

# BURROUGHS

---

J O H N B U R R O U G H S S C H O O L

## CURRICULUM GUIDE 2024-2025

**Student's Name** \_\_\_\_\_  
(Save for future reference)

*Every effort has been made to ensure the accuracy of the various entries, but John Burroughs School retains the right to amend, add, or cancel courses.*

**JOHN BURROUGHS SCHOOL**  
**CURRICULUM GUIDE**  
**2024-2025**

Thoughtful course selection plays a key role in ensuring optimal growth and development. Please read this guide carefully before requesting courses for next year. Spend some time thinking about your own goals and motivations and the time demands inherent in any given program, including participation in publications, dramatic and musical productions, student government, team sports, and/or activities outside of school. *Take a close look at the instructions, requirements, and guidelines outlined on pages 3-7.*

Then, in consultation with your parents/guardians and advisor, and with the approval of your Principal, plan a program best suited to your unique capabilities and interests. (Juniors should also consult with their college counselor.)

## TABLE OF CONTENTS

TABLE OF CONTENTS.....	3
COURSE REQUEST INSTRUCTIONS .....	4
JBS GRADUATION REQUIREMENTS.....	5
HIGH SCHOOL PROGRAM GUIDELINES .....	7
COURSE DESCRIPTIONS AND POLICIES.....	9
ENGLISH .....	10
HISTORY .....	14
LANGUAGES – CLASSICAL.....	19
LANGUAGES – MODERN .....	25
MATHEMATICS .....	40
SCIENCE.....	48
PERFORMING ARTS.....	58
<i>MUSIC</i> .....	58
<i>THEATRE, SPEECH AND DANCE</i> .....	62
FINE ARTS .....	67
PRACTICAL ARTS .....	72
<i>COMPUTER SCIENCE</i> .....	72
<i>INDUSTRIAL TECHNOLOGY/ENGINEERING</i> .....	75
<i>FAMILY AND CONSUMER SCIENCE</i> .....	79
OTHER COURSES .....	81
ATHLETICS.....	83
ACTIVITIES .....	86
SPECIAL PROGRAMS .....	91
INDEX.....	98

## COURSE REQUEST INSTRUCTIONS

1. Read the Curriculum Guide carefully. Note the requirements that apply to you and the various courses, activities, and programs in which you might participate.
2. Consult with your parents/guardians about your prospective schedule. **NOTE: One parent/guardian must sign the course request card.**
3. During the Advisory meeting during the common period on Monday, March 25, make an appointment to meet with your advisor to discuss your program choices. **NOTE: Once completed, your advisor must sign the course request card. Your advisor will submit the card directly to the appropriate principal for you.**
4. In junior year, be sure to consult with both your advisor and college counselor about courses. Obtain your college counselor's approval before seeking out your advisor's signature.
5. When choosing between different levels of a particular course, you are strongly encouraged to follow the recommendation provided by each department (listed on the course request card). If you have questions about any recommendations, consult with your current teacher in that subject.
6. Pay careful attention to the following when filling out the course request card:
  - a. Please use a **pencil**.
  - b. Circle the course number of each course you wish to take.
  - c. Write each course name and the number of periods it meets in the table provided. You must provide back-up choices for limited-enrollment courses and electives.
  - d. If you request more than one course in a department, you must designate which course you prefer.
  - e. In grades 11 and 12, when APs and Honors courses are offered, you may not take more than 3 Honors and/or AP courses in one year. If you wish to take a sixth full-credit course (Intensive Art or Mobile App Development only), you must obtain written permission from your principal. *Please note that in most cases these requests are denied.*
7. Turn in the completed, signed card of the proper color (see #8 below) to your **advisor** by Tuesday, April 2. After reviewing cards, advisors will turn them in to the appropriate principal by Thursday, April 4.
8. Advisors turn in cards to the appropriate principal:

<u>Current grade</u>	<u>Card Color</u>	<u>Principal</u>
7	Green	Ms. Churchwell-Varga
8	Orange	Ms. Churchwell-Varga
9	Yellow	Ms. Shimabukuro
10	Pink	Ms. Shimabukuro
11	Blue	Dr. Wasilewski

## **JBS GRADUATION REQUIREMENTS**

(Grades 9-12)

In order to earn a high school diploma a student must complete a program which fulfills the following requirements:

1. Each year at least four full-credit courses chosen from the five major academic disciplines, plus one elective each semester.
2. Four years of English.
3. Two years of History (World Civilizations I or II, and U.S. History).
4. Two levels of a single full-credit foreign language, classical or modern.
5. Two years of Mathematics.
6. Two laboratory Science courses.
7. Four courses in the Arts: 3 in the Fine Arts (Visual or Performing)\* and 1 in the Practical Arts.\*\*
8. DEIE & Health Seminar – 9<sup>th</sup> (see p. 81 ).
9. DEIE & Health Seminar – 10<sup>th</sup> (see p. 82).
10. Physical Education each year (see p. 83).
11. May Project in the senior year (see p. 97).

**\*Courses in the Fine Arts:** Digital Art & Design, Drawing and Painting I and II, Sculpture I and II, Ceramics I and II, Printmaking, Photography I and II, Integrated Studio Arts, Intensive Studies: Art, Independent Study: Art, 9th Grade Choir, JBS Voices, Men’s a Cappella, Orchestra, Jazz Band, Songwriting, Acting 9-10, Acting 11-12, The Great American Musical, Theatre Production, Video Production, Preparatory Strings, Playwriting, Improvisation, Public Speaking, Intermediate and Advanced Debate.

**\*\*Courses in the Practical Arts:** Project Technology I and II, Architectural Drawing, Digital Audio Technology, Computer-Aided Drafting, Video Production, Food & Nutrition: Cooking, Personal Finance, Sewing I and II (Clothing or Quilting), Basic Gardening, Public Speaking, Intermediate and Advanced Debate, Theatre Production, Programming in Java, and Programming for the Web.

## STATE OF MISSOURI COLLEGE PREPARATORY CURRICULUM

For its College Preparatory Studies Certificate, the Missouri Department of Elementary and Secondary Education requires that students complete a rigorous high school program, co-operatively planned by the school, the student, and the student's parents/guardians. At a minimum, this curriculum must include the following credits in each area of study: English/Language Arts (4), Mathematics (4), Science (3), Social Studies (3), Fine Arts (1), Practical Arts (1), Physical Education (1), Electives - including two credits of a Foreign Language (6).

### MISSOURI STATE HIGH SCHOOL ACTIVITIES ASSOCIATION (MSHSAA) ELIGIBILITY REQUIREMENT

Below are the academic eligibility requirements as established by MSHSAA:

“You must have earned, the preceding semester of attendance, a minimum of 3.0 units of credit or have earned credit in 80% of the maximum allowable classes in which any student can be enrolled in the semester, whichever is greater, at your school.

For your current semester, you must be enrolled in and regularly attending courses that offer 3.0 units of credit or 80% of the maximum allowable credits which may be earned at your school, whichever is greater.”

### COLLEGE ADMISSIONS REQUIREMENTS

Most colleges to which our students apply require or prefer high school students to complete four years of English, at least level III of a modern or classical language, three years of history, three years of mathematics (through Precalculus), and three years of a lab science, plus involvement in the arts, commitment in the activities program, participation in athletics, and other contributions to the school community.

### NCAA DIVISION I COURSE REQUIREMENTS

Complete 16 core courses: 4 years of English, 3 years of math (Algebra 1 or higher), 2 years of natural/physical science (including one year of lab science if your high school offers it), 1 additional year of English, math or natural/physical science, 2 years of social science, 4 additional years of English, math, natural/physical science, social science, foreign language, comparative religion or philosophy. Important: The NCAA has additional eligibility requirements which can be found online at <http://www.ncaa.org/student-athletes/play-division-i-sports>.

## HIGH SCHOOL PROGRAM GUIDELINES

1. In a school week with 35 academic periods, no more than 10 periods in a student's schedule should be free periods.
2. The average workload is five major (full-credit) courses plus one or two elective courses. Students must be enrolled in at least one elective each semester.
3. When determining the number of courses in which to enroll, students should note:
  - a. Most students take 5 major (full-credit) courses, but a student may choose or be advised to take 4, which is the minimum (see Graduation Requirements, p. 5). Students may not take more than 5 full-credit courses in any one year (unless the 6<sup>th</sup> class is Intensive Art or Mobile App Development).
  - b. Those interested in applying to Division I/II schools should be aware that the National Collegiate Athletic Association requires the satisfactory completion of at least sixteen academic courses at the high-school level (grades 9-12). Some independent studies may be used for the initial eligibility certification (see p. 6).
4. To prevent overloading of academic sections and to make full use of the faculty, the following course enrollment rules are in effect:
  - a. No assurance of course enrollment can be given to students who register for more than one course in a department.
  - b. Any course or activity listed in the Curriculum Guide may not be offered either because of insufficient enrollment or the unavailability of faculty to teach that course or activity.
5. Any course may be dropped by using the proper procedures within the time specified herein. Exceptions may be granted at the discretion of the grade-level principal.
  - a. A full-year course may be dropped any time prior to the end of the first semester, but before final exams. A semester course may be dropped at any point prior to the end of the semester in which it is offered. Courses dropped within these limits are not shown on a student's record and there is no penalty.
  - b. Students may switch to a *different level* of a course no later than November 15<sup>th</sup>. (If the 15<sup>th</sup> falls on a weekend, the student may change courses no later than the first Monday after the 15<sup>th</sup>.)
  - c. In the case that a student transfers from an honors/accelerated course to a different level in the midst of the semester, the student's grade is determined in the following way: The honors teacher determines an average and adds one-third of a letter grade to it (i.e., C+ becomes B-); that grade serves as the student's average upon entering the new class.

6. Courses may be added by using the proper procedures within the time specified herein, if class size limitations are not exceeded. A full-year course may be added no later than the end of the second week of the first semester. A semester course may be added no later than the end of the second week of the semester. Exceptions may be granted at the discretion of the grade-level principal.
7. Honors courses are offered in English, Modern and Classical Languages, Mathematics, and Science (see course descriptions). Students earning honors credit are awarded an additional .67 quality point. Specific guidelines for honors credit courses are as follows:
  - a. Honors work represents a more abstract and more difficult level of material or skill. Students take greater responsibility for their own learning. More work alone is not a criterion for honors credit.
  - b. The honors option is open to all students who meet the specified department prerequisites. In cases of over-enrollment, guidelines for placement are established by each department and noted in course descriptions.
8. Many colleges allow credit and/or placement for college-level work in high school through the College Board's Advanced Placement (AP) program. Scores are reported on a 1-5 scale; students who score a 3, 4, or 5 may receive college credit, but individual college policies must be consulted. Specific Advanced Placement (AP) courses are offered at Burroughs, but students may choose to take other AP examinations which we administer (e.g., English Language & Composition and U.S. History). Junior and senior students are limited to enrollment in 3 Honors and/or AP courses in a given school year. **NOTE: *Students in courses with AP in their title are required to take the College Board AP Exam to receive credit and honors points for an AP course at Burroughs.***
9. Evaluation in most courses is reported by the 12-step A/B/C system; these courses carry credit, and the grades are included in the grade point average calculation. For some courses identified herein, evaluation is reported by a two-step P/F (pass/fail) system; these courses carry credit, but the grades are not included in the GPA.
10. College courses can only be taken if a comparable substitute is not available at JBS (e.g., Calculus III). A full-credit half-year course at the college level receives one-half credit at JBS; the class appears on the transcript, but the grade is not listed nor is it included in the GPA. [Students are advised to send a separate transcript from the college where they are taking class(es) as part of their college applications.]

**COURSE DESCRIPTIONS AND POLICIES**

## ENGLISH

### JBS Graduation Requirement: 4 years

Much of what students discover and practice in a Burroughs English class develops through discussion, an exchange in which we aim for each student to take part. While the seminar model thus serves as our home-base format, students work in many other modes in class as well, from writing workshops to small-group exercises, to performance-based approaches that bring words off the page and into life. As a joyous team of close readers and versatile writers, we model those endeavors for our students as we guide them in honing their attention to, and bravely experimenting within, various literary forms. Both in classroom exchange and in writing instruction, we guide our students to root their ideas in evidence: to open the book, to find the passage, to read it carefully, to respond to it with integrity. In our diverse community, we aspire to reflect and explore the various identities in our midst; we seek to understand ourselves, each other, and our world.

As colleagues, we balance the individual experience and creative autonomy that animate each of our classrooms and the ongoing collaborative refinement of our practices. Our English classrooms challenge students to think deeply and regularly explore their ideas in writing. We encourage students to confer with us one-on-one during the writing and revising processes so we can provide tailored support and guided practice to individual writers as they develop their own voices.

In grades seven and eight, teachers lay the groundwork of the writing program by introducing foundational skills in literary analysis and in persuasive and expressive writing, as well as exploring the elements of usage and grammar. As students advance through the grade levels, they will engage in the ongoing refinement of their skills in writing, reading, speaking, and listening. Each of the following course descriptions lists a sampling of texts read, but these lists are not exhaustive. Summer reading is required at every grade level.

## English 7

(Required, 4 periods/week; full year)

English 7 is designed as a year-long journey of discovery. Students and teachers read, reflect, and write together about a range of genres including short stories, poetry, novels, plays, and essays. Students write in a variety of forms, including reflective journals, creative emulations, personal narratives, and literary analyses with teachers serving as mentors, coaches, and guides throughout the writing process. Required texts have included *How to Eat a Poem*, *The Outsiders*, *Animal Farm*, *Brown Girl Dreaming*, *A Midsummer Night's Dream*, and selected short stories. The course includes a systematic and intentional study of vocabulary and grammar—the building blocks of reading and writing—as well as an emphasis on dynamic participation, oral presentation, and active reading and listening. In sum, the English 7 curriculum seeks to support and develop young teams of readers, writers, and thinkers in our joyfully literate classroom spaces.

## English 8

(Required, grade 8; 4 periods/week; full year)

Our choice of texts seeks to inspire and compel students to empathize with other perspectives and experiences. To this end, we explore the way culture shapes identity and the way stories both reflect and shape people and communities. As we hone students' active reading skills, we simultaneously push them to deepen their analytical thinking and writing in addition to their self-expression and control of language in various creative pieces. With direct instruction, students practice note-taking skills and expand their vocabulary. They extend their grammatical lessons into syntax, punctuation, and style. Although our curriculum continuously evolves to reflect the diverse voices of our community and world, the following texts recently comprised our reading list: *Trash*, *Gracefully Grayson*, *The Secret Life of Bees*, *How Much of These Hills Is Gold*, *The Assassination of Brangwain Spurge*, *The Tragedy of Julius Caesar*, *March Book One*, and selected poems and short stories.

## English I

(Required, grade 9; 4 periods/week; full year; 1 credit)

English I is a genre studies course, exposing students to a wide variety of literary forms and placing special focus on the coming-of-age narrative. Throughout the year we explore how literature reflects and critiques society, how literature deepens our understanding of human character, and how literature develops our understanding of ourselves. The course requires students to read, write, and reflect on poems, plays, novels, short stories, and works of nonfiction while emphasizing each student's role as an interpreter of texts. Additionally, ninth-graders practice both expressive and literary analysis writing and receive ongoing instruction in grammar and rhetoric. Texts representing a wide range of

voices are selected from a list that includes *The Odyssey*, *Annie John*, *The Catcher in the Rye*, *Romeo and Juliet*, *The House on Mango Street*, *The Gangster We Are All Looking For*, *The Lord of the Flies*, and *The Nickel Boys*, as well as a variety of short stories and poems.

### English II

(Required, grade 10; 4 periods/week; full year; 1 credit)

Building upon the skills practiced in English I, sophomore students strengthen their dexterity in writing through a variety of expressive and argumentative writing projects. We focus on composition techniques including clarifying and combining sentences, controlling substantiating detail, and shaping overall essay structure. Through the conferenced revision process, students work to clarify their thinking as they develop their own voices. The course selections emerge from the British literary tradition and reach into the contemporary postcolonial landscape, addressing and responding to the changing scope of the texts and their far-reaching impact. We select readings from a list that includes *The Tempest*, *Macbeth*, *Frankenstein*, *Pygmalion*, *Malgudi Days*, *Brave New World*, *Purple Hibiscus*, *Born a Crime*, curated selections of poetry, and selected nonfiction.

### English III

(Required, grade 11; 4 periods/week; full year; 1 credit)

The junior-year English course, which focuses on American literature and key concepts of American culture, aims to address essential questions such as “what does it mean to be an American?” and “who gets to be an American?” The curriculum includes texts from a variety of time periods, genres, and literary movements. Additionally, students’ concurrent junior-year study of United States history presents them with opportunities to make interdisciplinary connections. Through an array of creative and analytical assignments, students expand their skills as they examine other writers’ rhetorical choices and hone their ability to craft complex arguments and expressive pieces. Readings may include *The Scarlet Letter*, *The Great Gatsby*, *The Brief Wondrous Life of Oscar Wao*, *Beloved*, *Maus II*, *The Namesake*, and *Their Eyes Were Watching God*, as well as a variety of shorter pieces in multiple genres.

## English IV

(Required, grade 12; 4 periods/week; full year; 1 credit)

Designed as a yearlong conclusion to a six-year program in literary instruction, English IV offers complex challenges in reading, writing, thinking, and discovery. The course pivots upon issues linked to self and society; for instance, we ask students to wrestle with how one develops an identity within community, how one learns to balance responsibilities to self and others, and how one best navigates a dynamic world. All writing assignments—including personal reflections, traditional literary analyses, stylistic emulations, narrative braids, and more—encourage students to experiment with new forms and strengthen the authority of their individual voices. Teachers select a mix of classic and contemporary fiction and nonfiction aimed at nurturing a love of reading, exposing students to a range of styles and voices, and preparing students to live literary lives outside the support of a high school classroom. In the spring semester, a visiting writer delivers an address, shares their work, and participates in conversations or workshops with seniors. Recent texts have included *Hamlet*, *Song of Solomon*, *Exit West*, *The Fire Next Time*, *The Best We Could Do*, *Much Ado About Nothing*, *As I Lay Dying*, *Salvage the Bones*, *The Things They Carried*, short stories, essays, poems, films, and more.

## English IV Honors Seminar

(Grade 12; by application; limited enrollment, 4 to 8 per group; 1 period/week; full year; Honors credit)

Admission requirements include a cumulative average of B+ or higher in English courses grades 9-11 in addition to a demonstrated commitment to the school's and English Department's integrity standards.

Several teachers in the English Department offer seminars in areas of specialized interest. Meeting weekly, these semester-long seminars are distinct from the regular English IV course. Honors credit is contingent upon the student's maintaining a satisfactory performance in Honors Seminar and at least a B in regular English IV. Weekly preparation, attendance, and participation are core requirements of the course in addition to completing all reading and writing assignments.

The Department Chair makes detailed application instructions available in early February. In determining admissions, English department members evaluate the strength of each candidate's application as well as the quality of each candidate's general performance in upper school English classes: not just grades achieved but also commitment made manifest through active, thoughtful, and generous participation. Honors English applicants are notified of admissions decisions over spring break so that applicants may plan their senior-year schedules accordingly. Students can expect an additional 60 minutes/week of honors homework in addition to their regular English work.

## HISTORY

JBS Graduation Requirements: World Civilizations I OR World Civilizations II; and U.S. History.

We live within a complex world facing challenges that frequently have their roots in the past. In history classes, students explore, analyze, and evaluate these roots by looking at earlier political, religious, economic, and social institutions. Students thereby acquire knowledge and develop skills that they can use to create meaning about their own lives and about the times in which they live. The department's curriculum provides a framework and body of knowledge with which to organize an understanding of these aspects of human endeavor.

Instruction in the seventh and eighth grades addresses geography, global issues, and American social and political institutions. Study in grades nine, ten, and eleven addresses the history of world civilizations, including a course in the history of the United States. In the twelfth grade, elective, specialized courses in history and the social sciences allow students to broaden, or to intensify, their program of study. The curriculum, grounded in factual information, develops critical thinking through reasoned classroom dialogue and logical, analytical writing. Teachers also strive in their classes to nurture each student's personal growth, to promote the group's mutual goals and responsibilities, and to engender a joy for learning.

### Geography and Global Issues 7

(Required: 4 periods/week; full year)

The course centers on the study of physical and human geography and how they relate to past and current global issues. The different fields of human geography—population, political, urban, and economic geography fields—are stressed and provide tools for examining current issues. Students learn the basic methods geographers use to study the world, including the five themes of geography, and then explore the role of geography in shaping societies. With this strong foundation, students begin to study different regions of the world, mainly non-western. Readings on current issues determine the areas studied and become a focal point in the study of that issue. As students learn of issues present around the globe, they continue to explore the role geography plays in these issues and use the different fields of human geography to understand these issues more effectively. Skills emphasized include writing, especially paragraph development; note taking, both in class and on homework; how to participate actively in discussions; how to read maps; and how to organize and read data. Students demonstrate comprehension through projects and on traditional assessments, including quizzes, tests, and writing assignments as well as projects and class discussions.

### Social Studies 8

(Required: 4 periods/week; full year)

Students study American political institutions, looking at the nation's political theory as well as the structure and functioning of various governing bodies. In addition, students investigate public issues and groups active in addressing them. Students also learn about Missouri's state government and its constitution. After developing expository writing into the essay form, they write a short, documented paper based on their research of a contemporary political issue.

