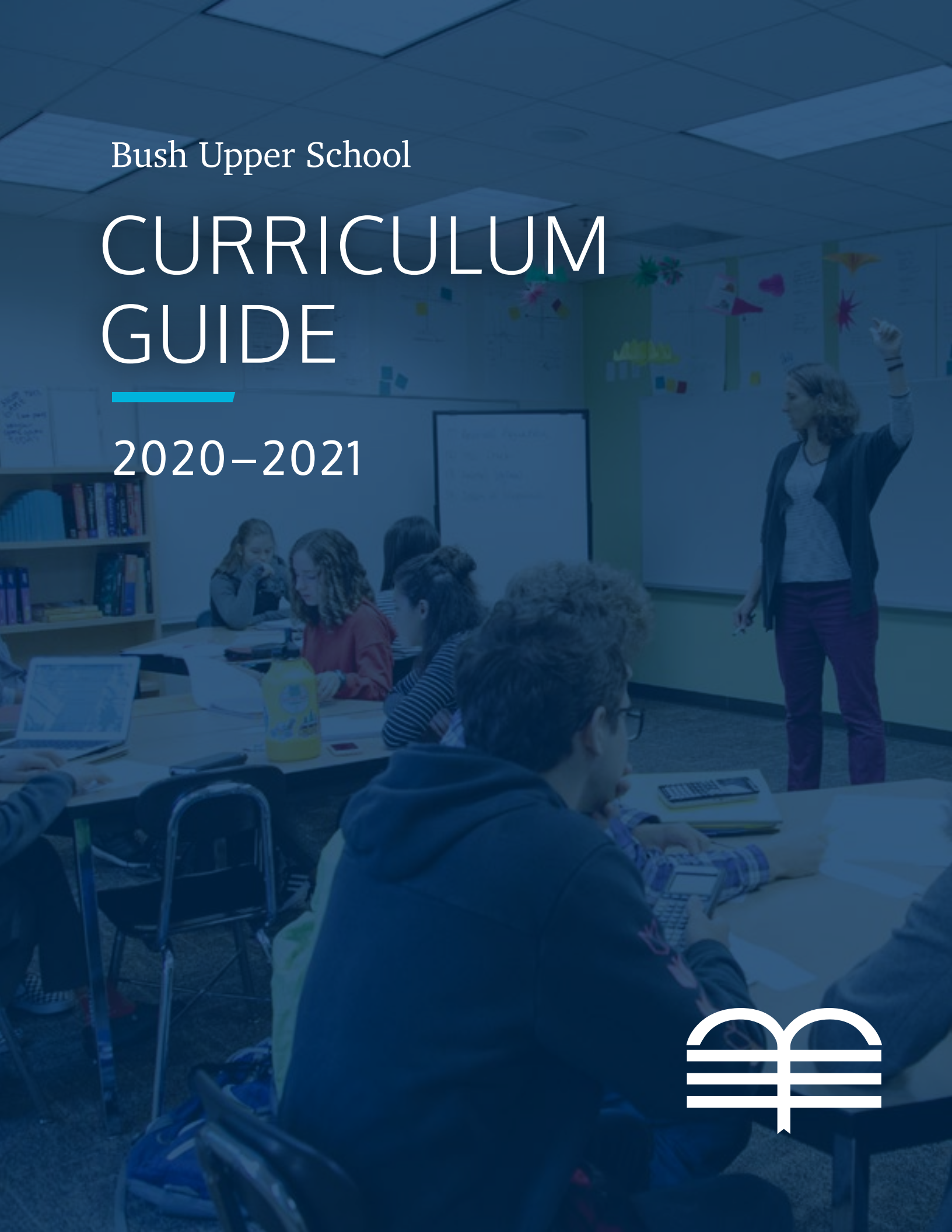
Bush Upper School

CURRICULUM GUIDE

2020–2021



Contents

Message from the Upper School Director

Dear Bush Upper School Students,

The 2020-2021 Curriculum Guide is a collection of courses, policies, and procedures that serves as a resource as you plan your learning experiences. The faculty have devoted time and energy to creating dynamic classes that provide opportunities to discover your passions and create pathways toward your future endeavors. You will be called upon to demonstrate a commitment to learning that will serve you well throughout the school year. By doing so, you will join the faculty in sustaining an atmosphere of learning that is grounded in mutual respect for intellectual growth and exploration.

Please consider your course selections carefully, as they will be important components to your high school experience. You, along with your advisor and family, will work to make sure that you remain on track to meet your graduation requirements. In doing so, attention will be paid to ensuring that you select courses that are challenging, stimulating, and complementary to your life-long goals. Your development as a learner is at the forefront of faculty course creation.

It is with great excitement that I share with you the 2020-2021 Curriculum Guide!

See you around campus,

Ray Wilson

Learning, Accomplishment, and Contribution: Experience Education

The mission of The Bush School is to spark in students of diverse backgrounds and talents a passion for learning, accomplishment, and contribution to their communities.

Educational Foundations

- Critical, independent, and creative thinking
- Ethical judgment and action
- Intercultural fluency
- Local and global citizenship

Learning Community

Bush's nurturing, dynamic, and intellectually vibrant culture fosters a passion for learning. Acceptance, mutual respect, collaboration, and exceptional student-teacher relationships are vital in the community.

Student Experience

The voice of each student is cultivated and listened to actively.

Challenging Educational Program

Bush inspires students to think harder and ask deeper questions. Inquiry and curiosity become lifelong tools for transforming information into understanding and action.

The Benefit

At The Bush School, young people discover who they are; they grow as individuals and are encouraged to pursue meaningful accomplishments.

Developing a Course of Study

The curriculum at Bush is rich in opportunity. Graduation requirements provide an introduction to a wide range of disciplines while leaving substantial room for choice, specialization, and the development of individual strengths and talents. This freedom of choice means that careful planning is essential.

The purpose is to educate students, both in areas of their own interests and in the broader areas of a liberal arts education. Students are given substantial control over their course of studies, and as such are asked to consider several notions in putting together a four-year plan:

- Identify those subjects or activities where you have special interests and strengths. Pursue them in depth and become really good at something.
- Take risks and try new things.
- Think about what you plan to do after high school. A high school education is an experience that contributes to your development of passions and interests, but be mindful of the entrance requirements at a variety of colleges as they relate to your goals and aspirations.

Graduation Requirements/Policies*

A credit stands for one semester's work. Students in the Class of 2021: please refer to the Trimester to Semester Conversion Tables on page 13.

English 7 credits	• English 9 and English 10 are required. • No elective can be taken more than once.
History 4 credits	• Two semesters of Historical Inquiry are required in the ninth grade. • Two semesters of US History are required in eleventh or twelfth grade.
Mathematics 6 credits	• Students must fulfill a Trigonometry or Statistics requirement. See Curriculum Map on page 38 or course descriptions for courses that fulfill this requirement. • Programming courses may not be used to complete the 6 credit math requirement.
Science 4 credits	• 2 semesters of Biology are required. • 2 semesters of Chemistry or Physics are required. • The Science Department strongly suggests that each student take a third year in science, although it is not a graduation requirement.
Visual & Performing Arts 3 credits	• Art classes may be repeated once for credit.
World Languages 4 credits, through Level III	• Students must complete four semesters of one language through the third level of study. • Students may not move on to the next level if they have earned a grade below C-.
Physical Education 3 credits	• One semester of Health is required during tenth grade. • One semester of a graded PE course is required. • One semester of either an additional graded PE course, team sports, or IAP is required.
Cascades Program	• All students are required to take two Cascades per year: one in January, and one in May.

* Class of 2022, 2023 and new families

Planning for College

In conjunction with their advisor and the College Counseling Office, students should carefully consider criteria for college admission while choosing courses at Bush that align with their passions.

Students planning to seek admission to selective colleges and universities are encouraged to exceed the minimum Bush graduation requirements. While most selective private colleges are not rigid about the specific number of years of study required for each subject, they seek students who have pursued a rigorous course of study throughout high school that demonstrates both strength and breadth. Generally speaking, the more selective the college, the higher the expectation for the program of study in high school. (Public universities tend to be firmer about specific requirements for admission. For example, see the requirements listed below for public universities in the state of Washington.)