### World Civilizations I

(Alternate required course, grade 9; 4 periods/week; full year; 1 credit)

This course begins the formal study of history by considering the contributions to world culture from the early human communities through the ancient world to 1300. In addition, students study the rise of contemporaneous societies in Asia, Africa, and Europe. Students engage in various class methods, including lecture, discussion, document analysis, and debate. Work in writing furthers student skill for preparing effective expository essays. The course requires a fall semester final exam. In the spring, students receive methodical instruction to complete a documented research paper.

### World Civilizations II

(Alternate required course, grade 10; 4 periods/week; full year; 1 credit)

This course continues the study of world history and cultures by examining societies in Asia, Africa, Europe, and the Americas, beginning in the 14th Century. Text, documentary, and literary sources present political, economic, social, and intellectual history. The foremost goal of the course is to help students learn about the complex origins of their contemporary world. A formal research paper is required, as are examinations at the end of each semester. A required summer reading book is assigned.

### United States History

(Required, grade 11; 4 periods/week; full year; 1 credit)

This course begins with European colonization in the western hemisphere, continuing chronologically and thematically to the present day. Students survey significant events, individuals, and issues in the American national experience. Beyond the standard text, students encounter primary source material, literature, and scholarly journals in preparation for discussion, simulation exercises, and lectures. Students write a term paper focusing on the skill of historiography. End of semester examinations are required. Students, after consulting with their teacher, may elect to prepare, with extra study, for the U. S. History Advanced Placement examination.

### African-American Studies

(Grade 12; enrollment limited to 16 students; 4 periods/week, full year; 1 credit)

This course dissects the evolution of African American culture through its roots in precolonial West Africa to modern Black America. It examines the emergence of modern African American culture through periods in history. The course focuses on four main units:

1. *Africa and Africans*: exploring the history of West African societies prior, during, and after European intrusion.
2. *Nation Building*: discussing the emergence of the United States as a nation as it coincides with slavery, segregation, and silencing.
3. *Black and....*: focusing on the ways that intersectional identities influenced Black cultural and political movements in the early 20th Century.
4. *Continuity and Change*: exploring the ways in which Black liberation efforts have changed or remained the same in the 20th and early 21st Centuries.

Students read a range of historical sources, including standard texts, popular literature, primary source documents, and articles from contemporary periodicals; they will also use various audio/visual resources. Assessments are primarily in essay form, with some student-led presentations. Students will sit for a final exam in December.

### Global Modern Feminism

(Grade 12; enrollment limited to 16 students; 4 periods/week, full year; 1 credit)

This survey course examines the experiences of women since 1900, the various ways in which they have raised their voices, and the opposition they have encountered. Students will gain a broad perspective on feminism, learning about a variety of individuals and movements around the world, as well as the overlapping themes and goals that cross borders. Possible topics of study include: suffrage in the United States and Europe; postcolonial feminism in the Caribbean; the diversity and challenges of modern African feminism; Black feminism in the United States; the rise of female leaders in Latin America; recent feminist movements in Asian nations; and modern radical feminism. Alongside readings from authors like Betty Friedan, Simone de Beauvoir, Kishida Toshiko, Domitila Barrios de la Chungara, and bell hooks, cinematic works from a variety of nations on or with feminist themes will be screened and examined as texts. Past films include: *Thelma and Louise*, *Bande de filles*, *Sisters in Law: Stories from a Cameroon Court*, and *9 to 5*. Active class participation is crucial; essays and a first semester examination in December are required.

### Literature and History

(Grade 12; enrollment limited to 16 students; 4 periods/week; full year; 1 credit)

If you might enjoy reading about a Russian aristocrat who, sentenced to house arrest at age thirty-two, will be shot by the NKVD if at any point in the rest of his life he leaves the Hotel Metropol in Moscow; or an old woman living alone in an ancient Polish forest who tries to hide two children from the Nazis during WWII; or a young man about your age who tries to survive trench warfare in WWI; or a Vietnam vet who, with disastrous consequences for his wife and himself, tries to pretend his past never happened, you might sign up for this class. If you want to read about why some people walk away from a utopia called Omeals, or what a fisherman trapped on a ledge in the North Atlantic does to protect his son and his nephew from a rising tide, or why over six hundred British cavalymen charged Russian cannons even though they knew almost certain death awaited them, or why a harlequin challenged an oppressive dictator and what his challenge tells us about the dangers of conformity, this might be a class for you. Class discussions about the issues raised and the events covered in everything we read, as well as examination of the authors' lives, which invariably seem more interesting than our own, form the backbone of the class. Only essay tests are given. There is a final exam in December.

### Bioethics (only one section offered)

(Grade 12; enrollment limited to 18 students; 4 periods/week; full year; 1 credit)

This seminar explores the political and ethical decisions behind some recent and some historical scientific issues. Led by both a science and a history teacher, students explore the science behind the issues before confronting the political and ethical ramifications of them. Students are evaluated (written and orally) on their knowledge of the science and its political and ethical implications and are expected to be active participants in both segments of the class - the scientific component as well as the discussion component, which are weighted equally. Contemporary issues covered may include: gene therapy, cloning, medical marijuana, the genetics of race, HIV and AIDS, and the ethics of human and animal experimentation. Historical issues addressed may include: the use of research by Nazi scientists, the Tuskegee experiments, and the human radiation experiments. Students will choose their own topic for a group presentation in the spring. A sample approach follows: *if the topic was stem cells, students would learn what various types of stem cells are, and what applications they might have, before considering ethical implications of such research, and whether or not the government should fund research into stem cells.*

## Urban Issues and Design

(Grade 12; enrollment limited to 16 students; 4 periods/week, full year; 1 credit)

“We drive up and down the gruesome, tragic suburban boulevards of commerce, and we're overwhelmed at the fantastic, awesome, stupefying ugliness of absolutely everything in sight -- the fry pits, the big-box stores, the office units, the lube joints, the carpet warehouses, the parking lagoons, the jive plastic townhouse clusters, the uproar of signs, the highway itself clogged with cars -- as though the whole thing had been designed by some diabolical force bent on making human beings miserable.”  
— James Howard Kunstler

How did our built environment get so bad? What was the traditional design before sprawl? How can we build better, safer urban environments? Why are cities the best way to save the environment? What is the connection between fossil fuels and sprawl? These are the questions addressed in the first half of this course exploring the design of the American city and how to fix it. In the second half of the year, the course focuses on the urban underclass and the myriad of interconnected problems present in urban America today. The spring semester explores economic and social inequality, race, crime, drug abuse, and more. Readings include selections from James Howard Kunstler, Andres Duany, Leon Dash, Elijah Anderson, Alex Kotlowitz, Jonathan Kozol, Jane Jacobs, and others. A final is required at the end of the first semester.

## The U.S. in the World since 1898

(Grade 12; enrollment limited to 16 students, 4 periods/week, full year; 1 credit)

This seminar examines the role of the U.S. and its interactions around the globe since 1898. Students will trace the ways in which the U.S. constructed its image and projected power in the wider world. We will also interrogate how American activity abroad affects politics and society at home. These dynamics include exploring America's global interactions through several themes: empire and expansion, the spread of American culture, race and gender, religion, national power and security, immigration and migration, and class.

Students will study these issues through an array of historical and contemporary perspectives. This includes primary documents and excerpts from historical books and articles like Kristin Hoganson's *Fighting for American Manhood: How Gender and Politics Provoked the Spanish-American War* and Daniel Immerwahr's *How to Hide an Empire: a History of the Greater United States*. Students will have opportunities to watch and discuss portions of popular films, documentaries, and TV shows, such as *Red Dawn*, CNN's "The Cold War," and the World Wrestling Federation. We will utilize other multimedia sources, including podcasts, audio archives, and social media. Finally, we will save space for discussing contemporary issues in American foreign affairs. Active participation is crucial. Class assignments include in-class and take-home essays, student-led discussions, a policy briefing presentation, and a first semester examination in December.

## LANGUAGES – CLASSICAL

JBS Graduation Requirement: Two levels of a single full-credit language.

T.S. Eliot observed that “we are all, so far as we inherit the civilization of Europe, still citizens of the Roman Empire.” The Latin program proves this observation by studying the language and the culture of the Romans.

To understand how the language works is essential. In this way the student can not only read the writings of great Roman authors, but also appreciate how basic Latin is to modern English. Most English words have classical roots, including 90% of words relating to science and technology, so the study of Latin and Greek leads to a wider English vocabulary. Furthermore, the greater part of English literature has been written by those who were classically educated, and for readers who were presumed to have some knowledge of Latin and Greek.

Many Latin readings show that most of our ideas political and personal, our fears and aspirations, are not new. To paraphrase Eliot, it is through the experience of the dead that we can make sense of the living, but first we must learn their language.

Because increased emphasis is placed on the depth of learning a foreign language, the department recommends the six-year sequence of study, i.e. through Level V, in Latin.

Honors credit is offered at both Levels IV and V upon the satisfactory completion of additional assessments. Those students who complete Latin V will have the opportunity to take the Latin AP exam.

It is not necessary to be enrolled in Latin in order to take Greek; many successful students have matriculated with backgrounds in the variety of languages Burroughs offers. Students follow the introductory courses (available in grades 10-12) because they are inquisitive about the Greek world, and not only its language but also its culture, history and geography. Meeting twice weekly, the Greek courses are considered electives that can supplement, and not replace, an existing language choice.

The Classics department also offers two elective courses. Classical Mythology in the Arts is an introductory and illustrated course available in grades 9-12, and Foundations of Western Literature, available in grades 11 and 12, introduces the pillars of Greco-Roman literature and encourages their intelligent reading through lectures and class discussion. Since all the works in this course are read in translation, it is NOT necessary to have studied either Latin or Greek.

Most years the department sponsors a trip to Italy (Rome and Naples) during the spring break. The popularity of this trip restricts it to students currently enrolled in Latin III, IV or V, or Greek I or II. The Italy Trip will take place again in March 2026. The next Greek trip takes place in June 2025. It is open to all in the Burroughs community: parents/guardians, students and alumni. However, priority will be given to those with a background in Greek or Latin. A trip to Campania and Sicily, also open to all members of the Burroughs community, will take place in June 2026.

### Latin 7\*

(4 periods/week; full year)

Students will travel back in time to 64 CE, the reign of the emperor Nero, who allegedly played the fiddle while Rome burned. Here, we meet a diverse cast of characters in our story, all living in the poor area of Rome, the Subura. Through these characters we will discover what daily life for people of all walks of life was like; hear both familiar and unfamiliar mythological tales; explore the beginnings of the Latin language and its tremendous impact on the English language; and compare our own lives to those of old. In this class we will ask hard questions: how far have we progressed, or not? Why did our founding fathers build our nation after the Romans'? How can we be better? From the first week throughout the year, students will read Latin passages to pave the way for linguistic, cultural, historical, and mythological understanding. These extended passages in combination with English supplementary cultural information will be the springboard for our discussions. Text: *Suburani*, Book 1.

### Latin 8\*

(Prerequisite: Latin 7; 4 periods/week; full year)

Part II introduces the student to further aspects of grammar and vocabulary, including the last two noun declensions, all the tenses of the indicative, and the passive voice. These are incorporated through the continuation of Horace's life story and in particular the decision by Horace's father to take his son from rustic Venusia to Rome for a formal education. The Rome of Horace's adolescence was dominated by the First Triumvirate of Crassus, Pompey and Julius Cæsar, whose assassination prompted Horace to abandon Italy for Athens where he would complete his education. Text: *The Oxford Latin Course*, Part II.

\*NOTE: Students who satisfactorily complete Latin 7 and Latin 8 may progress to Latin II in the ninth grade.

### Latin I

(Grades 9-12; 5 periods/week; full year, 1 credit)

This is a class for students who want to start Latin in the upper school or fortify their current Latin skills. For those who have not yet had the pleasure of Latin, nor enjoyed its salutary effect upon their use of English, this intensive course proves highly beneficial. Through a selective and accelerated reading of *The Oxford Latin Course*, together with supplementary material, students acquire the necessary vocabulary, grammar, and context for entry to Latin II. Text: *The Oxford Latin Course*, Parts I and II.

### Latin II

(Grades 9-12; Prerequisite: Latin I or equivalent\*; 4 periods/week; full year; 1 credit)

By the end of the third volume of the *The Oxford Latin Course* students meet all the major grammar and syntax (e.g., the subjunctive mood and constructions, gerunds and gerundives, conditional clauses, and the ablative absolute) necessary to translate Latin literature with some fluency. In this volume Horace returns from Greece, is introduced to the literary patron Mæcenas, and gradually comes to know both Augustus and the challenges which face his rule, from rebuilding the state to quelling Cleopatra; thus, Horace is placed in his true literary and historical context. Interspersed with the grammatical exercises and prose narrative are several of Horace's original poems, which embrace the perennial questions of love and war, the monumental and the commonplace in our lives, jealousy, and contentment. Text: *The Oxford Latin Course*, Part III (2nd edition).

### Latin III

(Grades 10-12; Prerequisite: Latin II; 4 periods/week; full year; 1 credit)

Students make the transition from the story of Horace's life, recounted in *The Oxford Latin Course*, to authentic Latin literature. We begin by reading short Latin novels covering a wide array of aspects of Roman daily life, culture, history, and mythology. Once students have built upon their vocabulary and reading stamina, we move forward into lightly adapted literature of both prose and poetry, before culminating in our first readings of unadapted classical literature. Students may read Phaedrus's adaptations of Aesop's *Fables*, Hyginus's mythological tales, ancient graffiti, writings from Roman women, and more. The year ends with Ovid, who, in an epic poem about transformation (*Metamorphoses*), recounts perennially favorite myths and legends that involve change; Apollo and Daphne, Pyramus and Thisbe and Pygmalion, to name a few. As students read such a wide variety of texts, appropriate attention will be given to historical and cultural evidence relevant to the assigned readings. All Latin III students will take the National Latin Exam. Texts: *Love and Transformation: An Ovid Reader*, ed. R. Lafleur (Pearson/Prentice Hall).

#### Latin IV

(Grades 11-12; Prerequisite: Latin III; 4 periods/week; full year; 1 credit; Honors credit available for those students who complete additional assessments)

This course embraces both poetry and prose of the highest order from two contemporaries living through the death throes of the Roman Republic. For matchless Latin prose, Latin scholars can do no better than the forensic work of Cicero, that towering literary figure of the late Republic. Once they have read Cicero's *First Catilinarian Oration*, they meet the sometimes romantic, sometimes invective poetry of Catullus, who was one of the few Romans, it seems, who did not try to curry favor with Gaius Julius Caesar. Whether reading prose or poetry, Latin students continue to enhance their skills by constant review and reinforcement of fundamental grammar and syntax. All Latin IV students will take the National Latin Exam. Texts: Cicero, *First Catilinarian Oration*, ed. K. Frerichs (Bolchazy Carducci) and *Love and Betrayal: A Catullus Reader*, ed. Arnold, Aronson and Lawall (Prentice Hall).

#### Latin V

(Grade 12; Prerequisite: Latin IV; 4 periods/week; full year; 1 credit; Honors credit available for those students who complete additional assessments)

Poets as different as Tennyson and T. S. Eliot have hailed Vergil's *Aeneid* as a landmark in the European literary tradition, and so it rightly forms the centerpiece of this senior level course. Students read the entire story in English as well as Latin extracts that include the fall of Troy, the tragedy of Dido and Aeneas and the hero's descent to the underworld. Since Vergil is the other author (with Pliny from Latin IV) on the AP syllabus, students may choose to take this examination at year's end. Time permitting, Latin V students will return to their first guide through the Latin language, Quintus Horatius Flaccus (Horace), and read selections from his songs on personal and political themes.

If there is sufficient student interest, a second class is offered that reads Cicero's brilliant, if scurrilous, speech in defense of Caelius (*pro Caelio*). This syllabus gives students the rare opportunity to read an entire Ciceronian speech in which every legal and emotional card is played out to the fullest. Those interested in studying law at college, or simply manipulating an audience, are encouraged to sign up for this option. All Latin V students will take the National Latin Exam. Texts: *Vergil's A Song of War: Readings from Vergil's Aeneid*, eds. R. A. LaFleur and A. G. McKay (Pearson) and *Horace Reader*, ed. J. Lowe OR Cicero, *Pro Caelio*, ed. Keitel and Crawford (Focus).

### Beginning Greek

(Grades 10-12; No prerequisite: absolutely no knowledge of Latin is necessary; 2 periods/week; full year; 1/2 credit)

Students are provided a clear and distilled introduction to Ancient Greek vocabulary, grammar, and syntax, and these are then practiced in readings from Aesop's fables, stories from *The Odyssey* and Greek history. While the stories give us insight into the beliefs and practices of the Ancient Greek world, the first year of instruction also covers the main forms of nouns and adjectives, and a range of active tenses, including participles. The text is supplemented with copious examples of Greek derivatives, and students thereby enrich their English vocabulary. Time is also devoted to reading a play in translation, either a tragedy or a comedy. Text: *Greek to GCSE*, Part 1, ed. Taylor (Bristol Classical Press).

NOTE: Many non-Latin students have taken, and are currently taking, this course with great success. It may be well added to any of the modern languages, since it reinforces grammar and vocabulary alongside history and mythology, but is not taught as a spoken language.

### Greek I

(Grades 11-12; Prerequisite: Beginning Greek; 2 periods/week; full year; 1/2 credit)

This course continues the progress made in Beginning Greek, introducing a wider range of linguistic tools and expanding vocabulary. Readings move from Homeric tales to the life of Alexander the Great, and finally to philosophy: the pre-Socratics and Socrates himself. Time is also devoted to reading a play in translation, either a tragedy or a comedy. Text: *Greek to GCSE*, Parts 1 and 2, ed. Taylor (Bristol Classical Press).

### Greek II

(Grade 12; Prerequisite: Greek I, 2 periods/week; full year; 1/2 credit)

This course continues the progress made in Greek I, introducing a wider range of grammatical forms and constructions, and expanding vocabulary. Readings move from the Greek philosophers to the wonderful world of myths and legends, and finally to passages adapted from the historical writings of Herodotus. Time is also devoted to reading a play in translation, either a tragedy or a comedy. Text: *Greek to GCSE*, Part 2, ed. Taylor (Bristol Classical Press).

### Classical Mythology in the Arts

(Grades 9-12; 2 periods/week; full year; 1/2 credit)

In this year-long elective course, students who are intrigued by the gods, goddesses, heroes and heroines of Greek and Roman mythology will get a chance to take a deep dive into both familiar and unfamiliar tales of deception, valor, and transformation as they explore their depictions in the arts. We will examine the myths through the lens of all media, ancient and modern. Students will read classical texts in translation, examine ancient vases, mosaics, coins and statues, read modern literary treatments, view film adaptations, analyze modern advertising, and listen to musical interpretations.

### Foundations of Western Literature

(Grades 11-12; academic option, no knowledge of Latin or Greek is necessary; 4 periods/week; full year; 1 credit; Honors credit available for additional assessments)

The influence exerted by the classical world upon the modern is sometimes obvious, sometimes latent, but always pervasive. The Doric columns on the Schnuck wing are a clear instance; less evident, perhaps, is the very long shadow cast by ancient Greek and Roman authors upon the subsequent western literary tradition. This course introduces students to the literary roots from which spring so many of the canonical works of western literature. The texts themselves lie at the heart of this course, which is a seminar-style discussion based upon close readings of primary sources. In the first semester, the class focuses on the classical epic, assessing the changing concept of the “hero” and the “heroic” in Homer’s *Iliad* and Vergil’s *Aeneid*. In the second semester the class cuts across generic boundaries as it dips into the intellectual ferment of fifth-century B.C. Athens; readings in history, tragedy, comedy, and philosophy enable students to consider “hot button” topics in Athens that should still stir everyone up today. The course will also include examination of classical themes in contemporary cultural expression. Some art history is sampled, too, as the class occasionally explores how classical literature has manifested itself in visual arts through the centuries. Evaluation consists of tests and short reflections on daily readings submitted via Canvas.

This course may be taken for an optional Honors credit. To earn Honors credit, students will complete two assignments each semester over and above assigned readings. These assignments may include, but need not be limited to, creative projects, leading class on the day’s reading, and reading an additional literary work and writing an evaluative report on it. Honors assignments will generally be evaluated on a credit/no-credit basis.

## LANGUAGES – MODERN

JBS Graduation Requirement: Two levels of a single full-credit language.

French, German, and Spanish are the modern foreign languages offered in Levels I-V (grades 7-12). French and Russian are also offered in grades 10-12 as additional language electives which meet twice a week.

The Modern Languages department aims to fulfill measurable and immeasurable goals. Teachers at all levels, and in each of the languages taught, move students toward the empirical goal of language proficiency in interpersonal, presentational, and interpretive communication as outlined by the American Council on the Teaching of Foreign Languages (ACTFL) Performance Guidelines for K-12 learners. Concurrently, the department's underlying conviction stresses the idea that language study enhances one's ability to recognize, accept, appreciate, and function with other ways of living; language study sheds light on cultural differences, while carrying the idea that there are legitimate reasons for differences. Differences stem from geography and branch out through the history and evolution of politics, philosophy, literature, and the arts of a given culture. A language reflects the culture in which it occurs, just as the culture reflects its language. The two are inseparable.

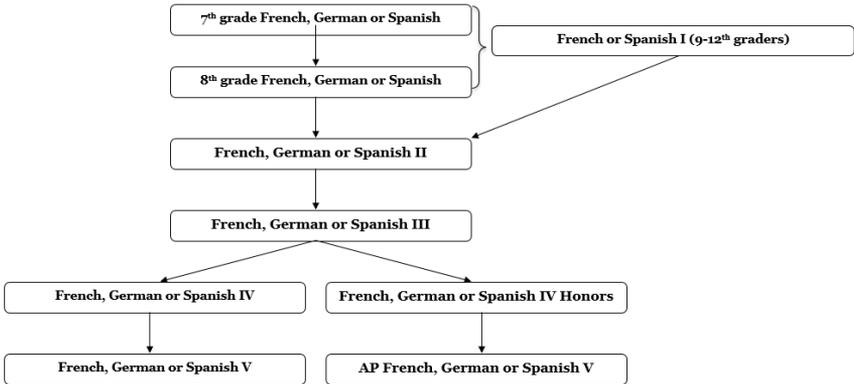
Thus, the Modern Language department at JBS strives to teach students to communicate in a living language, knowing that to do so effectively means not only to know vocabulary and grammar, but also to understand how the language has evolved symbiotically with the cultures of which it is a part. Moreover, developing a greater breadth of cultural perspectives inherently deepens an understanding of each student's own culture. In so doing, students understand the English language in a more sophisticated way, and they gain valuable perspectives on the functioning of their own culture as well as others.

The department provides the potential for a successful experience in all levels of skills. It offers comprehensive courses using a variety of teaching techniques and encourages interaction among individuals within the classes. Students who successfully finish the five-level sequence can continue their language instruction at the college level, generally placing out of beginning, and sometimes intermediate college-courses. Furthermore, students develop a sound foundation for a successful study abroad experience. The department also encourages students to participate in an exchange/homestay program or travel experience in a country where the studied language is spoken (see p. 93 "International Trips" section for more details).

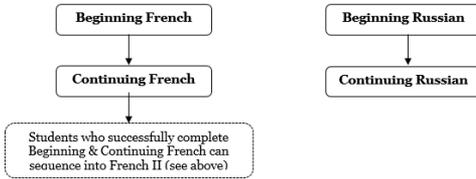
Because increased emphasis is being placed on proficiency in the teaching and testing of modern foreign languages, the department recommends the six-year sequence of study, through Level V.

The following flow chart demonstrates the typical sequence of modern language courses.

The following core language classes meet 4 days a week, with the exception of the level I and AP courses, which meet 5 days a week.



½ credit (2 periods a week) full-year language elective courses offered for 10<sup>th</sup>-12<sup>th</sup> graders:



*\*Electives are enrollment dependent.*

### French 7-Novice\*

(4 periods/week; full year)

This class is intended for students with basic to no prior French experience. They will begin their journey with a thorough exploration of both the French language and its many cultures. Basic communication concepts such as the present tense, personal pronouns, adjectives, as well as gender & number agreement, will first be introduced using context and then reinforced through class observations, discussion and practice as students begin to build their interpretive, interpersonal and presentational communication skills. Students will learn to think like a linguist by using both context and specific strategies while exploring unit themes of identity, school, and family life. The community that develops within the classroom will naturally encourage and shape the students' emerging accents and conversational skills. Throughout the year, unit projects will provide the opportunity to truly apply the language using various forms of creative projects as well as integrated performance assessments that will help students to track their language proficiency progress. Texts: *EntreCultures 1* Textbook & Activity Workbook (Wayside Publishing).

### French 7- Continuing\*

(4 periods/week; full year)

This class is intended for students with previous experience in French who demonstrate a Novice Mid proficiency level; it will continue to build on their prior knowledge. Basic communication concepts such as the present tense, personal pronouns, adjectives, as well as gender & number agreement will be reviewed using context and reinforced through class observations, discussion and practice as students continue to build their interpretive, interpersonal and presentational communication skills. Students will continue their linguistic journey by exploring unit themes of identity, school, and family life. Throughout the year, unit projects will provide the opportunity to truly apply the language using various forms of creative projects as well as integrated performance assessments that will help students to track their language proficiency progress. Texts: *EntreCultures 1* Textbook & Activity Workbook (Wayside Publishing).

### French 8\*

(Prerequisite: French 7; 4 periods/week; full year)

Continuing to build their interpretive, interpersonal, and presentational communication skills, this course emphasizes conversational ability, and continues to increase acquisition of vocabulary, verbs, idioms, and grammatical structures. Basic structures from the French 7 curriculum are reinforced and students study vocabulary, grammar, and cultural concepts related to the school day, school calendar, family and home life, food at home and at restaurants, leisure activities, weather, clothing, and getting around town. They continue to advance their fluency through classroom work, homework, and assessments that ask the students to engage in short conversations and dialogues, interpret written and spoken French from authentic resources, and write short responses to prompts in the target language. This course takes concrete steps toward establishing an immersion environment in which the teacher and students operate exclusively in French and targets the Novice Mid/Novice High Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners. A daily study of French music as well as various projects are also included in the curriculum throughout the year. Texts: *EntreCultures 1* Textbook & Activity Workbook (Wayside Publishing).

### French I (offered pending sufficient enrollment)

(Grades 9-12; Prerequisite: Department Chair approval; 5 periods/week; full year; 1 credit)

This course offers a basic and cultural foundation for those students who want to begin French in the upper school or for those students who would benefit from a review of the concepts learned in 7<sup>th</sup> and 8<sup>th</sup> grade (per department recommendation). Conversational ability is developed by classroom interaction and online homework practice. Students learn a variety of basic vocabulary and idioms, verb conjugations in the present, many types of pronouns, adjectives, adverbs, and how to properly form statements and questions. Short compositions, readings and dialogues are undertaken, and elements of culture are explored throughout the year. The pace of the course is rapid, covering roughly the equivalent of French 7 and French 8. Texts: *EntreCultures 1* Textbook & Activity Workbook (Wayside Publishing).

## French II

(Grades 9-12; Prerequisite: French I or equivalent; 4 periods/week; full year; 1 credit)

This course continues to build the vocabulary and language structures necessary for effective communication at the Novice High/Intermediate Low ACTFL Proficiency levels. Conducted almost exclusively in French, it allows the students to be immersed in the language and culture, thus providing them the opportunity to increase their linguistic knowledge and continuously develop their proficiency skills. Students will learn to work with the past tense (*passé composé & imparfait*), object pronouns, reflexive verbs, and the future tense. Skills are reinforced to help students continue to develop their proficiency skills in their interpretive, interpersonal, and presentational modes of communication as outlined under the expectations of the ACTFL Performance Guidelines for K-12 learners. Students will also participate in a cultural unit of study of *Le grand dérangement* (the Acadian expulsion in Canada and North America) and read and discuss a novel relating to a variety of themes pertaining to Acadian and Cajun culture in the United States. Texts: *EntreCultures 2* Textbook & Activity Workbook (Wayside Publishing); *Au revoir l'Acadie* (reader).

## French III

(Grades 10-12; Prerequisite: French II; 4 periods/week; full year; 1 credit)

This class, targeting the Intermediate Low/Intermediate Mid Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners, is conducted almost exclusively in French. The reinforcement of the three modes of communication (interpretive, interpersonal & presentational communication) is continued with a strong emphasis of using new vocabulary and grammatical concepts in context through conversation, scripted dialogues, class presentations, short essays, letters, and written responses, and interpretation of authentic infographics, articles, websites, and videos. The course explores the following themes as they relate to the students' current lives as well as French and Francophone cultures: friendship and personal life experiences, technology and digital citizenship, personal skills and competencies, preparation for future work, sustainability & responsible citizenship, aspects of personal identity & diversity, and artistic expression & appreciation. The study of basic grammatical principles and verb tenses is nearly complete by the end of level III, as students review the past tenses and imperative mood, learn the future tense, conditional and subjunctive moods and complete their study of pronouns. Texts: *EntreCultures 3* Textbook & Activity Workbook (Wayside Publishing).

### French IV

(Grades 11-12; Prerequisite: French III; 4 periods/week; full year; 1 credit)

Having been presented with the basics of the language in previous years, this course expands and refines the knowledge acquired and targets the Intermediate Mid/Intermediate High Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners. Students are expected to speak French throughout the course and continue to work on the four basic skills (writing, reading, speaking and listening) to varying degrees through discussions, written assignments, readings and listening exercises. New thematic credits are introduced through a range of cultural and literary presentations and discussions. Text: *Le Petit Prince* (Saint-Exupéry).

### French IV-Honors

(Grades 11-12; Prerequisites: French III and departmental approval; 4 periods/week; full year; 1 credit)

This course, which targets the Intermediate Mid/Intermediate High Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners, emphasizes mastery of the basic skills (writing, reading, speaking, and listening) as a solid preparation for taking the French-AP course the following year. New vocabulary and thematic units are introduced and practiced through a broad range of cultural presentations and readings as well as literary pieces, allowing for the review of grammar as well as the acquisition of new structures and vocabulary. Text: *Le Petit Prince* (Saint-Exupéry).

### French V

(Grade 12; Prerequisite: French IV; 4 periods/week; full year; 1 credit)

This class is taught as a film class in French, incorporating vocabulary, grammar review, and conversation, and is targeted for the Intermediate High/Advanced Low Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners. A variety of films are shown to expose students to a multitude of styles, themes, and content in French and Francophone movies. Time is given to the systematic development of vocabulary necessary for the discussion of selected topics in order to help students prepare for oral presentations and projects as well as debates involving the whole class; this is a project-based class without tests. This course will help students to reinforce their language proficiency and students will be well positioned to succeed on college language placement assessments after they graduate. Texts: *Breaking the French Barrier-Advanced* (grammar workbook).

NOTE: Due to the mature content of several of the movies (some of which are rated R) all students enrolling in this course need permission from a parent or guardian to watch them before enrolling in the course.

### French V-AP

(Grade 12; Prerequisite: French IV-Honors and departmental approval; 5 periods/week; full year, 1 credit, Honors credit)

This class, conducted exclusively in French, is targeted for the Intermediate High to Advanced Low Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners. It focuses on preparing the students for the Advanced Placement Language & Culture examination through the systematic refinement of the four basic skills (writing, reading, speaking, and listening), in addition to providing a complete review of their grammar skills. Emphasis is placed on the discussion of a wide variety of topics (through daily discussion of news and current events), and active spoken participation is a daily expectation. There are also frequent oral and audio activities to further develop listening and speaking skills. Works and articles of informational and literary value are read, discussed and analyzed, and short reading selections may also be assigned over winter and spring break in order to help maintain the students' fluency. Essays on a wide range of themes are also regularly written weekly in preparation for the Advanced Placement examination. Texts: *Thèmes* (Vista Higher Learning), *AP French Language & Culture* (Ladd's); *Short novels: Art* (Yasmina Reza), *L'homme qui plantait des arbres* (Giono); selected literary excerpts.

### Beginning French (offered pending sufficient enrollment)

(Grades 10-12; 2 periods/week elective; full year; 1/2 credit)

This course features introductory vocabulary and grammar topics essential to basic communication in French. By the end of the year, students will have been introduced to French culture and be able to narrate, ask questions, conjugate most basic verbs, and work with possessive and descriptive adjectives as well as personal pronouns. (Note: this is a hybrid course and some of the work is completed online to help students solidify their learning outside of the 2-day a week classroom experience.) Text: *EntreCultures 1* (Wayside Publishing).

### Continuing French (not offered in 2024-2025)

(Grades 11-12; Prerequisite: Beginning French, 2 periods/week elective; full year; 1/2 credit)

This course is meant to be a continuation of the Beginning French elective course. The students will finish their work in the Beginning French text, and by the end of the year, they will be able to use direct and indirect object pronouns, all regular present tense verbs as well as various irregular verbs, and will learn the *passé composé* and the imperfect tense. (Note: this is a hybrid course and much of the work is completed online to help students solidify their learning outside of the 2-day a week classroom experience.) After successful completion of Continuing French, students have to option to enroll in French II the following year. Text: *EntreCultures 1* (Wayside Publishing).

### German 7\*

(4 periods/week; full year)

This course introduces students to the language and culture of the German-speaking world. Emphasis is on the sound system, vocabulary, and structural patterns of the language; the primary goal is basic communicative proficiency. German is used as much as possible, and class activities are designed to maximize student use of the target language. Strategies include partner work, group activities, and role play. Audio texts, a video series, and short reading passages and stories serve as language models for developing aural and reading comprehension skills as well as written skills. Culture and geography are taught as an integral part of the language acquisition process. Texts: *InterKulturell 1* (Wayside Publishing); selected short novels.

### German 8\*

(Prerequisite: German 7; 4 periods/week; full year)

This course, too, emphasizes the development of listening, reading, speaking and writing skills. Students continue their study of the linguistic structures of the language, by completing the text and course materials begun in German 7. Concrete steps are taken toward establishing an immersion environment in which the teacher and students operate mostly in German. Texts: *Prima Plus A1.2* (Cornelsen); selected short novels.

### German II

(Grades 9-12; Prerequisite: German 8 or completion of Continuing German; 4 periods/week; full year; 1 credit)

This second-year course, conducted almost exclusively in German, continues to build on the structural foundations already established, and moves toward increasingly complex use of the German language. The emphasis is on both greater facility in sustained oral and written communication, and development of enhanced reading and listening comprehension skills targeting the Novice High/Intermediate Low Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners. Reading selections, video texts, and audio materials continue to serve as linguistic models. Texts: *InterKulturell 2* (Wayside Publishing); selected short novels.

### German III

(Grades 10-12; Prerequisite: German II; 4 periods/week; full year; 1 credit)

This is an integrative course in which students continue to develop more complex linguistic structures as they engage in readings and activities that enhance their knowledge and understanding of current German culture and cultural history. Readings concerning history and authentic materials from literature, film, science, poetry, and music are key components of the course, targeting the Intermediate Low/Intermediate Mid Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners. Text: *Prima Plus B1* (Cornelsen); selected novels.

### German IV

(Grades 11-12; Prerequisite: German III; 4 periods/week; full year; 1 credit)

Students explore a wide range of texts as models for speech and topics for written and oral discussion, as they are challenged to apply their knowledge of language structure to increasingly varied communicative tasks, targeting the Intermediate Mid/Intermediate High Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners. Authentic literary and other cultural materials in the textbook are supplemented by video series, news clips, novels, magazine articles, and a film unit. Although this course is combined with German IV-Honors, the expectations and assessments will differ in quantity, length and complexity. Texts: *Neue Blickwinkel* (Wayside Publishing); selected novels.

### German IV Honors

(Grades 11-12; Prerequisite: German III & departmental approval; 4 periods/week; full year; 1 credit)

Students explore a wide range of texts as models for speech and topics for written and oral discussion, as they are challenged to apply their knowledge of language structure to increasingly varied communicative tasks, targeting the Intermediate Mid/Intermediate High Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners. Authentic literary and other cultural materials in the textbook are supplemented by video series, news clips, novels, magazine articles, and a film unit. Through the course, students will begin developing skills to take the AP German Language and Culture exam the following year. Although this course is combined with German IV, the expectations and assessments will differ in quantity, length, and complexity. Texts: *Neue Blickwinkel* (Wayside Publishing); selected novels.

### German V

(Grade 12; Prerequisite: German IV; 4 periods/week; full year; 1 credit)

This class is taught as a film class exclusively in German, incorporating vocabulary and grammar review, conversation, and film studies, and is targeted for the Intermediate High/Advanced Low Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners. Students watch various German films and short clips, and they discuss and analyze the material and what it reveals about German culture and history. This is a project-based class without tests; time is given to the systematic development of vocabulary necessary for the discussion of selected topics in order to help students prepare for oral presentations and projects as well as debates involving the whole class. Texts: selected novels.

### German V-AP

(Grade 12; German IV Honors and by departmental approval; 5 periods/week; full year, 1 credit, Honors credit)

This class, taught exclusively in German, is targeted for the Intermediate High to Advanced Low Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners. It focuses on preparing the students for the Advanced Placement Language & Culture examination through the systematic refinement of the four basic skills (writing, reading, speaking, and listening), in addition to providing a complete review of their grammar skills. Emphasis is placed on the discussion of a wide variety of topics, and active spoken participation is a daily expectation. There are also frequent language lab activities. Works and articles of informational and literary value are read, discussed, and analyzed, and short reading selections are also assigned. Texts: *Neue Blickwinkel* (Wayside Publishing); selected novels.

### Beginning Russian (offered pending sufficient enrollment)

(Grades 10-12; 2 periods/week elective; full year; 1/2 credit)

This course offers students an introduction to both the Russian language and Russian literature. On the one hand, students learn the alphabet, noun declensions, and all verb tenses in the active voice as they work to develop listening, reading, speaking and writing skills; class activities promote student use of the target language and thus communicative competence. Text: *I love Russian, A1* coursebook (Linden & Denz).

Continuing Russian (not offered in 2024-2025)

(Grades 11-12; Prerequisite: Beginning Russian; 2 periods/week elective; full year; 1/2 credit)

All those who have completed Beginning Russian are invited to continue their exploration and study of Russian in this course. Students' understanding of and ability to use the language improves as grammar and vocabulary topics including the subjunctive, verbal aspect, and verbs of motion are addressed; students also have the opportunity to strengthen their listening, reading, speaking and writing skills by using Russian in class. Text: *Beginner's Russian* (Hippocrene).

Spanish 7-Novice\*

(4 periods/week; full year)

This class is intended for students with basic to no prior Spanish experience. They will begin their journey with a thorough exploration of both the Spanish language and its many cultures. Basic communication concepts such as the present tense, personal pronouns, adjectives, as well as gender & number agreement, will first be introduced using context and then reinforced through class observations, discussion and practice as students begin to build their interpretive, interpersonal and presentational communication skills. Students will learn to think like a linguist by using both context and specific strategies while exploring unit themes of identity, school, family life, pastimes and vacations. Throughout the year, unit projects will provide the opportunity to truly apply the language using various forms of creative projects as well as integrated performance assessments that will help students to track their language proficiency progress. Texts: *EntreCulturas 1* Textbook & Activity Workbook (Wayside Publishing); selected readers.

Spanish 7-Continuing\*

(4 periods/week; full year)

This class is intended for students with previous experience in Spanish who demonstrate a Novice Mid proficiency level; it will continue to build on their prior knowledge. Basic communication concepts such as the present tense, personal pronouns, adjectives, as well as gender & number agreement will be reviewed using context and reinforced through class observations, discussion and practice as students continue to build their interpretive, interpersonal and presentational communication skills. Students will continue their linguistic journey by exploring unit themes of identity, school, family life, pastimes and vacations. Throughout the year, unit projects will provide the opportunity to truly apply the language using various forms of creative projects as well as integrated performance assessments that will help students to track their language proficiency progress. Texts: *EntreCulturas 1* Textbook & Activity Workbook (Wayside Publishing); selected readers.

### Spanish 8\*

(Prerequisite: Spanish 7; 4 periods/week; full year)

This course continues to build the basic language proficiency skills, with emphasis on increasing active vocabulary and adding the preterite (past) tense as well as object and reflexive pronouns. Students practice their speaking and comprehension skills by completing computer activities at home on the Explorer website as well as the Extempore Cloud lab. Conversation, reading, writing, and culture remain primary components of the course. Concrete steps are taken toward establishing an immersion environment in which the teacher and students begin to operate almost exclusively in Spanish and which targets the Novice Mid/Novice High Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners. Texts: *EntreCulturas 1* Textbook & Activity Workbook (Wayside Publishing); selected short novels.

### Spanish I

(Grades 9-12; Prerequisite: Department Chair approval; 5 periods/week; full year; 1 credit)

This course is for those who want to start Spanish in the upper school, or students whose skills learned in 7<sup>th</sup> and 8<sup>th</sup> grade need more practice (per department recommendation). Conversational ability is developed with emphasis on pronunciation, communication, and vocabulary. Students learn to manipulate both the present and preterite (past) tenses of regular and irregular verbs, adjective agreement, interrogative expressions, and direct and indirect object pronouns within the context of several topical vocabularies. Students have online access to Supersite to practice and reinforce skill development. The course is designed to lay a strong foundation for future study; it is the equivalent of Spanish 7 and Spanish 8 combined. Texts: *Descubre 1* (Vista Higher Learning); selected beginner novels.

## Spanish II

(Grades 9-12; Prerequisite: Spanish I or equivalent\*; 4 periods/week; full year; 1 credit)

*¡Nuestra meta es ser bilingües!* (Our goal is to be bilingual!) Spanish II serves to maintain and build enthusiasm for the continued study of Spanish. As students are introduced to advanced grammar topics like the preterit and imperfect, the three moods and many of their tenses, “por” and “para” and relative pronouns, students will dive into engaging activities that will build their linguistic fluency. Audio immersion with television series in Spanish help students adapt their hearing to fast but natural Spanish speech and accents. Spanish is at the core of this class and skills are reinforced, targeting the Novice High/Intermediate Low Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners. Much work is done collaboratively to reinforce that students are global citizens who need each other. Texts: *EntreCulturas 2* Textbook & Activity Workbook (Wayside Publishing).