	Highly Selective Private Colleges and Universities Recommended	**Washington Public Universities** Required
English	4 years	4 years
Foreign Language	3–4 years	2 years
Mathematics	4 years	3 years
Science	3–4 years	2 years (one year must be Chemistry or Physics for WWU)
History	3–4 years	
Social Studies		3 years
Fine, Visual, or Performing Arts		1 year
Academic Elective		1/2 year

Special Note: Keep in mind that colleges are not only looking at students' achievements in the classroom; they are also seeking students who are curious, committed, and involved. They want students who exceed the minimum. Personal and extra-curricular dimensions play an important role in college admissions at selective colleges. Pursue your interests, take an active role, and try new experiences. Not only will you become a more appealing candidate, but also a more fulfilled and interesting person.

Creating a Ninth Grade Program

Welcome to the Upper School! The Bush curriculum offers a great deal of freedom to shape a program that suits your goals and allows investigation into ideas you wish to explore. In Ninth Grade, you already have significant choices to make. Please study the chart below. Use the Four-Year Planner to shape your program. If you have questions, the people to ask include your advisor, your class dean, and the Upper School Director.

Arts	You should take one or two semesters of Art as a Ninth Grade student. You may spread the rest of your Art requirements over the next three years, but you are strongly advised to complete your Art requirements before senior year.
English	All Ninth Grade students are required to take English 9.
History	All Ninth Grade students are required to take Historical Inquiry.
Mathematics	All Ninth Grade students take math. Your class placement will be determined in consultation with the Math Department Chair.
Physical Education	You should take one or two semesters of P.E. as a Ninth Grade student. You may spread the rest of your P.E. requirements over the next three years, but you are strongly advised to complete your P.E. requirements before senior year.
Science	All Ninth Grade students are required to take Biology.
World Language	The choice of Spanish, French, or Mandarin is entirely up to you. The level at which you enter the Upper School language program will be determined in consultation with the World Languages Chair.

Suggestions for Tenth, Eleventh, and Twelfth Grade

All students must take a minimum of five classes per semester. There is time within the schedule to take five or six classes, but the following should be considered when designing a program.

- You should choose a schedule that will allow you to achieve success in an academic program that is interesting and appropriately challenging.
- Take into consideration the number and nature of your commitments outside of your academic schedule.
- Look at the nature of the courses themselves. Talk with the teacher about class expectations for hours of homework, major projects, and other issues that will demand special care from members of the class.
- Planning over the scope of your four-year career at the Upper School is important. Make sure that your schedule is balanced by making use of the Four-Year Planner included in this Curriculum Guide.
- If you wish to participate in a semester-long or year-long partner program, you must plan your academic studies around being away from campus. Ask the Upper School Director about planning your academic studies while away.

Special Course Considerations

Schedule Changes

Students may add classes, depending on availability, during the first week of each semester. Permission in the form of signatures must be obtained from a student's advisor and parents. Schedule changes are not made on the basis of teacher preference. In exceptional circumstances, it may be necessary for a student to withdraw from a class after the course change period has closed and before the end of the semester. In such cases, a notation of "WP" or "WF" will be recorded on the student's transcript depending on whether the student is passing or failing the class at the time of withdrawal. Such a move is only possible with the permission of the Upper School Director, in consultation with the teacher, advisor, and parents. In the case of seniors, they must consult with the college counseling office.

Independent Study

In exceptional circumstances, it is possible for a student to design an Independent Study on a topic of interest. Independent Studies **cannot take the place of** a class already offered in the Bush curriculum, **nor can they be taken to fulfill a graduation requirement**. (One cannot take Geometry with a tutor, for instance, in order to receive credit rather than take it during the school day.) Students wishing to pursue Independent Study must submit an Independent Study Form as well as a detailed proposal to the sponsoring department's Department Chair. All approved Independent Studies courses will receive Credit/No Credit.

An Independent Study proposal consists of three parts:

1. A description of the course objectives;
2. A detailed calendar of assignments, readings, and projects covering the semester; and
3. A plan for assessing the learning that has taken place.

The proposal will be considered by the sponsoring department and the Upper School Director, and will only be approved if the plan described warrants a full semester's Independent Study credit.

Global Online Academy

The Global Online Academy (GOA) is a consortium of schools, including The Bush School, that connects students from all over the world. The mission of GOA is to reimagine learning to empower students and educators to thrive in a globally networked society. GOA offers our Upper School students the opportunity to learn alongside peers from around the world, share their voice on a global stage, and to further pursue an individual passion.