## Spanish III

(Grades 10-12; Prerequisite: Spanish II; 4 periods/week; full year, 1 credit)

Spanish III meets the Intermediate Low/Intermediate Mid Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners. The main objective is to have a lasting understanding of the language, to cooperate and interact beyond the classroom experience and collaborate with the community and the world. The class is distributed in 6 units, each embedding essential questions that are related to the study of the language. The goals for the year are the emphasis on communication, knowledge of different Hispanic cultures, comparisons of Hispanic cultures with our own community and the connections among them. It is important to continue the study of grammar and the implementation of all basic grammatical uses such as: perfect forms, “Si” clauses, and the imperfect subjunctive. Each unit will support understanding of essential questions to assess students' prior knowledge of the language, applying grammar, and determining if students are mastering the required skills. Answers to the essential questions must be supported with evidence from authentic sources and vocabulary control. The essential questions in each unit will be reviewed throughout the course to reinforce the concepts presented and help students develop critical thinking and achieve a clear understanding of issues and to solve problems creatively. Finally, students will continue to practice language application standards for interpersonal, interpretive, and presentational communication. Several projects involved in research of a variety of topics are assigned. Texts: *EntreCulturas 3* Textbook & Activity Workbook (Wayside Publishing); selected readings.

### Spanish IV

(Grades 11-12; Prerequisite: Spanish III; 4 periods/week; full year; 1 credit)

This course, targeting the Intermediate Mid/Intermediate High Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners, is designed to improve students' ability to communicate in the target language through a wide range of writing, reading, listening and oral exercises. These may include individual or group presentations, voice recordings, essays, and other exercises. Previously studied grammar concepts will be reviewed to strengthen the students' use of language. Selections from literary texts are examined for their semantic and cultural meaning. Active discussions about news clips, documentaries, films, and music will help students develop their understanding of language and culture. Texts: selected literary texts.

### Spanish IV Honors

(Grades 11-12; Prerequisites: Spanish III and departmental approval; 4 periods/week; full year; 1 credit)

This course, targeting the Intermediate Mid/Intermediate High Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners, is designed to refine the already well-developed communicative competence of students. A wide range of writing, reading, listening and oral exercises will provide students with the necessary skills to communicate proficiently in the target language. Recognizing that usage of the target language is key to the second language acquisition, the students will have several oral evaluations in the form of individual and group presentations. Grammar concepts previously studied will be further analyzed to strengthen the students' use of language. An ample selection of literary texts is examined for their semantic and cultural meaning. Other media such as news clips, documentaries, film and music coupled with active discussions are an integral part to developing the students' understanding of language and culture. This course specifically prepares students to take the Spanish-AP course the following academic year. Texts: selected literary texts.

### Spanish V

(Grade 12; Prerequisite: Spanish IV; 4 periods/week; full year; 1 credit)

This course gives prominence to developing the students' conversational and writing skills and is targeted for the Intermediate High/Advanced Low Proficiency levels as outlined in the ACTFL Performance Guidelines for K-12 learners. Students are expected to regularly share their ideas and opinions using the target language. Current events, literary texts and several films provide the framework for class discussions as well as insight to the history and culture of the Hispanic world. This course also emphasizes the development of new vocabulary and linguistic expressions to aid students in their conversational and writing skills. Text: *Cinema for Spanish Conversation* (Hackett Publishing).

NOTE: Due to the mature content of several of the movies (some of which are rated R) all students need permission from a parent or guardian to watch them before enrolling in the course.

### Spanish V-AP

(Grade 12; Spanish IV Honors and departmental approval; 5 periods/week; full year, 1 credit, Honors credit)

This course represents the level of a third-year college course in Spanish through its content, expectations, and activities. Communication (interpersonal, presentational, and interpretive) is the main goal of this course and provides students with opportunities to demonstrate their proficiency in each of the three modes in the intermediate to pre-advanced range as described in the ACTFL Performance Guidelines for K-12 Learners. The class emphasizes Latin American and Spanish culture and literature embedded with history and current events to help students compare their own communities with that of the Spanish-speaking world at large. Expression and grammatical accuracy are highly emphasized and expected. Students are expected to take the Spanish Language and Culture Examination in May. Texts: *¡Qué chévere 4!* (EMC); *AP Spanish Language and Culture Exam Preparation* (Vistas Higher Learning). Additional sources include selected literary texts and news articles.

## MATHEMATICS

**JBS Graduation Requirement:** Two years of mathematics in grades nine through twelve. However, most colleges to which our students apply require or prefer at least three years of math through Precalculus (see p. 6).

The goals of the math program at JBS are to provide all students with computational skills and a knowledge of the basic facts, principles, and methods of mathematics; to develop in each student the ability to explore, make conjectures, and reason logically; and to help students learn to effectively communicate mathematical ideas. Students are encouraged to think critically and creatively in applying their mathematical knowledge to problems and are given the opportunity to explore the various applications of mathematics. One goal is to provide students with the background and appropriate skills to enable them to expand their mathematical knowledge in the future. In most courses, a TI-84+ graphing calculator is required and is used alongside other computational tools to develop central ideas and skills.

An array of courses is offered at each grade level to ensure that students are appropriately challenged. The curriculum is not tracked, but rather each year the department reviews the work and demonstrated learning of each student, and makes thoughtful placement recommendations for each student.

The following table shows the courses available at each grade level.

<b>Grade</b>	<b>Courses Offered</b>
7	Math 7, Math 7 Accelerated
8	Algebra I, Algebra I Accelerated
9	Geometry, Geometry Accelerated
10	Algebra II, Algebra II Accelerated, Algebra II Challenge
11	Precalculus, Precalculus Accelerated, Precalculus Honors, Statistics*, Economics*
12	Calculus, AP Calculus AB, AP Calculus BC, Statistics, Multivariable Calculus, Economics*

*\* Should not be substituted for a student's primary mathematics course. These classes have limited enrollment and rising 12<sup>th</sup> graders are given preference.*

NOTE: Students receive course recommendations from the Mathematics Department with their Spring Updates. Recommendations are carefully considered by the department and are based on a number of factors, including input from current math teachers and demonstrated learning in current math courses. Students who are not recommended for an accelerated or honors course are strongly discouraged from enrolling in the course and must meet with the math department chair to obtain a signature if they intend to enroll in a class against recommendation.

### Math 7

(Grade 7: required if not in Math 7 Accelerated; 5 periods/week; full year)

This course is designed to provide the crucial background skills that students need for success in 8th-grade math. Emphasis is placed on firming up basic skills, exploring topics and skills that are new and more complex, and understanding why procedures work as they do. Students gain a solid foundation in arithmetic involving positive and negative numbers, fractions, decimals, percentages, prime factorization, square roots, ratios, order of operations, use of variables in problem solving, translating words and ideas into algebra, basic equation solving, area of plane figures and volume of solids. Extra time is devoted to study strategies, and the importance of showing and organizing work.

### Math 7 Accelerated

(Grade 7: required if not in Math 7; 5 periods/week; full year)

This course is designed to build upon even the most rigorous elementary mathematics curriculums. It provides all students with a solid foundation in order of operations, integers, absolute value, algebraic proof, integer exponents, number theory, fractions, decimals, percentages, equation solving, ratios, proportions, and basic two-dimensional and three-dimensional geometry. The supporting theory and principles behind each new idea are explored in significant depth. Students synthesize concepts, apply concepts in unfamiliar situations, generalize, hypothesize, and communicate their understanding both verbally during class and in written form on assessments and on daily assignments. Much emphasis is placed on the use of precise language and notation, problem-solving techniques, writing skills used in mathematics, and organization of thought processes.

### Algebra I

(Grade 8; required if not in Algebra I Accelerated; 5 periods/week; full year)

Algebra is the foundation for all later work in mathematics; mastery of concepts and skills is imperative. This course will cover the essential Algebra I skills, concepts, and ideas. The language and methods of algebra are the tools, while the multi-step problems are the context. Charts, diagrams, graphs, and the TI-84+ calculator are used to enhance the level of understanding, as well as to provide alternative approaches in problem solving. Topics covered will include linear and quadratic equations, word problems, factoring, algebraic fractions, graphing, function notation, systems of linear equations, and radicals. Students will have the opportunity to practice skills and to build a repertoire of problem-solving techniques. Time is allocated for consistent, cumulative review and for practice recognizing the various types of mathematical situations that students may encounter.

### Algebra I Accelerated

(Grade 8; required if not in Algebra I; 5 periods/week; full year)

Algebra is the foundation for all later work in mathematics; mastery of concepts and skills is imperative. The language and methods of algebra are the tools, while the multi-step problems are the context. Charts, diagrams, graphs, and the TI-84+ calculator are used to enhance the level of understanding, and to provide alternative approaches in problem solving. Topics covered will include everything in Algebra I, as well as logic, linear inequalities, absolute value functions, and more challenging problems throughout each unit. This is a fast-paced course. Rapid generalization and the ability to use abstraction are expected.

### Geometry

(Grade 9; Prerequisite: Algebra I; 5 periods/ week/ full year)

The goals of the course are two-fold: content and form. The content is driven by investigations leading to definitions and conjectures; congruence and similarity of triangles and polygons; parallel lines; the Pythagorean theorem and its applications; analysis of area and volume; the geometry of circles; and basic techniques of analytical geometry. Constructions are used to help students experience the ideas at hand. The content areas are used to develop understanding of the form and processes of mathematics. Students learn to employ inductive and deductive reasoning. There is an emphasis on proof when the material allows it, and students learn that conclusions must be consistent with the assumptions on which they are based. They work to explore, understand, and clearly communicate the ideas they encounter. In addition, some algebra review will be interwoven as needed.

### Geometry Accelerated

(Grade 9; Prerequisite: Algebra I; 5 periods/ week/ full year)

The goals of the course are two-fold: content and form. The content includes definitions, postulates, and theorems; congruence and similarity of triangles and polygons; parallel lines; the Pythagorean theorem and its applications; analysis of area and volume; the geometry of circles; and basic techniques of analytical geometry. In addition, several extension topics are incorporated, including constructions, the description of a locus, transformations, points of concurrency, or the hinge theorems. The content areas are used to develop understanding of the form and processes of mathematics. Students learn the fundamentals of formal logic and deductive reasoning. The course is rigorous and heavily proof-based, and students learn that conclusions must be consistent with the assumptions on which they are based. They work to explore, understand, and clearly communicate the ideas they encounter. This is a fast-paced course. Rapid generalization, a solid mastery of Algebra I topics, and a strong ability to represent and interpret mathematical ideas visually are expected.

## Algebra II

(Grade 10; Prerequisite: Geometry; 4 periods/week; full year; 1 credit)

This course continues the development and efficient application of algebraic skills introduced in Algebra I. Several major families of functions are constructed and explored: linear, quadratic, absolute value, exponential, polynomial, and radical. When appropriate, the study of these functions includes additional discussion of transformations, composition of functions and modeling. Other topics that are developed and applied include basic combinatorics and probability, basic complex numbers, systems of linear equations, factoring, rational algebraic expressions, and rational algebraic equations. Multiple analytic approaches, as well as graphical and numerical methods, are applied to the problems in this course. An important goal of Algebra II is that students learn to discern which of these many methods is most appropriate in a given situation. Algebra II is the first part of a three-year sequence, which continues with Precalculus and then Calculus, giving students time to practice and master these mathematical skills, concepts, and procedures.

## Algebra II Accelerated

(Grade 10; Prerequisite: Geometry; 4 periods/week; full year; 1 credit)

This course continues the development and efficient application of algebraic skills introduced in Algebra I Accelerated. Several major families of functions are constructed and explored: linear, quadratic, absolute value, exponential, polynomial, variation and radical. The study of these functions includes additional discussion of transformations, composition of functions and modeling. Other significant topics that are developed and applied include combinatorics and probability, general equation solving algorithms, relations, complex numbers, matrix algebra, rational exponents, systems of linear and nonlinear equations, systems of inequalities, factoring, rational algebraic expressions, and rational algebraic equations. Multiple analytic approaches, as well as graphical and numerical methods, are applied to the problems in this course. An important goal of Algebra II Accelerated is that students learn to discern which of these many methods is most appropriate in a given situation. After Algebra II Accelerated, all junior level classes are possible placements for students: Precalculus, Precalculus Accelerated, or Precalculus Honors.

## Algebra II Challenge

(Grade 10; Prerequisite: Geometry; 4 periods/week; full year; 1 credit)

This course builds on the efficient application of algebraic skills introduced in Algebra I Accelerated. All of the same topics are taught as in Algebra II Accelerated, but symbol manipulation and procedural practice are covered quickly and given less emphasis. Students will engage in collaborative, complex problem solving to develop their verbal and written mathematical communication skills. Students will explore rigorous applications with their

classmates and will present their solutions regularly. Important goals of Algebra II Challenge are that students learn to write crisp and coherent mathematical arguments, to explain their solutions clearly, and to sustain their effort while exploring some of the classic and famous challenging mathematical problems. After Algebra II Challenge, students take either Precalculus Accelerated or Precalculus Honors.

### Precalculus

(Grade 11; Prerequisite: Algebra II; 4 periods/week; full year, 1 credit)

This course helps students complete the prerequisite mathematics for a year-long Calculus course. The course builds upon the introduction of functions in Algebra II to develop competence in evaluating, analyzing, graphing, inverting, applying, and seeking connection between different families of functions. Students will study polynomial functions, rational functions, exponential functions, logarithmic functions, and basic trigonometric functions. Upon successful completion of this class, students will take Calculus or Statistics.

### Precalculus Accelerated

(Grade 11; Prerequisite: Algebra II; 4 periods/week; full year; 1 credit)

This course embraces a thorough study of the mathematics needed for calculus, including in-depth study of these major families of functions: exponential, logarithmic, trigonometric, polynomial, and rational. Mastery of linear and quadratic functions is assumed from previous study, as are complete and sound algebraic skills. There is much emphasis on graphing all functions studied. In addition to graphing, properties, and applications of each kind of function are studied. Limits and limit notation is introduced and applied to function analysis. Upon successful completion of Precalculus Accelerated, students will take Calculus, AP Calculus, or Statistics.

### Precalculus Honors

(Grade 11; Prerequisite: Algebra II; 4 periods/week; full year; 1 credit)

This challenging and fast-paced course covers the mathematics required for the study of calculus. Emphasis is placed on function analysis, including the use of limits to understand function behavior. Students will learn to graph, analyze, combine, compose and invert exponential, logarithmic, rational, polynomial, and trigonometric functions. Both unit circle and right triangle approaches to cover trigonometry are used, as well as all major families of trigonometric identities, inverse trigonometric functions, graphing, equation solving, and applications of trigonometry. Nonlinear inequalities, parametric equations, polar equations, and conics are also concepts explored in detail. Students should be able to recall and apply concepts and techniques covered in Algebra II and Geometry and are expected to synthesize material readily, to collaborate and communicate effectively, and to use format and notation in their written solutions

appropriately. Upon successful completion of Precalculus Honors, students will take Calculus, AP Calculus, or Statistics.

### Calculus

(Grade 12; Prerequisite: Precalculus; 4 periods/week; full year; 1 credit)

This calculus course covers functions, limits and continuity, differential calculus, integral calculus, and many applications. Applications are drawn from several fields, including science and business. Students use analytical, numerical, and graphical techniques to model, solve, and communicate understanding of a variety of problems. The course focuses on both conceptual understanding and procedural skill, and an emphasis is placed on the underlying meaning of concepts and the connections among them. This course is designed to provide a good foundation in calculus and is intended to help students transition smoothly into a college calculus course.

### AP Calculus AB

(Grade 12; Prerequisite: Precalculus; 5 periods/week; full year; 1 credit, Honors credit)

This is a college level first course in calculus which is challenging and fast-paced. There are two primary goals of the course: (1) to learn calculus using analytical, numerical, and graphing techniques, and (2) to refine approaches to problem-solving. Topics include limits and continuity, differential calculus with applications, and integral calculus with applications and methods of integration. Students are required to take the Calculus Advanced Placement examination (see p. 8, section 8). Most colleges grant placement or credit based on the examination results.

NOTE: The Mathematics Department recommends the following for students who are considering AP Calculus AB: a Precalculus Honors student should consistently earn scores in the B range or higher; a Precalculus Accelerated student should consistently earn uncorrected test scores in the B+ range or higher.

### AP Calculus BC

(Grade 12; Prerequisite: Precalculus; 5 periods/week; full year; 1 credit, Honors credit)

This is a college-level first course in calculus, which covers a full year of college calculus and is rigorous and fast-paced. There are two primary goals of the course: (1) to learn calculus using analytical, numerical, and graphing techniques, and (2) to learn approaches to problem-solving. Topics include all the topics in AP Calculus AB, as well as improper integrals, polar, vector, and parametric functions, infinite sequences, and power series. Students are required

to take the Calculus Advanced Placement examination (see p. 8, section 8). Most colleges grant placement or credit based on the examination results.

NOTE: The Mathematics Department recommends that a Precalculus Honors student considering AP Calculus BC earn scores in the A- range or higher. Students in Precalculus Accelerated will not have covered all the prerequisite material.

### Multivariable Calculus

(Grade 12; Prerequisite: AP Calculus; 4 periods/week; full year; 1 credit)

This course covers topics in multivariable calculus such as vector algebra, parametric functions in multiple coordinate systems, calculus on vector-valued functions, surfaces, partial derivatives, and path integrals, as well as repeated integrals. The course also exposes students to advanced mathematical topics such as set theory and cardinality, topology, and group theory. Students use analytical, numerical, and graphical techniques to model, solve, and communicate understanding of a variety of problems. The course focuses on both conceptual understanding and procedural skill, and an emphasis is placed on the underlying meaning of concepts and the connections among them. Class discussions and collaborative work are an integral part of the course.

### Statistics

(Grades 11-12; Prerequisite: Algebra II; 4 periods/week; full year, 1 credit)

Statistics, the study of data analysis and data-based reasoning, plays an increasingly vital role in virtually all professions and fields of study. This course introduces students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Data sets used in this course are drawn from many facets of life and published research in both hard sciences and the social sciences. The TI-84+ calculator, with its statistical operations, is used regularly to support class investigations. In addition, statistical applications may be used in class and for project work. Students who wish to take the Advanced Placement Statistics examination are well prepared to do so as the course covers all topics on the syllabus.

### Economics

(Grades 11-12; Prerequisite: Algebra I; 4 periods/week; full year; 1 credit)

This course offers an introduction to the study of economics with a focus on macroeconomics. Class time and independent work will include a mix of lectures, activities, readings, videos, written exercises, and online resources; we will incorporate current events whenever possible. An introduction to economic thinking and the economic forces at work around us will help students be more

educated consumers of goods/news/data and more informed participants in the local/national/world economy and the democratic process.

Over the course of the school year, students will examine relationships among broad economic aggregates such as national income, saving, investment, consumption, employment, and the money supply and learn how measures such as GDP, CPI, unemployment, and trade balances are defined, calculated, and used to assess the health of the macroeconomy. The interactions of market forces, government intervention, and Federal Reserve actions to shape monetary and fiscal policy will be a major focus. The course also includes a unit on personal finance and career development. Coursework will prepare interested students to take the AP Macroeconomics exam.

## SCIENCE

JBS Graduation Requirement: Two laboratory Science courses.

The Science department offers a variety of science experiences. Students are introduced to the richness and excitement of understanding the natural world. The curriculum is designed to be relevant to students' lives, and also to provide the foundation for further study of the more theoretical and abstract concepts of biological, chemical, and physical phenomena.

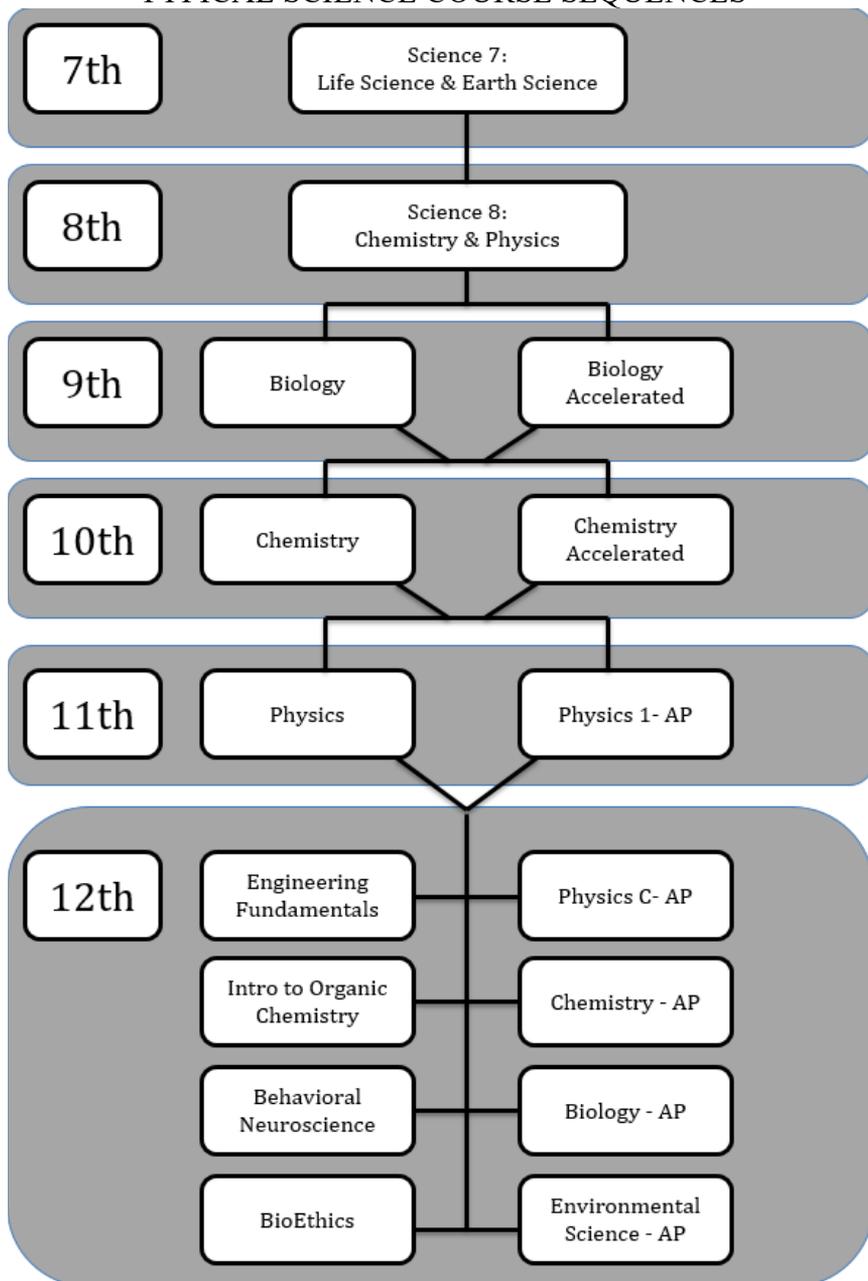
Laboratory work is an integral part of every science course. Students learn in the early grades to observe carefully, collect accurate data, and draw scientific conclusions. Students in the introductory high school sciences and the Advanced Placement sciences spend from five to seven periods per week (depending on the specific course) in the science classroom to accommodate both double period laboratory activities as well as lectures and discussion sessions. Those taking an Independent Study work individually with a science teacher-mentor to study a topic of interest through in-depth analysis, experimentation and research.

The sequence of courses in grades nine through twelve ensure that all students are presented the fundamentals of biology, chemistry and physics in their first three years of high school. In their junior and senior years, students may elect to take an Advanced Placement science course or a class on a topic of interest.

**\*\*NOTE:** The number of sections scheduled for AP courses and senior science electives is determined by the number of sections that must be scheduled for regular courses and by AP enrollment projections. While every effort will be made to enroll students in their preferred courses, if enrollment requests exceed class capacities, some students may not get their first choice.

The flow chart on the following page illustrates the typical sequences of science courses (exceptions to these sequences are possible):

## TYPICAL SCIENCE COURSE SEQUENCES



Exceptions to this flow chart are possible.

## Science 7: Principles of Life Science and Earth Science

(Required; 4 periods/week, full year)

Understanding and working with scientific exploration is central to the study of all sciences. Thus, students in both the Life Science semester and the Earth Science semester participate in a mixture of observational, directed, and inquiry-based laboratory activities and experiments. Students generate testable questions, work with and design-controlled experiments, take measurements, organize data, draw conclusions, and present results in written and oral formats. The development of science and study skills such as outlining, note taking, keeping a class notebook, data graphing, and analyzing graphs are given particular attention throughout the year. Life Science includes topics on features of living things, cell structure and function, evolution and classification, and the animal kingdom while the Earth Science semester focuses on earth structure, rocks and minerals, and plate tectonics.

## Science 8: Principles of Chemistry and Physics

(Required; 4 periods/week, full year)

Chemistry and Physics are each studied for one semester. Chemistry emphasizes the development of laboratory skills and includes the classification of matter, the model of the atom, chemical bonding, and chemical reactions. Particle models of the states of matter and simple chemical reactions are utilized. Physics studies the motion of objects including Newton's Laws of Motion, forces and interactions, and the energy involved with physical systems. Laboratory data gathering, constructing and interpreting graphs of data, observational skills, organizational skills, concept mapping, and study skills are emphasized throughout the semesters. Partner work and projects emphasize collaboration with peers.

## Biology

(Grades 9-10; 6 periods/week, full year; 1 credit)

This course provides a comprehensive overview of the central concepts of biology: cell structure and processes, genetics, human physiology, evolution, ecology and the diversity of life. Each week four periods are spent in the laboratory, carrying out experiments and investigations to enhance understanding and application of biological concepts. The remaining two are devoted to lectures and activities that include: computer labs, presentations, data analysis, cooperative learning, simulations, modeling, and discussions. Students are also required to participate in team projects and group explorations that involve using scientific method skills and writing formal lab reports. The course culminates in the spring with a four-day trip to Drey Land for a field ecology study.

### Biology Accelerated

(Grades 9-10; 7 periods/week, full year; 1 credit)

This course covers the similar general topics as Biology but examines each area at a greater level of depth and detail, and proceeds at a faster pace. It provides a comprehensive overview of the central concepts of biology including cell structure and function, DNA and genetics, human and plant physiology, evolution, ecology and the diversity of life. Each week four periods are spent in the laboratory, carrying out experiments and investigations using the scientific method, while the remaining three are devoted to the exploration and discussion of new material. The ecology unit culminates in the spring with a four-day trip to Drey Land for a field ecology study. Biology Accelerated is the appropriate course for students with strong math and reading abilities who already have well developed study habits and organizational skills.

NOTE: Students receive recommendations from the Science Department with their Spring Updates. Recommendations are carefully considered by the department and are based on a number of factors, including input from both fall and spring semester science teachers. Students who are not recommended for Biology Accelerated are strongly discouraged from enrolling in this course and must meet with the science department chair to obtain a signature if they intend to enroll against this recommendation.

### Chemistry

(Grades 10-11; Prerequisite: Biology; 6 periods/week, full year; 1 credit)

This course introduces students to the study of our physical world at the atomic level through an active experimental approach. The classic essential topics of atomic structure, reactions and equations, chemical calculations and the mole, gas laws, periodicity, and acid-base chemistry are covered as well as recent topics related to chemistry's role in protecting and sustaining the environment. Problem-solving is a major component of chemistry as well as laboratory investigations, data analysis, lectures, demonstrations and reading assignments. Students are expected to have experience with both word processing and computer graphing programs. This course meets the needs of any student desiring a general background in chemistry.

### Chemistry Accelerated

(Grades 10-11; Prerequisite: Biology; 7 periods/week, full year; 1 credit)

This course is appropriate for students with strong study skills and for future science majors. The work for the year is organized around key concepts and principles, which are preparatory for future science courses. These fundamental principles are often developed on the basis of experimental data and quantitative reasoning in the laboratory. Some experiments utilize computer-based data collection technology while others use more traditional methods for collection. Lectures, demonstrations, reading assignments, and problem sessions emphasize the chemical bond, quantum model of the atom, periodicity of the elements, thermodynamics, nuclear chemistry, acids-bases, gas laws, oxidation-reduction reactions, stoichiometrics, and the mole concept. Animations, tutorials and simulations serve to enrich and clarify ideas. This course examines more topics, requires a deeper understanding of chemical concepts, relies heavily on mathematical explanations, and proceeds at a faster pace than Chemistry.

NOTE: Students receive recommendations from the Science Department with their Spring Updates. Recommendations are carefully considered by the department and are based on a number of factors, including input from current science teachers and grades in current math courses (i.e., Science Department recommends that students considering Chemistry Accelerated should have completed Geometry Accelerated with at least *B*+s for both semesters. Geometry students should have earned at least *A*-s for both semesters.) Students who are not recommended for Chemistry Accelerated are strongly discouraged from enrolling in this course and must meet with the science department chair to obtain a signature if they intend to enroll against this recommendation.

### Physics

(Grades 11-12; Prerequisite: Chemistry and Algebra II (or concurrent registration); 7 periods/week, full year; 1 credit)

This course in physics includes the study of motion, forces, energy, momentum, and waves. Students use a wide variety of graphical and pictorial tools, in addition to mathematics, to describe, to interpret, and to make predictions about physical phenomena. Several collaborative project-based units are based on curriculum developed and tested by the Lucas Educational Foundation; these connect the material to real-world challenges. The course is built upon a small number of essential physics concepts which are developed in depth and with conceptual coherency.

### Physics 1-AP

(Grades 11-12; Prerequisites: Algebra II, Chemistry; 7 periods/week, full year; 1 credit, Honors credit)

This introductory college-level course in physics covers motion, forces, energy, momentum, rotating systems, oscillating systems, and fluid mechanics. This course employs a rigorous text and places a stronger emphasis on mathematical analysis than the other non-AP physics course offered to juniors and seniors; students in Physics 1-AP should anticipate a greater degree of algebraic difficulty in the problems and a more regular and frequent use of trigonometry. The course also covers more topics and therefore moves at a faster pace than Physics. Students enrolled in the course are expected to achieve at a level sufficient to earn college credit and thus are required to take the Advanced Placement examination in May (see p. 8, section 8).

NOTE: Students receive recommendations from the Science Department with their Spring Updates. Recommendations are carefully considered by the department and are based on a number of factors, including input from current science teachers and grades in current math courses. The Science Department recommends the following for students who are considering Physics 1-AP: Students should have completed the second year of the Algebra sequence and have a thorough facility with algebraic equations and graphical analysis. This typically corresponds to earning at least a B+ in Algebra II Challenge for both semesters or at least an A- in Algebra II Accelerated for both semesters. A Chemistry Accelerated student should have at least B+s in both semesters and a Chemistry student should have at least A-s in both semesters. Students who are not recommended for Physics 1-AP are strongly discouraged from enrolling in this course and must meet with the science department chair to obtain a signature if they intend to enroll against this recommendation.

### Independent Study: Science

(Grades 11-12; Prerequisites: approval by the teacher, department chair, and principal; minimum of 2 periods/week; 1/3 credit)

Independent study on a scientific topic of interest to the student may be explored under direct supervision of a teacher in the department. A general idea or area of interest must be discussed with the supervising teacher before approval can be granted, and the student must be self-disciplined and committed to working on the project. The student must complete the Independent Study Contract during the first week of the semester in which the work begins. Independent study focuses on areas of science not taught in other available science courses.

### Behavioral Neuroscience

(Grade 12; enrollment limited to 18 students per section; Prerequisites: Biology and Chemistry; 5 periods per week; full year; 1 unit)

This course examines the relationship between both human and animal behavior and the nervous system. The course begins by exploring evolutionary processes, the basic physiology of the neuron, the brain, and the endocrine system. This introduction is followed by investigations of human and non-human behavior from both an evolutionary and a nervous system perspective. Topics include sensation and perception, the biological mechanisms of drug action, learning and memory, evolutionary adaptations of behavior, sexual behavior, motivation and emotion, social behavior, and behavior disorders. Students spend one double period per week in the laboratory performing neurophysiology experiments, exploring neuroanatomy and performing experiments in animal behavior (such as conditioning rats and evaluating habitat preferences in select animals). During the second semester, students must devote portions of two or more free periods per week to rat training.

### Biology-AP \*\* (see note on p. 48)

(Grade 12; enrollment limited to 18 students per section; Prerequisites: Biology, Chemistry; 7 periods/week, full year; 1 unit, Honors credit)

This course is designed to be the equivalent of a college introductory biology course usually taken by biology majors during their freshman year. The two main goals are to develop a conceptual framework for modern biology and to gain experience and practice of biology through experimentation and inquiry. The content explores and weaves together the four big ideas of biology: (1) Evolution drives the diversity and unity of life; (2) Organisms utilize energy and molecular building blocks; (3) Organisms retrieve, transmit and respond to information; and (4) Biological systems interact and these interactions create complex properties. By questioning, hypothesizing, observing, performing experiments, graphing, and statistically analyzing data, and drawing logical conclusions during two double-period laboratories per week, students will develop and refine testable explanations and predictions of natural phenomena. Students enrolled in the course are expected to achieve at a level sufficient to earn college credit. Students are required to write the Advanced Placement examination in May (see p. 8, section 8).

### Intro to Organic Chemistry (not offered in 2024-2025)

(Grade 12; enrollment limited to 18 students per section; Prerequisites: Algebra II, Biology, Chemistry; 5 periods/week, full year; 1 credit)

Students who took 10th grade chemistry (either regular or accelerated) have the necessary background to explore the chemistry of living things in this course. Lab activities include the extraction and analysis of the flavor molecules from several spices such as cloves and cinnamon. Students will also learn the synthesis of aspirin. Cocoa and its chemical components will be studied as students craft their own small batches of chocolate. Through this course, students who are considering health or medicine related paths will gain valuable understanding and lab experience that will help them succeed in the challenging coursework that awaits them after high school. Students will learn the naming system for carbon-based compounds; related topics of food, medicine, and biodiesel production and quality control will be explored. Lab activities focusing on extraction and isolation of historically interesting compounds from plants will guide the lab activities during the first semester. Synthesis of molecules and organic reactions will be the focus of the second semester. An exploration of common chemical reactions and the interplay with three-dimensional structures will introduce students to the significance of carbon-based chemistry. Students will be scheduled for one double period per week in the chemistry laboratory performing student centered laboratory work.

### Chemistry-AP \*\* (see note on p. 48)

(Grade 12; enrollment limited to 18 students per section; Prerequisites: approval of the department chair, Chemistry (preferably Accelerated), Precalculus); 7 periods/week, full year; 1 unit, Honors credit)

This course meets the objectives of a freshman chemistry course on the college level. The emphasis is on the mathematical and theoretical aspects of inorganic and organic chemistry and on training in fundamentals needed for future work in chemistry or in related fields. This course differs from the usual secondary school course in the kind of textbook used, the amount and kind of laboratory work, the emphasis on mathematical formulation of principles, and in the special consideration given to the arithmetical solutions of problems. Laboratory work includes college first-year experiments in inorganic chemistry plus extended independent studies in qualitative analysis and complex synthesis. This course follows the recommended program for chemistry published by the College Board. Students enrolled in the course are expected to achieve at a level sufficient to earn college credit, and thus are required to take the Advanced Placement examination in May (see p. 8, section 8).

### Engineering Fundamentals: A Project Based Introduction

(Grade 12; enrollment limited to 18 students per section; Prerequisites: Biology, Chemistry, Physics; 5 periods/week; full year; 1 credit)

In this class, students design solutions to authentic real-world problems; their work benefits real people. In the first semester students design a water system for a rural community in Central America, and in the second semester they solve a problem for a St. Louis agency. Engineers are problem solvers who use the principles of math and science as their toolkit. In the first semester, students learn tools and strategies of the design process, with emphasis on understanding the problem well before beginning to design a solution. They also study the basics of fluid mechanics, which applies to most engineering disciplines either directly or by analogy. They immediately apply these principles to designing a water supply system for an under-resourced community in rural Central America. This is a ten-week collaboration with an international sustainable development agency called Global Brigades. Often, the class decides to work together on fundraising activities to help make their design a reality for the community. In the spring semester, students spend a month studying aspects of the forward-looking fields of biotechnology and digital connectivity. The remainder of the spring semester is focused on a capstone project, in which students function as a project team to solve another real problem with a societal benefit, with a St. Louis area agency as the client. The textbook for this class, “Engineering: A Project-Based Introduction,” is used in the first-year design course at Harvey Mudd College.

### Environmental Science-AP\*\* (see note on p. 48)

(Grade 12; enrollment limited to 18 students per section; Prerequisites: Biology, Chemistry, Physics; 5 periods/week; full year; 1 credit; Honors credit)

AP Environmental Science is a college level integrated study of ecology and environmental science. The course provides students with the scientific principles, concepts, and methodologies required to understand the fundamental concepts of ecology; to identify, analyze, and evaluate environmental concerns both natural and human-made; and to examine possible solutions for resolving these environmental issues. Environmental science is an interdisciplinary study that draws from biological, physical, chemical, and earth sciences as well as social sciences including economics, politics, and sociology. One double period per week is devoted to laboratory and/or field investigations. The goal of these investigations is to complement the classroom portion of the course by allowing students to learn about the environment through firsthand observations and experiments. Examples of investigations include collecting and analyzing Deer Creek water and JBS prairie soil samples, conducting long term studies on local ecosystems, constructing and analyzing model windmills, and visiting local sites of environmental interest. Students enrolled in the course are required to take the Advanced Placement exam and are expected to achieve at a level sufficient to earn college credit (see p. 8, section 8).

### Physics C-AP\*\* (see note on p. 48)

(Grade 12; enrollment limited to 18 students per section; Prerequisites: Precalculus, Chemistry, Physics, concurrent or completed enrollment in AP Calculus, and approval of Dept. Chair; 6 periods/week, full year; 1 credit, Honors credit)

AP Physics C is a yearlong, calculus-based physics course that covers the material required for students who plan to major in the physical sciences or engineering in college. The course is broken up into two main sections, one portion on Mechanics and the other portion on Electricity and Magnetism. Consequently, students will be able to take two different AP exams at the end of the year, one that covers the Mechanics material and one that covers the Electricity and Magnetism material.

Students will use applications of introductory differential and integral calculus throughout the course, as well as gain hands-on experience in using laboratory equipment and computer-based data collection. This course employs a rigorous text and places a strong emphasis on mathematical analysis of physical phenomena. Students enrolled in the course are expected to achieve at a level sufficient to earn college credit and thus are required to take the Advanced Placement examination (AP Physics C: Mechanics only) in May (see p. 8, section 8).

### Bioethics

(Grade 12; enrollment limited to 16 students; 4 periods/week; full year; 1 credit)

This seminar explores the political and ethical decisions behind some recent and some historical scientific issues. Led by both a science and a history teacher, students explore the science behind the issues before confronting the political and ethical ramifications of them. Students are evaluated (written and orally) on their knowledge of the science and its political and ethical implications and are expected to be active participants in both segments of the class - the scientific component as well as the discussion component, which are weighted equally. Contemporary issues covered may include: gene therapy, cloning, medical marijuana, the genetics of race, HIV and AIDS, and the ethics of human and animal experimentation. Historical issues addressed may include: the use of research by Nazi scientists, the Tuskegee experiments, and the human radiation experiments. Students will choose their own topic for a group presentation in the spring. A sample approach follows: *if the topic was stem cells, students would learn what various types of stem cells are, and what applications they might have, before considering ethical implications of such research, and whether or not the government should fund research into stem cells.*

## PERFORMING ARTS

JBS Graduation Requirement: Four courses in the Arts: 3 in the Fine Arts (Visual or Performing) and 1 in the Practical Arts

### MUSIC

The belief that a student's music education is equally vital and no less demanding than other academic subjects guide the Music Department's philosophy. The study of music gives us the ability to communicate the ideas and emotions of the human spirit. At the same time, a growing body of research indicates that music education provides significant cognitive benefits and bolsters academic achievement. Students in the music program learn to work cooperatively, pose and solve problems, and forge the vital link between group effort and quality of result. These skills and attitudes, not incidentally, are vital for success in the 21<sup>st</sup> century workplace.

7<sup>th</sup> and 8<sup>th</sup> grade students may select Band, Chorus, or Orchestra. Students in high school may choose from a variety of ensembles, which reflect their interest and ability level. Complete descriptions of each follow. Some ensembles require instructor approval and/or an audition. Students in band are required to furnish their own instruments.

#### *Full-Year Participation*

Since the year's program must be planned well in advance of execution and is done with the understanding that performers are available for the work when it is scheduled, this can only be done successfully if performers are in the organization for the complete school year.

#### *Seriousness of Purpose*

A musical organization develops technically and artistically only as individual members apply themselves seriously to the task of learning and perfecting skills and music literature. This implies diligent and systematic practice both at school and home. Private music instruction is of great value to the performer.

#### *Rehearsals*

A student must be present at rehearsals with the equipment needed. For instrumentalists, this means having the instrument in hand; for vocalists, bringing their music at all times.

## *Performances*

All the members of performing organizations have the responsibility to fulfill their parts in performance. The ensemble is based on co-operation of the highest order. Absences affect the total membership and its performance in any piece. Deficient renditions result if key performers fail to produce their parts. Excuses are not granted except for extreme emergencies and unusual situations. The directors MUST be notified in advance of a given performance when a student is excused.

If a student performer agrees to the above statements, genuine artistic growth occurs, and the integrity of the group is assured.

## *Vocal*

### Chorus 7/8

(7<sup>th</sup> and 8<sup>th</sup> grade, no audition required, 3 periods/week; full year)

Students develop their vocal skills and learn basic note reading and sight-singing through group singing performance. This choral group is open to all 7<sup>th</sup> graders and all 8<sup>th</sup> grade students, regardless of whether they have previously taken Chorus in 7<sup>th</sup> grade. The chorus performs different styles of choral music in two and three-part voicing. Students perform at least once per semester. Classes are split by gender.

### 9<sup>th</sup> Grade Choir

(9<sup>th</sup> grade, departmental approval, 3 periods/week; full year; 1/2 credit)

This entry-level high school singing group expands on the skills introduced in middle school and takes advantage of the new musical challenges and expanded voicings of a mixed gender choir. Open to all 9<sup>th</sup> graders, regardless of whether they have previously taken Chorus in middle school, this choir is an important and necessary step for students who would eventually like to sing in one of the high school performance ensembles (see JBS Voices and Men's a Cappella below). The group prepares one concert each semester. Optional activities may include participation in the traditional Holiday Program and in contests or festivals.

### JBS Voices

(Grades 10-12; by audition; 3 periods/week; full year; 1/2 credit)

JBS Voices focuses on developing both individual vocal technique and group choral singing skills. The group prepares one concert each semester. Optional activities may include participation in the traditional Holiday Program and in contests or festivals.

### Men's a Cappella

(Grades 10-12; by audition; 3 periods/week; full year; 1/2 credit)

This chorus explores music written specifically for men's voices, including styles as diverse as pop, doo-wop, jazz, barbershop harmony, and plainchant. The course focuses on developing vocal techniques and skills in listening and in singing in close harmony. Students perform in a least one concert per semester. Optional activities may include participation the traditional Holiday Program and in contests or festivals.