Bush students in tenth, eleventh, and twelfth grade have the opportunity to take diverse and challenging credit-bearing courses through GOA. These courses will stretch students academically and will nurture their development of essential 21st century skills. GOA courses have synchronous components (when students collaborate together or work with GOA faculty at a set time, generally using video conferencing software) and asynchronous components (students choose when to participate). Courses are designed, developed, and taught by faculty from member schools and meet the high quality and experience students can expect from an advanced level course at The Bush School. Students enrolling in GOA courses are required to have the same commitment and engagement level as they would in any class taken at The Bush School.

Who Should Enroll in GOA Courses?

Successful online learning requires a specific set of skills, skills that might not be exercised as often in a brick and mortar environment. It is recommended that students considering these courses are intrinsically motivated and are able to effectively manage their own time. In a typical week, students commit five to seven hours to a GOA course and log in five to seven times to interact with their teacher and peers. GOA faculty publish a calendar and coursework, ensuring that there are multiple touchpoints for students to show their learning and connect with others.

While enrolled in GOA courses, students will develop six core competencies in practical, hands-on ways including:

- Collaborate with people who don't share your location.
- Communicate and empathize with people who have perspectives different from your own.
- Curate and create content relevant to real-world issues.
- Reflect on and take responsibility for your learning and that of others.
- Organize your time and tasks to learn independently.
- Leverage digital tools to support and show your learning.

GOA Site Director at The Bush School

Every GOA member school has appointed an on-campus Site Director, who is dedicated to knowing, supporting, and leading the school's cohort of GOA students. Kelsey Medrano, kelsey.medrano@bush.edu, is the Site Director at The Bush School and is the student and family's main point of contact for all information regarding GOA.

Registration for GOA Courses

Sophomores, juniors, and seniors are eligible to register for GOA courses. Interested students must be enrolled in five courses on The Bush School campus in order to register for a GOA course, which is taken as a sixth course in a full student schedule. GOA courses cannot be taken as a seventh course. GOA courses are taken for nondepartmental, elective credit and do not fulfill Bush graduation credits. GOA courses will appear on a student's Bush School transcript and will be incorporated into a student's GPA if taken during the academic year. The cost of GOA courses during the academic year is included in tuition.

In order to register, students must go online and request a course here, by 8:00 am on March 25, 2020. The Site Director will review all requests and enroll students by lottery if more than two students request the same course. The enrolled students will be notified that they have been added to the course, and additional students will be placed on a wait list. Important course related dates can be found on the GOA Academic Calendar. Please note that add and drop dates for courses differ from courses taken on The Bush School campus.

For more information about the Global Online Academy, please visit: www.globalonlineacademy.org.

Grading Policies

- Narrative evaluation and written comments are the most important form of evaluation at Bush and are emphasized instead of letter grades. Grades on assessments and semester grades are not posted publicly.
- At the beginning of each term, teachers explain their grading expectations or criteria for assessment. Each teacher outlines the relative weight that will be placed on classroom participation, homework, and assessments.
- Grades of A, B, C, D, or F are given in all full-credit courses in the Upper School. Half-credit courses, Cascades, and Independent Studies courses are graded credit/no credit. P.E. credit for interscholastic sports is graded credit/no credit. No other credit/no credit grades are given, unless specified by the Upper School Director.
- Consistent definition of grades is maintained across the school. Current practice indicates the following definitions: A = excellent, exceptional work; B = good work; C = adequate, acceptable work; D = very poor work; F = failure. An A is the highest grade students may earn. Below a full A, pluses and minuses are used with the understanding that the letter grade itself is key, and that some colleges may eliminate pluses and minuses in their grade point calculations.
- The designation “Incomplete” exists in order to acknowledge situations when a student has been unable to complete the requirements of an assignment or a course because of medical reasons or otherwise unavoidable factors. If an “Incomplete” is assigned, unless otherwise noted, the student is responsible within two weeks after the end of the term for completing the assignment in question. If at the end of two weeks, it is necessary to seek a further extension for acceptable medical or personal reasons, this may be granted. If a student is not able to complete work within the two-week extension, the teacher will evaluate the work done for its merit and assign a suitable grade. If no work is received, the “Incomplete” assignment will not earn credit. The Upper School Director must be notified and approve all “Incompletes” assigned at the end of term.
- Only the teacher of record may assign grades. The Upper School Director or the Head of School may not change a grade. Students wishing to appeal a grade should schedule a meeting with their teacher and advisor to discuss the matter. The purpose of this meeting is to understand fully the means and thinking used to determine the grade that was assigned. In some cases, The Upper School Director may attend a grade review meeting. After a grade review meeting has taken place, at the teacher’s discretion, a grade may or may not be changed.
- In some cases a student may repeat a course in order to improve a grade. This may be done only to change grades lower than C–. The transcript will indicate that the course was taken twice. One enrollment will show as an “Audit” and the other will display the earned letter grade(s) or year-long grade.
- At the end of each semester, three days are set aside for final assessments. Two assessments are scheduled each morning. The individual teacher will determine the relative weight placed on the assessment grade, and this information will be published for the class as part of the course outline.
- Year-long classes make use of semester grades as indicators of a student’s progress, but only one grade, at the end of the school year, is registered for a year-long class on a student’s transcript. By contrast, the grades earned in elective, semester- length classes all appear on the school transcript.
- No courses from other institutions (during the year or during the summer) may be used to supplant Bush Upper School courses or to meet graduation requirements, nor may they be used to earn Bush credits.