### Songwriting

(Grades 9-12; department approval required – students must play guitar or piano; 2 periods/week; full year; 1/3 credit)

This course is designed for students interested in exploring the craft of songwriting. Students will explore basic theory, chord progressions, song structure, lyric writing, and performance preparation. They will study current pop music and learn what makes a song successful in today's media market. Students will produce at least one fully notated and recorded original song.

## *Instrumental*

### GENERAL NOTES FOR INSTRUMENTAL MUSIC

Middle school instrumental ensembles do not feature piano and guitar. Students who play these are encouraged to learn a second instrument in Beginning Band or Preparatory String Ensemble, or are invited to participate in choir. Regardless of which path they pursue in middle school, they can then transition to piano or guitar for Jazz Band or High School Orchestra.

Students must provide their own instruments, with the exception of percussion, piano, and bass. For guidance with instrument purchase or rental, please contact Tim Baker, Anita Hagerman, or Keith Vassall.

### Preparatory Strings

(Grades 7-12; no audition required; 3 periods/week; full year, 1/2 credit [for Grades 9-12])

This course is designed to meet the needs of the following students:

- a) students who have a desire to learn violin, viola, cello, or upright bass with no previous experience;
- b) students who have played some violin, viola, cello, or upright bass, but can't yet read music or are not yet ready for a larger ensemble experience; or

c) students who play another instrument already and want to learn a second one to play classical music in an ensemble setting (esp. piano & guitar players, or players learning to double on viola or upright bass).

Students in the Preparatory Strings ensemble will perform at least one piece at the fall and spring orchestra concerts.

### Beginning Band

(Grades 7-8; no audition required; 3 periods/week; full year)

Students who have not played a band instrument may begin learning one in this course. Instruments offered change yearly: for 2024-2025, students will learn alto saxophone or electric bass guitar. Students perform in one fall and one spring concert.

### Bomber Band

(Grades 7-8; by audition; 3 periods/week; full year)

This class is offered to students with prior experience on a band instrument. Students continue studying the fundamentals of the instrument as well as concert repertoire. Genres may include concert band and jazz band literature. Instruments offered are flute, oboe, clarinet, trumpet, alto sax, tenor sax, baritone sax, French horn, trombone, tuba, electric bass, and percussion. Instruments offered may be subject to change. Students perform in one fall and one spring concert. Class may be split into multiple sections.

### Middle School Orchestra

(Grades 7-8; by audition; 3 periods/week; full year)

This class is offered to violinists, violists, cellists, and bassists who can already read music and have two years of prior experience playing in a string ensemble. Skills focus on ensemble training, learning concert repertoire, and further developing string technique. Eighth graders may be given opportunities to double onto piano, classical guitar, or percussion if the music calls for it. Students perform two concerts per year, plus the Holiday Program.

### High School Orchestra

(Grades 9-12; departmental approval required; 3 periods/week; full year, 1/2 credit)

High School Orchestra provides a performance opportunity for string players to play in an ensemble setting. Repertoire draws on music from the classical tradition, pops, soundtrack, or world music. Students prepare two concerts each year, plus the Holiday Program. Pianists, percussionists, or other instrumentalists wishing to perform classically-informed music in an ensemble setting are welcome and should contact Dr. Hagerman before enrolling.

### Jazz Band

(Grades 9-12; departmental approval required; 3 periods/week; full year, 1/2 credit)

In Jazz Band, students master the skills needed to perform jazz in the idioms of Blues, Swing, Latin, Fusion, Afro-Cuban, and other contemporary styles. Students prepare one concert each semester. Class may be split into multiple sections.

### *History and Theory*

### Music History

(Grades 9-12; 2 periods/week; full year; 1/3 credit; E/S/U grading)

The evolution of western classical music is explored through music from the ancient Greeks to today's minimalists. Each period includes a brief explanation of the composers and styles under scrutiny, introducing a series of recorded illustrations. Students listen to sacred and secular music, lieder and opera, and instrumental and orchestral works. The development of different genres is examined, from folksong to "nationalist schools" of composition and beyond. Guest lecturers include visiting composers, and opportunities are provided to attend live performances by professional ensembles.

### *THEATRE, SPEECH AND DANCE*

JBS Graduation Requirement: Four elective courses in the Arts: 3 in the Fine Arts (Visual or Performing) and 1 in the Practical Arts

### Speech 7

(Required; 1 period/week)

Students prepare short, original oral presentations. Emphasis is placed on enunciation, poise, and choice of language. Through practice before a critical audience of their peers, students gain skill in expression and become accustomed to speaking with confidence in public.

### Acting 8

(Required, grade 8; 1 period/week; 1 semester)

Through games, ensemble-building activities, and individual performance projects, students work to develop the fundamental skills of the actor: concentration, relaxation, self-discipline, and playfulness.

## Debate 8

(Required; 1 period/week; 1 semester)

This introductory course can be seen as a continuation of many aspects of the 7<sup>th</sup> grade speech course in that students strive to refine their ability to speak confidently in public. Students deliver speeches, write resolutions, and debate one-on-one and in teams using current-event topics and credible sources. The ability to develop educated opinions and conduct a civil exchange of ideas is an essential aspect of this course.

## Intermediate Debate\*

(Grades 9-10; limit 16; 2 periods/week; 1 semester course offered both semesters; 1/4 credit)

This intermediate course is designed for students who have debate experience and wish to continue their study of the discipline. Students carry out individual and team debates as well as learn about techniques and strategies for effective discourse. Question and answer techniques are acquired, as are different forms of argumentation and rebuttal. A focal point of this course is an emphasis on research skills and the use of concrete evidence when debating. This course may be used to fulfill either the Practical or Fine Arts requirements.

## Advanced Debate\*

(Grades 11-12; limit 16; 2 periods/week; 1 semester course offered both semesters; 1/4 credit)

This advanced course enhances and hones debate and judging techniques; students debate in teams, and sophisticated research and resolution-writing are expected. Students focus on policy debate and work with specific topics established by the National Forensic League. This course may be used to fulfill either the Practical or Fine Arts requirements.

## Public Speaking\*

(Grades 9-12; 2 periods/week; 1 semester course offered both semesters; 1/4 credit)

This course gives further practice in public address. With current events and personal interest as a focal point, students generate their own material for original speeches to be delivered in a variety of styles. Memorization is not required. The semester will conclude with a final speech, conceived and presented in emulation of a T.E.D. Talk. This course may be used to fulfill either the Practical or Fine Arts requirements.

\*NOTE: In Speech and Debate courses for grades 9-12 preference is given to students who

- a) signed up last year but were not given a slot in the course

AND

b) have not taken the course before.

Unless space is available, no one may enroll in both semesters in one year.

### Acting 9-10

(2 periods/week, full year; 1/3 credit)

This course covers a range of activities including monologues, scene work, and audition technique and preparation. Four “production credits” are required by year’s end.

### Improvisation

(Grades 10-12; Prerequisites: Acting 9-10; 2 periods/week; 1 semester; 1/4 credit)

Theatre skills are developed through intensive use of theatre games and non-scripted material. The course emphasizes stretching the boundaries of the performer’s ability in voice, movement and imagination.

### Acting 11-12

(Prerequisites: Acting 9-10; 2 periods/week; full year; 1/3 credit)

This course continues with training in the theatre disciplines. The first semester is dedicated to styles of acting, with students learning various styles (i.e. Classical, Elizabethan, Naturalistic) through work with monologues. The second semester is a scene study workshop with special attention paid first to Chekhov and then to a variety of contemporary writers.

### Theatre Production

(Grades 9-12; 2 periods/week, full year; 1/3 credit)

The course is designed to train students for technical roles in support of the performing arts. Students gain a background in the technology of lighting and electricity, rigging, sound reproduction, construction, and design. The history of theatre technology is covered, with studies of the form of production space emphasized. Safety is stressed in all aspects of the course. Students may pursue a special area of interest (lights, sound, set and prop construction), in which individualized assignments are arranged with the instructor. These may include, but are not limited to, lighting design, sound design, stage management, prop and set design, technical direction, and stage carpentry and rigging. This course may be used to fulfill either the Practical or Fine Arts requirements.

### Video Production

(Grades 9-12; 2 periods/week, full year; 1/3 credit)

The goal of the class is that each student will be able create video media products that convey a narrative for an intended audience. Students will learn the process of taking a video project from the initial idea into a story and how to use camera composition techniques and video editing software. Students will apply these skills by making video projects that will be reviewed and critiqued by class. This course may be used to fulfill either the Practical or Fine Arts requirements.

### Playwriting

(Grades 10-12; Prerequisite: Theatre 9-10, Improvisation, or departmental approval; 2 periods/week; full year; 1/3 credit)

Through creative writing exercises and reading a variety of scripts, this seminar style course will introduce the fundamental elements of crafting dramatic narrative and creating characters for the stage. Students will write monologues, scenes, and an original one-act play. Performances of completed pieces and works in progress will be an important part of the creative process.

### The Great American Musical

(Grades 9-12, Prerequisite: departmental approval, 2 periods a week; full year)

This course will offer students the opportunity to explore the evolution of the American musical from its folk roots to the grand scale Broadway productions of today. Students will examine composers, lyricists, producers, directors, choreographers, and performing artists who have contributed to the development of musical theater, as well as an in-depth study of seminal works. There will be very occasional out-of-class assignments, such as short readings or online viewing or listening sessions, but this work will not significantly increase the weekly workload. Depending on offerings of local companies in a particular season, the class will attend a professional production at some point during the year.

### Dance – Instructional

(Grades 9-12; Fitness)

Instruction in various genres and forms of dance is available as a fitness option during the fall and spring seasons. The program provides training for intermediate dancers and also serves as an appropriate introduction for beginners with no previous experience. (See PE/Athletics.)

## Dance – Performance

(Grades 9-12; Team Sport)

Students rehearse for and perform in the annual Dance Show as a team sport option during the winter season. Dancers of all abilities and experience levels are welcome as performers, and experienced upper school students can also work as choreographers. (See PE/Athletics.)

## FINE ARTS

JBS Graduation Requirement: Four courses in the Arts: 3 in the Fine Arts (Visual or Performing) and 1 in the Practical Arts

The Fine Arts department offers a structured introduction to the visual arts and to the techniques, methods, and concepts common to the creative disciplines. We aim to develop visual literacy, encourage artistic perception and cultivate resourcefulness and character. Our program guides the young artist through exercises that demand resourcefulness and close observation to help develop the fundamental skills of visual perception. These same skills are essential to all forms of cognition and vital to developing flexible thinkers. Most importantly, and beyond the pedagogy of art, we want to share with young artists the power and beauty of the visual arts and help them understand its potential in their lives.

### *7th and 8th Grade Fine Arts*

The Fine Arts Foundation Program consists of a 2-D and a 3-D class during both 7th and 8th grade. There are five important areas for growth that we explore in the Foundation Program and all Fine Arts classes: perception, resourcefulness, character, craftsmanship and creativity. We vary our activities, but generally cover complementary skills and ideas in 2-D Art and 3-D Art.

#### 2-D Art 7

(Required; 2 periods/week; 1 semester)

2-D Art 7 is arranged to help students increase their powers of observation through a variety of drawing exercises, and the recording of visual notes. Students will learn about the history of Western linear perspective, the Italian Renaissance, and how to use both theoretical and observed one and two-point perspective to organize space. Use of line, value, and color mixing are covered through a wide use of materials and applications.

#### 3-D Art 7

(Required; 2 periods/week; 1 semester)

3D art has height and width as a painting does, plus a third dimension – depth. The objectives of 3D Art are to begin to develop technical abilities involving sculptural form and to be introduced to the elements and principles of strong three-dimensional design. 7<sup>th</sup> grade students are guided through a variety of activities that include sculpting from observation, hand building and glazing techniques, plaster casting, and wire brazing.

### 2-D Art 8

(Required; 2 periods/week; 1 semester)

In 2-D Art 8, we review and emphasize the formal concepts and skills taught in 7<sup>th</sup> grade including observational drawing, linear perspective, composition, color theory, and color mixing. The concept of personal identity is explored through self-portraiture and learning about historical and contemporary portrait artists.

### 3-D Art 8

(Required; 2 periods/week; 1 semester)

The 8th grade sculpture experience is an extension of the 7th grade foundation program in structure but is broader and deeper in scope. Students are introduced to the role of content and the concept of meaning within art, and how they can express these ideas in their own work. Assignments will complement their 2-D Art 8 experience and include learning to control proportion and composition, and students can expect activities that will challenge their problem-solving skills.

## *Level I and II Fine Arts Classes*

### Ceramics I

(Grades 9-12; 2 periods/week; full year; 1/3 credit)

This class will introduce students to the processes and techniques of making vessel-based objects in clay. Students will explore both hand building; pinch, coil & slabs, and the potter's wheel, spending a semester in each concentration. They will be exposed to both historical and contemporary art works and examine how those ideas can be explored in their own work. Students will also investigate a variety of glazing and surface treatments.

### Ceramics II

(Grades 10-12; Prerequisite: Ceramics I; 2 periods/week; full year; 1/3 credit)

Building on the foundations taught in Ceramics I, Ceramics II will challenge students to expand on their building skills as well as the concepts that they explore in their work. Both hand building and the potter's wheel will be once again employed in the creation of work, and students will dive deeper into the ideas and projects presented to them. Students will also have the opportunity to pursue individual investigations in their work alongside directed assignments.

### Digital Art & Design

(Grades 9-12; 2 periods a week; full year; 1/3 credit)

In this course students will use foundational studio theory to create work within a digital format and use the computer as a creative tool. Students will have the opportunity to create digital work based in illustration, graphic design, animation, photomanipulation, and 3D imaging. Using powerful desktop and tablet software,

students will explore how they can expand their knowledge of two- and three-dimensional design within the digital realm. Students will be guided through project-based assignments using such software tools as Adobe Photoshop, Illustrator, Procreate, and others.

### Drawing and Painting I

(Grades 9-12; 2 periods/week; full year; 1/3 credit)

Principles of composition and the fundamental elements of art such as form, line, mark, shape, value, and color are studied through assignments in a variety of subject areas, which include portrait, landscape, figure, and still life. Students draw from observation, disabuse themselves of visual stereotypes, become self-evaluating of their work, and learn how to see. To that end, students are taught observational techniques such as measuring, and are encouraged to draw what they see rather than what they know. Media used in the studio include watercolor, acrylic, pastel, charcoal, ink, and pencil. The studio houses a small library for reference, as the examination of great works of art is a continuing part of study. The program is enhanced through the school's collection of original art works, gallery exhibits and lectures by visiting artists.

### Drawing and Painting II

(Grades 10-12; Prerequisite: Drawing and Painting I; 2 periods/week; full year; 1/3 credit)

This course expands upon the fundamental theory and practices of art introduced in Drawing and Painting I, and more advanced concepts are explored. All media are available, including gouache, tempera, watercolor, acrylic, pastel, charcoal, ink, and pencil. Students are encouraged to take a corrective approach to their work, and to practice vocabulary surrounding visual dialogue as they engage in critique. Students are also encouraged to explore content in their work through creative expression.

### Photography I

(Grades 9-12; 2 periods/week; full year; 1/3 credit)

Basic black and white darkroom techniques are taught: exposure, developing, contact printing, and enlarging. Aesthetic issues are explored in relation to the historical development of photography as an art form.

### Photography II

(Grades 10-12; Prerequisites: Photography I; 2 periods/week; full year; 1/3 credit)

Advanced, experimental, and alternative photographic techniques are explored with emphasis on the development of personal aesthetic vision. Ideas relevant to the history of photography are presented and discussed.

### Printmaking

(Grades 9-12; 2 periods/week; full year; 1/3 credit)

Students are introduced to a variety of printmaking techniques including etching, engraving, serigraphy, relief prints, book binding, and monotypes. Historical and contemporary issues relevant to printmaking are discussed and regular critiques are held. Students are also required to make an edition of prints in order to participate in a print-swap with their peers.

### Sculpture I

(Grades 9-12; 2 periods/week; full year; 1/3 credit)

Sculpture I is an exploration into the processes and techniques involved in creating sculptural forms. This class delves into the investigation of material, such as plaster, clay, bronze, and non-traditional materials, in addition to conceptual issues and themes related with sculptural art. A variety of projects are considered and used for creative examination. This class is designed to introduce students to the fundamental elements and principles of three-dimensional design. Students should develop a visual vocabulary while learning how to resolve three-dimensional structure and design problems. Students are also introduced to the work of a variety of artists working three-dimensionally.

### Sculpture II

(Grades 10-12; Prerequisite: Sculpture I; 2 periods/week; full year; 1/3 credit)

Sculpture II is designed for students to build off the fundamentals learned in Sculpture I. These include: advanced modeling and casting techniques, an exploration of individual style and creativity, and understanding the communicative power of form and materials, including clay, bronze, wood, wax, steel, plaster, foam, etc. By combining these and other sculptural principles and elements, students will learn how to communicate their ideas through three-dimensional form and develop their own aesthetic and conceptual base.

## *Advanced Level Fine Arts Classes*

### Integrated Studio Arts

(Grades 11-12; Prerequisites: at least two prior high school Fine Arts classes; 3 periods/week; full year; 1/2 credit)

This course, designed as a bridge between foundations courses and Intensive Studies, is intended for those students who want to expand their visual vocabulary in a multidisciplinary Fine Arts class. Students will be guided through direct instruction and assignments that integrate both 2D & 3D elements of media. Projects will ultimately develop into more flexible assignments through which students can explore their projects through a thematic lens,

allowing for more creative freedom. This course is recommended for the student who wants to gain more experience and confidence in their art-making in a multifaceted sense. Students will produce a required art portfolio by the conclusion of the class.

#### Intensive Studies: Art

(Grades 11-12; Prerequisites: Level II Fine Arts class, or at least one high school 2D and one high school 3D Fine Arts class. Department approval required. \**D&P I strongly recommended.* \* 4 periods/week; full year; 1 credit)

This course challenges and channels advanced students' excitement for their work by exploring essential issues in art through guided exercises in both 2-D and 3-D media. The effective use of fundamental elements of design such as perspective, line, gesture, composition, value and color are explored. Discussions, field trips, reports and gallery visits are incorporated so that students may gain a better understanding of the context in which artists, historical and contemporary, create. This course is strongly recommended for the student who wants to develop a portfolio. Requirements include participation in critiques, development of an artist's statement, participation in a show of intensive work in the school's Bonsack Gallery, and generation of independent work along with studio assignments. This course is co-taught by members of the Sculpture and Drawing and Painting faculty.

#### Independent Study: Ceramics

(Grades 11-12; Prerequisites: Ceramics II and departmental approval; 1/3 credit)

Students develop, with their teachers, projects specifically designed to address their individual needs and interests in ceramics.

#### Independent Study: Photography

(Grades 11-12; Prerequisites: Photography II and departmental approval; 1/3 credit)

Students develop, with their teachers, projects specifically designed to address their individual needs and interests in photography.

#### Independent Study: Sculpture

(Grades 11-12; Prerequisites: Sculpture II and departmental approval; 1/3 credit)

Students develop, with their teachers, projects specifically designed to address their individual needs and interests in sculpture.

Classical Mythology in the Arts (for course description, see p. 24)

## PRACTICAL ARTS

JBS Graduation Requirement: Four courses in the Arts: 3 in the Fine Arts (Visual or Performing) and 1 in the Practical Arts

The mission of the Practical Arts department is to help students discover new abilities within themselves as they explore the objectives, activities, and projects within the curriculum. The practical arts complement, and in many cases implement, the academic subjects taught in school; the programs incorporate cross-curricular projects wherever possible. In computer science, family and consumer sciences, and industrial technology/engineering courses, students learn skills that serve them well in life and help them to express themselves creatively, technically, and artistically. Practical arts concepts are taught using applied, hands-on activities to develop knowledge of the concepts involved and their applications. Technical problem-solving skills and craftsmanship are a focal point of the curriculum. Students are taught to create and appreciate original ideas and projects.

## COMPUTER SCIENCE

### Technology Literacy

(Required, grade 7: 1 periods/week; full year)

This course immerses students in the John Burroughs School computing environment, engaging them in a number of projects aimed at building skills needed across the curriculum through 12th grade. Work begins with an overview of computer hardware, including both internal and external components of the machine. Both the GSuite interface and the Canvas learning management system are used throughout the year to ensure students are comfortable with these systems which are essential to daily coursework. The class completes a video editing project which highlights planning, research, online resources, and the use of appropriate citations. This project incorporates the use of screenshots, text, video, and audio voice-overs. Students are introduced to spreadsheets and learn to write basic formulas and to use essential functions. They collect, analyze, and chart data using spreadsheets in order to build critical thinking skills. Students also learn basic photo manipulation and editing. Cross-curricular work with other departments is incorporated whenever possible. Special attention is given to the John Burroughs Technology Acceptable Use Policy, the ethical use of computers, and digital citizenship.

### Coding Essentials

(Required, grade 8; 2 period/week; 1 semester)

In this course, students explore computational thinking and the fundamentals of programming. This course begins with coding in JavaScript with the p5 library, which allows for easy creation and manipulation of graphical elements. Students cover fundamental programming structures (variables, conditional logic, loops, and functions) through writing a variety of visually interesting projects. More advanced topics like arrays and objects are touched upon as well. The capstone project requires students to leverage and apply what they know in JavaScript by coding an open-ended, interactive, story-based adventure game. Throughout the course, students are reminded of best practices with regard to the JBS Technology Acceptable Use Policy, ethical computer use and digital citizenship.

### Programming in Java

(Grades: 9-12; 2 periods/week; full year; 1/3 credit)

This is an elective course for those interested in expanding their knowledge of computer programming. Students explore the object-oriented programming paradigm extensively. Study begins with Greenfoot, a Java development environment that incorporates class libraries for easy visual representations of interacting objects. Through the use of games and simulations in the first part of the course, students are given an initial exposure to objects, methods, variables, conditional logic, looping structures, and arrays. In the second semester, students begin working solely with the Java libraries to create applications while solidifying knowledge of programming concepts. At the end of the course, students revisit Greenfoot to program a final game. This course provides a chance to write computer programs and acquire experience without the demands of a full-credit course.

### Programming for the Web

(Grades 9-12; 2 periods/week; full year; 1/3 credit)

Students learn to create web pages using HTML, CSS, and JavaScript. Throughout the course, students publish assignments to personalized home pages where they showcase all of their work online. Design and layout techniques are emphasized throughout the course to help students create professional looking sites that are easy and logical to navigate. Students also learn to use responsive design so that pages look appropriate on computers as well as tablets and mobile devices. This course provides a chance to design web pages and acquire experience without the demands of a full-credit class.

Advanced Computer Science: Mobile Application Development  
(Grades 9-12; 4 periods/week; full year; 1 credit)

NOTE: This course does not fulfill the Practical Arts graduation requirement.

This is a full credit, non-AP course in which students learn to combine object-oriented programming and user interface design to write programs in Swift for iOS devices. Boolean logic, data structures and design thinking are emphasized. Throughout the year, students plan, program and test their own mobile applications from scratch. This course provides the opportunity to further explore computer science concepts learned in our other course offerings, but is also accessible to those who are new to the field of computer science. This course is an option for students who are unsure if they can handle the rigors of AP Computer Science, but it can also be taken after completing the AP course. Instruction is differentiated to meet the needs and levels of all students in the class. Access to equipment or software outside of class is not necessary for this course. Students make use of a free developer account provided by Apple, as well as a professional account provided by the school.

Computer Science-AP

(Grades: 11-12; Prerequisites: concurrent enrollment in Precalculus or higher; 4 periods/week; full year; 1 credit)

NOTE: This course does not fulfill the Practical Arts graduation requirement.

Students learn the basics of object-oriented programming in the Java language, following the curriculum outlined by the College Board. Topics include object-oriented programming, control structures, classes, inheritance, arrays, ArrayLists and other data structures. Emphasis is given to the construction of software from the specification phase through testing and maintenance. While no previous programming experience is required, please note that this is a very fast paced class. In order to complete assignments, students in this course will need dedicated access to an up-to-date home computer with a reliable internet connection. Students for whom this will be a challenge should speak with their principal or the chair of the Computer Science department.

## INDUSTRIAL TECHNOLOGY/ENGINEERING

Modern society is permeated by many forms of technology. The Industrial Technology/Engineering classes facilitate the development of an understanding of technology and how it affects the world. Students are prepared, through both traditional and progressive methods, to adapt to a world increasingly filled with technological change. The syllabus includes applied, hands-on activities to further develop a student's knowledge of science, technology, engineering, and mathematics. Students develop basic skills including the safe use of tools, machines, computers and processes used by industry. Students acquire practical skills for solving technological problems and creativity is fostered by using technology for desired purposes. Students design and create from materials as well as computer applications. Activities facilitate the discovery of individual talents, aptitudes, interests and potentials related to industry and applied technology. Cooperative attitudes and constructive work habits are encouraged to help students work as individuals and in teams. We highly value craftsmanship and engender pride in work well done.

### Basic Technical Design and Engineering

(Required, grade 7; 2 periods/week; 1 semester)

This course is designed to provide active learning situations for seventh grade students to acquire fundamental knowledge of material design, application, and process. Students are exposed to a variety of software, hand tools, and power tools during the construction of hands-on projects. Emphasizing problem solving, creativity, and cooperation, students will rotate through various projects in the areas of basic woodworking, computer aided drawing and graphic design, laser engraving, basic mechanisms, and aerodynamics.

### Industrial Technology and Engineering

(Required, grade 8; 2 periods/week; 1 semester)

This course is designed to give eighth grade students a broad exposure to current and emerging technologies and careers. Because of the wide variety of hands-on, project-based modules to choose from, this class has appeal to all students. Students will rotate through various projects throughout the semester. Examples of possible modules may include: computer aided drafting, laser cutting, 3D printing, sheet metal fabrication, electronics, and basic electricity.

### Project Technology I

(Grades 9-12; 2 periods/week; 1 semester; 1/4 credit)

This learn-by-doing course introduces students to basic woodworking. Each student designs and builds several small projects employing both hand and machine skills. Power tools that will be used in the construction process for cutting joints and shaping techniques include the table saw, router, compound miter saw, router table, drill press, shaper, and wood lathe. The basic furniture-making process will be studied from design to finishing, giving students a solid foundation in the safe use of machines for stock preparation. Students will be charged a project fee for materials.

### Project Technology II

(Grades 9-12; Prerequisite: Project Technology I; 2 periods/week; 1 semester; 1/4 credit)

This learn-by-doing course that introduces students to metal and woodworking skills. Students will use Computer Aided Design (CAD) and also Computer Aided Manufacturing (CAM) technology for metal layout and cutting. Machines that will be used for cutting joints and shaping techniques include the table saw, router, router table, slot mortiser, plate cutter, planer, shaper, Mig welder, drill press, surface grinding, and metal and wood cut off saws. Students will also explore how to fasten and construct using both metal and woods. Students will be charged a project fee for materials.

### Architectural Drawing

(Grades 9-12; 2 periods/week; full year; 1/3 credit)

Architectural Design allows you a chance to learn the concepts of architectural drafting and design. A wide range of topics will be covered throughout the year including green architecture, home styles, interior design, room planning, standard design practices, drawing types, construction techniques and framing practices. You will have a chance to demonstrate your knowledge with numerous architectural design problems. You will create a full set of house plans along with architectural models to simulate home construction. Creativity, visualization, and problem solving skills will be emphasized.

### Digital Audio Technology

(Grades 9-12; Prerequisites strongly recommended: Songwriting Class or advanced musical training; 2 periods/week; full year; 1/3 credit)

Digital Audio Technology (DAT) is an independent study course that allows students to advance at their own pace. The class meets two periods a week. The goal of the class is for each student to learn to record, edit, and mix original digital audio mixes. Non-musicians as well as musicians will benefit from this course. Since audio engineering is a broad field, a variety of topics are explored. Each student will be required to produce at least two projects per semester. The final audio productions will be shared at the end of the school year.

### Computer-Aided Drafting and Manufacturing (CAD/CAM)

(Grades 10-12; 2 periods/week; full year; 1/3 credit)

This course is a challenging and rewarding class that introduces the field of engineering and engineering drawing. Problem solving and research skills are developed through engineering design problems. You will apply your CAD (Solidworks) knowledge to create working drawings for projects. Throughout the year, you will be required to demonstrate design and production techniques using 3d Printers, Laser Cutters and Engravers, Overhead Mills, and Plasma Cutters to make physical models of your virtual designs.

### Video Production

(Grades 9-12; 2 periods/week, full year; 1/3 credit)

The goal of the class is that each student will be able create video media products that convey a narrative for an intended audience. Students will learn the process of taking a video project from the initial idea into a story and how to use camera composition techniques and video editing software. Students will apply these skills by making video projects that will be reviewed and critiqued by class. This course may be used to fulfill either the Practical or Fine Arts requirements.

### Independent Study: Industrial Technology and Engineering

(Grades 9-12; Prerequisites: approval by the teacher, department head, and principal; minimum of 2 periods/week; 1/3 credit)

Independent study allows the student to explore a specific area of study beyond the basic course offerings in Industrial Technology/Engineering. The instructor discusses the topic and project with the enrolling student and approves the project-based outcome of the class. A completed Independent Study Contract, obtained from the grade-level principal, must be submitted during the first week of the term in which the class will meet. Independent Study class requires a high degree of self-discipline and commitment on the part of the student. Students will be encouraged to enter their finished projects in the district contest sanctioned by the Missouri Technology and Engineering Educators Association of Missouri in the spring.

## FAMILY AND CONSUMER SCIENCE

### Basic Foods

(Required, grade 7; 2 periods/week; 1 semester)

This course introduces students to the selection and preparation of foods. Students will learn basic cooking techniques, the importance of safety and sanitation, and the functions of ingredients used in recipes. Proper use of equipment is stressed. A variety of dishes will be made weekly within a small lab group.

### Basic Sewing (Required, grade 8; 2 periods/week; 1 semester)

This course, which introduces beginning sewing, stresses the proper use and care of the sewing machine. Construction techniques and fabric selection are emphasized when students construct two projects including pajama shorts and a patchwork pillow. Basic hand sewing techniques are also introduced.

### Food & Nutrition: Cooking

(Grades 11-12; 2 periods/week; 1 semester; 1/4 credit; \$65 lab fee)

This course is open to students interested in gaining knowledge and skills needed to make informed, mindful choices regarding all things related to food. From nutrition programming; to grocery shopping; to meal design, preparation, and cooking, students enrolled in this course will walk away with science-based information that will help promote long-term well-being and stress management. This class will be both discussion- and lab-based, offering students opportunities to make nutritious dishes in the kitchen.

### Personal Finance

(Grades 9-12, 2 periods a week; full year; 1/2 credit)

This course will explore financial literacy topics that will help prepare students to make informed financial decisions both in the short term and throughout their lives. Students will begin building their understanding and vocabulary around such topics as money management, banking, borrowing/debt, credit scores, saving/investing, taxation, risk management, inflation, interest rates, etc. The course will also equip students to recognize misinformation and discriminatory financial practices along with systemic barriers to financial stability and wealth accumulation that disproportionately affect communities of color.

### Sewing I

(Grades 9-12, 2 periods a week; 1 semester; 1/4 credit)

This course is open to students interested in advancing to the next level of sewing. Students will continue to explore and preform various sewing techniques on the machine. Using a pattern, students will construct two projects including a tote bag and fleece pullover. Students will be charged for patterns and fabric materials.

Sewing II: Clothing (not offered in 2024-2025)

(Grades 9-12, Prerequisite: Sewing I; 2 periods a week; 1 semester; 1/4 credit)

This course is open to students who completed Sewing I. Students will be asked to pick a pattern in the categories of shirts/dress and pants/skirts to construct using the sewing machine. Students will be charged for patterns. Materials will need to be purchased by the student.

Sewing II: Quilting (not offered in 2024-2025)

(Grades 9-12, Prerequisite: Sewing I; 2 periods a week; 1 semester; 1/4 credit)

This course is open to students who are interested in making a log cabin style quilt. Instruction will be given on fabric selection, strip sewing and techniques, while providing students options for quilt size, color and pattern selection. At the end of the semester, students will have a completed top piece, backing, and binding that would be ready to be machine finished by an outside source of their choosing. Materials will need to be purchased by the student.

Basic Gardening

(Grades 9-12; 2 periods/week; full year; 1/3 credit)

This course introduces beginning gardening: sowing, maintaining and harvesting crops. Students explore the world of permaculture by way of understanding the different layers, functions, and maintenance of a food forest. Students learn about seasonal and regional crops, how to compost, and have the opportunity to build a closed terrarium and grow microgreens. No prior knowledge of gardening is needed.

## OTHER COURSES

### Academic Support

(Grades 7-12; 1-3 periods/week; non-credit)

The Academic Support Department helps students develop and strengthen study skills and organizational techniques. They offer alternative test-taking methods to “level the playing field” for students with learning differences that enable students to reach their full potential. Students may receive services if they have a diagnosed learning disability. They may also be referred to Academic Support by a principal in consultation with advisors, families, teachers, and counselors. The department also works with the general faculty to increase their awareness of and ability to teach students with different learning styles. (For more information, see <https://www.jburroughs.org/academics/academic-support>.)

### DEIE & Health Seminar 7th

(Required; 1 period/week; full year)

This is a discussion-based course that informs students’ understanding about a variety of processes and topics that are significant to them as adolescents and as students at John Burroughs School. Topics explored in the course include a general orientation to life at school at JBS; mental health and wellness; personal identity and an introduction to diversity, equity, inclusivity and community engagement; social media literacy; and the importance and challenges of friendship. The Principal of Grades 7 & 8 coordinates this course, but it is taught by an array of faculty members, whose training and experiences make them excellent instructors and resources for our youngest students.

### DEIE & Health Seminar 8th

(Required; 1 period/week; full year)

This discussion-based course builds upon the work done in 7th grade seminar and, in addition, acts as a bridge to the upcoming 9<sup>th</sup> and 10<sup>th</sup> grade seminars. Course topics include diversity and identity, community engagement and design thinking, the teen brain and wellness, and transitioning into 9th grade.

### DEIE & Health Seminar 9th

(Required; Grade 9; 1 period/week; full year; 1/4 credit)

This interactive class builds on the foundation of the 7th and 8th grade seminars and addresses a variety of health and wellness issues in more depth than was possible at the middle-school level. Course topics include stress and mental health, nutrition and eating disorders, drugs and alcohol, sex and consent, and healthy/unhealthy relationships. The course takes steps toward connecting these health topics to identity-related issues and looks forward to the 10<sup>th</sup> grade seminar, where identity plays an even greater role.

### DEIE & Health Seminar 10th

(Required; Grade 10; 1 period/week; full year, 1/4 credit)

This course builds on the previous seminars by exploring the various aspects of identity with the goal of helping students better understand themselves, others, and the broader systems that shape our society. The course aims to increase students' ability to communicate effectively across difference as well as to engage in meaningful conversation, specifically about these differences, with the ultimate goal of moving toward greater cultural competency. Mindfulness as an anti-bias tool plays a major role in this course as well.

Topics covered in the course include diversity at JBS, bias in the brain, race, ethnicity, socioeconomic status, environmental justice, gender, sexual orientation, ability, religion, political identity, mental health, and global cultural competency. Every two to three weeks, students hear a presentation on a topic given by a faculty member on one of these topics and then engage in small-group discussions in their weekly classes.

Grades are based on the following course requirements:

1. Attendance and active participation in all classes and presentations.
2. Assignments that deepen student engagement with the seminar topics.
3. Semester-culminating projects.

## ATHLETICS

Physical Education/Athletics is required of all students each year. It is hoped that through participation in daily physical fitness and/or athletic activities, students experience the benefits that come with such activity, and gain a better understanding as to how and why physical fitness and athletics contribute to their total health and well-being. The intention is that students choose to make physical activity a part of their life well beyond their high school years.

The program stresses skill-related fitness (co-ordination, agility, power, balance, speed) as well as health-related fitness (flexibility, muscular strength, and aerobic endurance). An emphasis throughout the athletic program is to build character through participation in sport, with a focus on sportsmanship, teamwork, effort, and honorable conduct under all circumstances.

### Physical Education: Grades 7-8

(Required; 5 periods/week, Monday through Thursday, full year)

The program is designed to give students experiences in the activities and sports offered in the upper school. Emphasis is placed on developing the skills, knowledge, and values derived from regular participation in physical activity and sport.

### Athletics: Boys, Grades 9-12

FALL	WINTER	SPRING
Cheerleading*	Basketball	Baseball
Cross Country	Cheerleading*	Fitness
Fitness	Dance – Performance	Golf
Football	Fitness	Independent Activity
Independent Activity	Independent Activity	Lacrosse
Soccer	Ice Hockey	Tennis
Swimming/Diving	Squash	Track
	Wrestling	Water Polo

### Athletics: Girls, Grades 9-12

FALL	WINTER	SPRING
Cheerleading*	Basketball	Fitness
Cross Country	Cheerleading*	Independent Activity
Field Hockey	Dance – Performance	Lacrosse
Fitness	Fitness	Soccer
Golf	Ice Hockey	Track
Independent Activity	Independent Activity	Water Polo
Tennis	Squash	
Volleyball	Swimming/Diving	
	Wrestling	

### Requirements by Grade Level

#### *Grades 9-10* (Required; 1 credit)

At a minimum, students must participate in two seasons of a team sport and one season of fitness or independent activity (IA).

- \* During grades 9-10, cheerleading may only be selected for both the fall and winter seasons if the student participates in a sport during the spring season; otherwise, the student must choose either the fall or winter season.

#### *Grade 11* (Required; 1 credit)

At a minimum, students must participate in one season of a team sport and two seasons of fitness or independent activities (IA).

*Grade 12* (Required; the allowance of 1 free season is subject to departmental approval.)

At a minimum, students must participate in one season of a team sport and one season of fitness or an independent activity (IA).

NOTE: P.E./Athletics Credit: At the end of each season, students receive a grade of Pass or Fail. When a student receives a Fail in any year, the Grade 12 Option for a Free Season is forfeited.

### Student Team Manager

(Grades 9-12)

A student may earn a team sport credit by serving as a team manager for a specific team. Responsibilities of the student manager include, but not limited to, attending all home and away contests, keeping stats, filming games/practices, and assisting with transporting equipment to fields/courts.

### Independent Athletic Activity (IA)

(Grades 9-12)

A student may choose to participate in a non-school sponsored athletic enrichment activity (IA). An IA must be supervised by an adult (other than a parent/guardian) and meet the minimum rigor of a fitness unit (e.g., meet approximately 4 times during the school week, a minimum of an hour each session, etc.). A blended fitness and IA program is possible, as long as the days do not change from week to week. All IAs are subject to the approval of the Department.

### Performing Arts Option

(Grades 9-12; as agreed by relevant faculty)

For full-time participation in the company of a major theatrical or dance production or as a full-time member of a season's technical crew, students may receive a sports credit for that season.

### Outdoor Adventure Team (OAT)

(Grades 9-12)

Students may select outdoor adventure team as a team sport credit for one season. Over the span of the year, but especially during the fall and spring, OAT offers a range of adventure programs at school and remote locations during weekends. While the credit may apply to any sports season, a student who takes OAT for sports credit may need to participate on trips during other seasons to fulfill the requirement. The total hours required will be roughly commensurate to those required by a sports team. Students who like adventure and appreciate bad weather as well as good should consider this option. You must complete an OAT registration form available from the athletics department and receive the signed approval of the athletic director and the coordinator of the outdoor adventure team. As space is available, other JBS students who are not signed up for OAT to earn team sport credit are invited and encouraged to participate.

## ACTIVITIES

A rich collection of activities provides opportunities for students to develop leadership skills, build a sense of community, recognize and respect differences, pursue special interests and have fun. We encourage all students to take part in at least one activity they are most passionate about; many take part in several. Sample club descriptions are included below: full descriptions for the more than 60 clubs and activities currently offered can be found on the JBS website.

### The World

(Grades 9-12; full year)

Students are invited to participate in the publication of the school newspaper, which provides experience leading to editorial responsibility. Editors are chosen by the faculty advisor(s) and the publications committee, on the basis of past performance, commitment to the newspaper, and a letter of application. The World staff is responsible for writing, editing, photography and page layout.

### The Governor

(Grades 10-12; full year)

Students work together, from the beginning of the school year through March, to produce a traditional yearbook. Under the direction of a group of junior and senior editors, students are responsible for writing and editing, photography, page layout, and design. Most work is done during weekly meetings, but editors can work in the Publications Lab during free periods, as well as before and after school, and all staff have access to their work from home. Editors are chosen by the faculty advisors and the publications committee based on past performance, meeting attendance, commitment to their work on the yearbook, and a letter of application.

### The Review

(Grades 7-12)

This publication for art and writing reviews and publishes student work. In addition to producing an annual magazine each spring, the group encourages student writing, revision, and informal discussion about art and language. The editors and staff typically meet before school to review submissions, and all students are welcome to attend.

### Middle-School Model UN

(Grades 7-8; unlimited membership)

The club begins meeting in September under the leadership of experienced 8th graders and is open to all lower school students. The program is designed to introduce students to the workings of the United Nations with a particular focus on the Sustainable Development Goals and their applications to local and global issues. In addition to basic research skills necessary for participation in future MUN activities, students learn to discuss, analyze, and debate global issues. By drafting resolutions, researching countries and their concerns, and voting on sample resolutions, students also begin to understand how and why different countries engage with global problems in different ways. Students participate in MUN general assembly debates and project presentations. These are sometimes done with other schools and sometimes done through internal forums with the mentorship of older MUN students at Burroughs.

### Model UN (SLAMUN)

(Grades 9-12; limit 50; by appointment)

SLAMUN (St. Louis Area Model UN) includes one session in the fall where students from St. Louis area schools gather at JBS to engage in the simulated operation of the United Nations by drafting resolutions, discussing assigned topics, and voting on proposals. In order to prepare for the sessions, participants meet on Special Meeting Days to discuss world events and work on resolution writing.

Participants from grades 7-12 prepare a resolution on a chosen topic from a packet of topics prepared by the student leadership of SLAMUN. The student leadership is called the Secretariat and they choose the resolutions that will be debated at each session from the resolutions submitted by student delegates. They also plan each session and run the debates themselves. Students apply to the Secretariat in the Spring each year for leadership positions.

### THIMUN

(Grades 11-12; fall semester through conference in late January/early February)

The JBS THIMUN (The Hague International Model United Nations) team alternates between traveling to the Netherlands and other rotating international locations during late January or early February for the annual conference. Each conference site includes hundreds of students from around the world assembling to debate international issues in emulation of the actual United Nations.

Information about the potential conference site is shared with interested rising juniors and seniors in the spring and applications for current JBS juniors and seniors are due in early September. Students may apply to serve as delegates, student officers, advocates or justices for the International Court of Justice, or as members of a conference press team. Strong applicants will have a passion for researching and debating international issues, good communication skills, creative problem-solving skills, and an openness to new experiences and cultures, among other abilities and qualities. Students who intend to apply may find it useful to practice leadership and problem-solving skills by participating in MUN workshops, taking debate classes, working on the JBS student newspaper, or serving substantively as a leader in another student organization (in or outside of JBS). Application decisions are made in mid-October. The team then spends the next few months preparing for the conference weekly Sunday afternoon meetings. In addition to focusing on the in-depth research of complex international issues, these Sunday sessions work to hone the students' professional skills in communication, collaboration, and cultural competency.

### Student Congress

(Grades 7-12; full year)

Student Congress is comprised of the Student Body President, the Chief Justice of Court, elected officers from each class, and an appointed Chief(s) of Staff. Congress meets once a week; its role is to direct student organizations and help establish understanding between students and other branches of the John Burroughs community. Congress helps define and implement the John Burroughs School Philosophy and is the main student vehicle to initiate change within the school. Members of Congress also organize several traditional school events, including the Student Activities Fair, Spirit Week, Blue and Gold Dance, Dance Marathon, Commons Café and Field Day.

### Student Court

(Grade 7-12; hearings of 1-2 hours/week; full year)

The Student Court is composed of eight students, including a Chief Justice, two seniors, one junior, one sophomore, one 9th grader, one 8th grader, and two clerks. Each member of the Court, except the clerks, is entitled to one vote. The Head of School appoints two non-voting sponsors to the Court who, upon confirmation by the Court, enjoy all other rights granted to a member of the Court. The Court hears cases arising from alleged violations of school rules.

NOTE: More information on the Court is in the JBS Family Handbook.

Montgomery Plan Community Engagement Club  
(Grades 7-12; offered full-year, participation is flexible)

Montgomery Plan is a student group that promotes local community service opportunities for middle school and high school students. The Mission Statement is to inspire informed, compassionate, and impactful engagement with the greater St. Louis community through education, real-world experiences, and reflection.

Monthly meetings are held on Late Start Thursday mornings. Meetings offer discussions on a given theme, a chance to learn about upcoming engagement opportunities, and the opportunity to discuss and debrief recent events and/or engage with representatives from partner agencies invited by the club to speak.

Montgomery Plan typically sponsors 2-4 events per month, including off-campus service work and on-campus drives and fundraisers. Annual drives include the fall Danna Drive, which supports a local organization chosen by student leaders, and the Holiday Food Drive, which supports a busy food pantry in South St. Louis City. Group volunteer opportunities include performing Sunday Funday recitals at senior living centers, assisting with events for people with disabilities, gardening and riverbank cleanup, MLK, Jr. Day of Service each January, Art Empowerment, and more. Montgomery Plan also sponsors two annual fundraisers: Old Newsboys Day is a citywide effort in November to raise money for over 100 local children's charities, and Empty Bowls is a potluck dinner in late February/early March to raise awareness about and funds for a local organization fighting hunger and food insecurity in the St. Louis region.

Montgomery Plan partners with other service-oriented student groups, and shares individual opportunities as election judges, book buddies, and more. Active members may apply for leadership roles within the club. Students who participate in Montgomery Plan events receive priority registration to attend the annual Spring Break Service Trip, which has traveled to destinations such as Kansas City, Chicago, Memphis, and Little Rock.

Other Clubs and Activities

Aim High	Ceramics Club
Anatomy Club	Chess Club
Animal Allies	Classics Club
Asian Culture Club	Computer Science Club
Biomedical Sciences Club	Cooking Club
Bird Nerds	Cultural Performance Club
Bomber Bee Club	Current Events Club
Business Club	Dance Squad
Cars & Coffee	Diversity ETC

Environmental Club  
Extra Hands for ALS  
Film Club  
French Club  
Gender Equity Organization (GEO)  
Girls Who Code  
Guild of Geeks  
Hispanic Culture Club  
Jewish Culture Club  
Kids Against Cancer  
Kids Under Twenty-One (KUTO)  
KIVA  
Light & Sound Crew  
Marble Club  
Math Club  
Middle School Diversity Club  
Mock Trial Team  
Ping-Pong Club

Political Action Club (PAC)  
Protecting Our Patriots  
Puzzle Club  
RISE (Race Intersecting  
Socioeconomics)  
Robotics  
Science Olympiad  
Sixth Man Club  
Spectrum  
Sports for Charity  
St. Louis Teens Aid Refugees  
Today (START)  
Stubborn Ounces  
Super Mileage Vehicle Club  
(SMVC)  
World Religions and Beliefs  
Yarnivores

## SPECIAL PROGRAMS

During the school year a variety of special programs are available to a limited number of students. These programs are not listed as regular courses or activities because they differ substantially in form and time period. Generally, additional fees are charged, and for some programs these are substantial.

NOTE: Limited financial aid is available from the Edward W. Cissel, Jr. Fund, created specifically for those who could not otherwise take advantage of these programs. Information can be obtained from the Head of School's assistant.

### Outdoor Programs

Students are actively involved in outdoor educational programs. Their objective is to give students opportunities to grow and learn in special ways relevant to the out-of-doors:

- a. Experiencing self-challenge: encourage the student to extend boundaries of performance.
- b. Broadening self-image and developing self-confidence: confronting new, challenging situations to discover new capabilities and strengths.
- c. Learning self-reliance: encouraging independence when meeting a challenge, so that the student learns to think and act responsibly and autonomously.
- d. Learning constructive participation: learning both to contribute within a problem-solving group, and to depend upon the peer group for success.
- e. Learning a new relationship with nature: introducing the student to new perspectives on our interdependence with nature, in order to develop an appreciation of the eco-system.

### 7th Grade Drey Land

(Required, grade 7; Fall)

This is a 4-day orientation program takes place at our Drey Land Camp in the Ozarks. The program is designed so that Burroughs' 7<sup>th</sup> graders learn about themselves and each other, participate in activities that require differing perspectives and cooperative group learning, and experience the beauty of the outdoors. The 7<sup>th</sup> grade Drey Land program helps students to understand and embrace the importance of considering alternate ways of thinking and doing as they continue their journey as students at John Burroughs.

### Drey Land Plus

(Summer before grade 9)

Drey Land Plus is an orientation program for new students in grades nine offered at the school's Drey Land Camp in the Ozarks. In this program, conducted in August, each new student is paired with a current rising 9<sup>th</sup> grade partner in order to enjoy and learn from a number of outdoor activities and challenges. These usually include a group campfire, quiet walk, float trip, and other group activities and discussions. This program seeks to foster a better understanding of the school and its many traditions as well as an appreciation of themselves, their classmates, and the vitality that is John Burroughs School. Partner students are selected by the principal of grades 9 and 10 based on similar or compatible interests of the new students as well as an appreciation and understanding of the program.

### Biology Field Study at Drey Land

(Required, grade 9; Spring; see p. 50)

### Senior Drey Land

(Summer before grade 12)

In this program, the entire senior class returns to Drey Land for a final visit. This is the only Drey Land program in which an entire class takes part. Seniors revisit past Drey Land activities, take part in new challenges like the trust leap, reminisce about the time at Burroughs, and, most importantly, bond before taking on leadership of the student body.

## International Trips

THIMUN Trip (see p. 87)

### Classics Department Trips

Opportunities to travel to Italy, Greece, and other Roman provinces are offered by the Classics Department to students and interested members of the Burroughs community. These trips bring to life the material that students of Latin and Greek have been learning in our classrooms. They stroll along the same streets of Rome and Athens that were trodden by the poets, historians, orators, and philosophers whose work they have studied. On these trips, participants travel back in time when visiting ancient sites, while enjoying the contemporary culture and cuisine of each destination. Members of the Classics Department and Burroughs faculty lead these trips. Financial aid is available for current students who qualify.

Italy Trip (two consecutive years followed by a one year break: March 2026, 2027, 2029, etc.)

The trip to Italy is offered to students of Latin and Greek over spring break. The popularity of this trip restricts it to students currently enrolled in Latin III, IV or Latin V, or Greek I or Greek II. While in Italy, students spend a week exploring Rome and the Etruscan city of Orvieto, before departing for the Naples area where the buried cities of Pompeii and Herculaneum are the focus.

Greece Trip (every three years: June 2025, 2028, etc.)

Though the trip to Greece is open to all students, parents/guardians, and alumni, priority is given to current and former students of Latin and Greek. The journey begins in mainland Greece with visits to sites such as Delphi, Mycenae, and Olympia from our base in Athens. This is followed by a five day ‘mini-cruise’ that includes Crete, Mykonos, Patmos, and Rhodes, as well as Ephesus, a major city of the Roman empire which was once on the coast of Turkey, but is now about six miles inland.

Roman Province Trip (alternate years: June 2026, 2028, etc.)

Like the trip to Greece, this trip is open to all students, parents/guardians, and alumni, but priority is given to current and former students of Latin and Greek. The inaugural Roman province trip will take participants to Campania and Sicily where they will visit world-class museums, archaeological sites and historical reconstructions from their bases in Naples and Palermo.

### Modern Language Department Trips

Modern language students who spend meaningful time in a country which speaks the language they study attain a higher degree of fluency. The language comes alive; moreover, host families and new friends can make lifelong, life-altering impressions. In bringing this experience to the classroom, students are more motivated themselves and motivate others. Furthermore, an experience abroad can improve a student's maturity. The Modern Language department sponsors trips in each of the core languages offered. These trips are designed to be educational, enjoyable, convenient, and affordable. Burroughs faculty chaperone the trips. The school offers financial aid for students with need.

#### French Trip (alternating years: 2024, 2026, etc.)

This ten-day cultural summer French trip in June immerses students in the culture, food and language of a variety of cities and regions in Canada, where students retrace the steps of the French Acadians. Students will visit Montreal, Quebec City, as well as a variety of quaint small towns in New Brunswick, Prince Edward Island, and Nova Scotia, where we'll end our tour in Halifax. Incorporated in the trip are visits to various museums, monuments, old city ramparts, parks, beaches, forts, an Acadian village, and a sugar cabin (to learn how maple syrup, a staple in Canada, is made). This trip is offered to students in grades 9-12 (priority is given to upper classman).

#### German Exchange (yearly)

This three-week trip at the beginning of the summer features a two-week homestay in Amberg and travel to Munich, Vienna, Berlin and many cities in Bavaria. Those who travel host their partners here in St. Louis the following year in the spring. This trip is offered to students in grades 11-12.

#### Spanish Trip (alternating years: 2025, 2027, etc.)

This ten-day Spanish spring break or summer trip (depending on the year) emphasizes educational immersion in Spain, where students further explore the history, literature, and art history that we have covered in the classroom. We will include opportunities to enjoy a variety of food, music, and visits to museums. In addition, we try to attend a play, a zarzuela and/or a flamenco performance. This trip is offered to students grades 10-12.

## *Other Special Programs*

### Career Awareness

(Grades 7-12)

The Rassieur Career Awareness Center is located in the College Counseling Office and provides information on future occupations. The purpose of the Career Center is to initiate career exploration. Materials include books, periodicals, pamphlets, and audio-visual sources as well as some information on possible May Projects for seniors. Outside speakers are brought to school for a Career Awareness Day for sophomores in the spring. On Career Awareness Day students also complete assessments, including a career interest profile and personality inventory, to assist with the college search process.

### Praxis Week (Ms. Keeley)

(Open to rising sophomores through rising seniors)

The Praxis Week program takes place the first week of summer and exposes twenty Burroughs high school students each year to a wide range of careers in applied math and science. Students interact with professionals and academics in their work environments, traveling to a variety of businesses and research institutions in St. Louis. Hands-on activities are emphasized to give the students an idea of what working in various fields would be like. If necessary due to public health circumstances, the program is held over Zoom instead. In either case, the variety of experiences over the course of the week opens students' minds to the wealth of options available. Applications are sent by the principals to 9th-11th grade students in January or February. Interested students can contact Ms. Keeley for additional details.

### Summer Days (Mrs. Clark)

(Grades 9-12; two weeks in July, 9 am-2 pm)

This day camp for children from St. Louis City run by Burroughs students offers positions for counselors who are selected mostly from rising sophomore, junior, and senior applicants. Selection is based on previous volunteer experience, gender, and seniority – while some freshmen and sophomores are chosen, priority is given to juniors and seniors. Counselor-led activities include swimming, field games, arts and crafts. Field trips include the Zoo, Science Museum, City Museum, and a water park.

Aim High  
(Grades 10-12)

Aim High, a challenging and engaging five-week academic summer program with monthly Saturday enrichment sessions during the academic school year, empowers eager middle school students from underrepresented communities to strengthen their character, self-confidence, and determination. During the intensive program, Achievers sharpen their skills in math, science, and the humanities while also participating in the arts, sports, and field trips. The program is offered at John Burroughs and Webster University. John Burroughs students may serve as teaching assistants (TAs) during the summer program and on Saturdays once monthly during the school year; they help with classes, counseling, and sports as well as with cultural activities and field trips. Aim High represents an important exchange between the city and the county, and between public and private education. Sophomores, juniors, and seniors may volunteer for the five-week program which begins in mid-June and ends in mid-July.

Tutoring JBS Students  
(Grades 9-12)

Department heads or teachers may enlist the aid of students to teach those who are having difficulty with a subject, and who need more help than the teacher can reasonably provide. Students are then asked to give up some of their free time to tutor in particular subjects.

Teacher's Aide  
(Grade 12, by department approval; 4 periods/week; full year; 1/2 credit)

Limited openings for selected seniors are available in some departments, usually Ceramics & Sculpture, Mathematics, History, and Languages. Senior aides work closely with a supervising teacher in seventh- or eighth-grade classes, preparing materials, tutoring individual students, and teaching some units. Teacher approval required.

Independent Study  
(Grades 9-12; no Honors credit is awarded)

In a few cases students may receive permission to study under the supervision of a teacher to explore specialized interests or to do advanced work beyond what the regular JBS curriculum offers. A contract approved by the teacher, department head, and the Principal specifies description of the project, hours, and product; this contract must be completed during the first week of the semester that the study begins.

Theater/Dance Productions  
(Grades 7-12; by audition)

Theatre productions are put on for the public each season. Auditions are required. The work takes place outside regular school hours. For full-time participation in the company of a major theatrical or dance production or as a full-time member of a season's technical crew, high school students may receive a sports credit for that season.

May Project  
(Grade 12)

As a final graduation requirement, each senior designs a program of 100 hours to complete during the month of May. May Project affords seniors the opportunity to work in a new setting, with new people, learning new skills and exploring new experiences as they seek to benefit the community. Through the program, seniors establish a professional working relationship with a sponsor. Plans for the May Project begin in January and final proposals are submitted to the May Project Review Board in March. *Details about the process and guidelines are available from the Principal of Grades 11 and 12.*

Alternate Senior Program  
(Grade 12)

A senior can apply to take special courses at a local college in lieu of a full course load at Burroughs. The courses must represent valid educational experiences and must be scheduled around the courses at Burroughs. Tuition fees at the colleges are paid by the student; there is NO TUITION REMISSION at John Burroughs School for this arrangement. Plans must be made at the end of the junior year in consultation with the Principal and the College Counselor.

## INDEX

- 2-D Art 7, 67
- 2-D Art 8, 68
- 3-D Art 7, 67
- 3-D Art 8, 68
- 7th Grade Drey Land, 91
- 8th Grade Seminar, 81
- 9th Grade Choir, 5
- Academic Support, 81
- Acting 11-12, 5, 64
- Acting 8, 62
- Acting 9-10, 5, 64
- Advanced Computer Science:
  - Mobile Application Development, 74
- Advanced Debate, 5, 63
- African-American Studies, 16
- Aim High, 96
- Alternate Senior Program, 97
- Architectural Drawing, 5, 76
- Athletics, 83
  - Drama Option, 85
  - Grade 11, 84
  - Grade 12, 84
  - Grades 7-8, 83
  - Grades 9-10, 84
  - Independent Athletic Activity, 84
  - Outdoor Education, 85
  - Requirements, Grades 9-12, 84
  - Teams Sports Offered, 83
- Basic Foods, 79
- Basic Gardening, 5, 80
- Basic Sewing, 79
- Basic Technical Design and Engineering, 75
- Beginning French, 31
- Beginning Greek, 23
- Beginning Russian, 34
- Behavioral Neuroscience, 54
- Bioethics, 17, 57
- Biology, 50
- Biology Accelerated, 51
- Biology Drey Land, 92
- Biology-AP, 54
- Ceramics I, 5, 68
- Ceramics II, 5, 68
- Chemistry, 51
- Chemistry Accelerated, 52
- Chemistry-AP, 55
- Chorus 7, 59
- Classic Department trips, 20, 93
- Classical Mythology in the Arts, 24
- Coding Essentials, 73
- College Admission Requirements, 6
- Computer Science-AP, 74
- Computer-Aided Drafting, 5
- Computer-Aided Drafting and Manufacturing (CAD/CAM), 77
- Continuing French, 31
- Continuing Russian, 35
- Course Request Instructions, 4
- Dance – Instructional, 65
- Dance – Performance, 66
- Debate 8, 63
- Digital Art & Design, 68
- Digital Audio Technology, 5, 77
- Diversity Seminar, 82
- Drawing and Painting I, 5, 69
- Drawing and Painting II, 5, 69
- Drey Land Plus, 92
- Engineering Explorations, 56
- English 7, 11
- English 8, 11
- English I, 11
- English II, 12
- English III, 12
- English IV, 13
- English IV Honors Seminar, 13
- Environmental Science-AP, 56
- Food & Nutrition: Cooking, 5, 79
- Foundations of Western Literature, 24
- French 7-Continuing, 27
- French 7-Novice, 27

French 8, 28  
 French I, 28  
 French II, 29  
 French III, 29  
 French IV, 30  
 French IV-Honors, 30  
 French trip, 94  
 French V, 30  
 French V-AP, 31  
 Gardening. *See* Basic Gardening  
 Geography and Global Issues 7, 14  
 German 7, 32  
 German 8, 32  
 German exchange, 94  
 German II, 32  
 German III, 33  
 German IV, 33  
 German trip, 94  
 German V, 34  
 German V-AP, 34  
 Global Modern Feminism, 16  
 Governor, The, 86  
 Graduation Requirements, 5  
 Great American Musical, The, 5, 65  
 Greece trip, 93  
 Greek I, 23  
 Greek II, 23  
 Health and Wellness, 81  
 Improvisation, 5, 64  
 Independent Study, 96  
 Independent Study: Art, 5  
 Independent Study: Ceramics, 71  
 Independent Study: Industrial Technology and Engineering, 78  
 Independent Study: Photography, 71  
 Independent Study: Science, 53  
 Industrial Technology and Engineering, 75  
 Integrated Studio Arts, 5, 70  
 Intensive Studies: Art, 5, 71  
 Intermediate Debate, 5, 63  
 International Trips, 93  
 Intro to Organic Chemistry, 55  
 Italy trip, 93  
 Jazz Band, 5, 62  
 JBS Voices, 5, 59  
 Latin 7, 20  
 Latin 8, 20  
 Latin I, 21  
 Latin II, 21  
 Latin III, 21  
 Latin IV, 22  
 Latin V, 22  
 Literature and History, 17  
 May Project, 97  
 Men's a Cappella, 5, 60  
 Mobile App Development, 74  
 Model UN, 87  
 Model UN (SLAMUN), 87  
 Modern Language department trips, 94  
 Montgomery Plan, 89  
 MSHSAA Requirements, 6  
 Music History, 62  
 NCAA eligibility requirements, 6  
 Orchestra, 5, 61  
 Outdoor Education, 85  
 Outdoor Programs, 91  
 Photography I, 5, 69  
 Photography II, 5, 69  
 Physics, 52  
 Physics 1-AP, 53  
 Physics C-AP, 57  
 Playwriting, 5, 65  
 Praxis Week, 95  
 Precalculus, 44  
 Printmaking, 5, 70  
 Program Guidelines, 7  
 Programming for the Web, 5, 73  
 Programming in Java, 5, 73  
 Project Technology I, 5, 76  
 Project Technology II, 5, 76  
 Public Speaking, 5, 63  
 Review, The, 86  
 Roman Britain trip, 93  
 Science 7: Principles of Life Science and Earth Science, 50

Science 8: Principles of Chemistry  
 and Physics, 50  
 Sculpture I, 5, 70  
 Sculpture II, 5, 70  
 Sewing I, 5, 79  
 Sewing II: Quilting, 80  
 Social Studies 8, 15  
 Songwriting, 5, 60  
 Spanish 7-Continuing, 35  
 Spanish 7-Novice, 35  
 Spanish 8-Continuing, 36  
 Spanish I, 36  
 Spanish II, 37  
 Spanish III, 37  
 Spanish IV, 38  
 Spanish IV-Honors, 38  
 Spanish trip, 94  
 Spanish V, 39  
 Spanish V-AP, 39  
 Speech 7, 62  
 Student Congress, 88  
 Student Court, 88  
 Summer Days, 95  
 Teacher's Aide, 96  
 Technology Literacy, 72  
 Theater/Dance Productions, 97  
 Theatre Production, 5, 64  
 THIMUN, 87  
 Tutoring JBS Students, 96  
 U.S. in the World since 1898, The,  
 18  
 United States History, 15  
 Urban Issues and Design, 18  
 Video Production, 5, 65, 77  
 World Civilizations I, 15  
 World Civilizations II, 15  
 World, The, 86