Tutoring and Academic Support

Faculty members are available and committed to helping all students as much as schedules allow. Teachers are available during conference times, breaks, and occasionally during common free blocks. Students should schedule time with their teacher(s) when concerns arise in class. When a teacher determines that a student may need assistance beyond the individual help that the teacher can give, the issue must be raised with the parents, the student, the student’s advisor, and the division learning specialists. It is particularly important that the specific recommendation for a tutorial program should arise from concerns that are jointly discussed, that the nature of the program should be prescriptive, and that it should relate as closely as possible to the curriculum at the school.

When there is sufficient concern about a student’s work to warrant outside tutoring, this concern will be communicated to and between parents and teachers, the advisor, and the learning specialists. Often, due to scheduling difficulties, communication via email and/or phone is an effective alternative to a full meeting of all parties involved. If, as a result of this communication, it is determined that a student needs extra help, the learning specialists will make recommendations for possible outside support. Once a tutor has been selected by the family, the learning specialists will assist in providing time and space on campus for tutors to work with students.

The student is expected to continue working individually with the teacher with the goal of eliminating the need for outside assistance. Tutoring is never meant to take the place of work with an individual classroom teacher. Tutorial support is intended to complement the conferences between students and teachers that take place as a normal function of work in school.

It is important and most effective when the teacher at The Bush School and the tutor work in concert to best support the student involved. Parents should always inform the school and a teacher that a student is being tutored. The Bush teacher should understand the nature and frequency of the tutoring and be given the opportunity to share goals and suggestions for tutoring sessions. The school asks that the family of a student who is working with a tutor monitor regular contact between the tutor and the classroom teacher. Email communication, initiated with the parents and shared between tutors and faculty members, has proven to be an effective form of such communication.

Tutors are not regarded as faculty members. Their financial contracts with parents are handled independently of the school. If a student receives financial assistance through the school, similar assistance is available to help with tutoring expenses. Please contact the division learning specialist for more information on that possibility.

If you have any questions about the tutoring process, please contact the Upper School Learning Specialists.

Year-Long Classes

Ninth Grade Classes

English	English 9
History	Historical Inquiry
Math	Algebra 1, Geometry, Advanced Algebra, Math Analysis*
Science	Biology
World Language	French I, II, or III Spanish I, II, or III Mandarin I, II, or III

Tenth Grade Classes

English	English 10
Math	Algebra 1 Geometry* Advanced Algebra* Math Analysis* Introductory Calculus* Advanced Calculus*
Science	Chemistry, Physics (without Calculus)
World Language	French I, II, III, or IV Spanish I, II, III, or IV Mandarin I, II, III, or IV

Eleventh & Twelfth Grade

Math	Advanced Algebra* Math Analysis* Introductory Calculus* Advanced Statistics* Advanced Calculus* Multivariable Calculus*
History	US History
Science	Advanced Biology* Advanced Chemistry* Anatomy & Physiology Environmental Science* Physics* Physics with Calculus*
World Language	French I, II, III, IV, or V Spanish I, II, III, IV, or V Mandarin I, II, III, IV or V

*Please consult Curriculum Guide for prerequisite.

Trimester to Semester Conversion Tables

The Trimester to Semester Conversion Tables are designed for Bush students with both trimester and semester credits. Students in the Class of 2021 will need to use these charts to determine the number of trimester credits completed and the number of semester credits needed to meet graduation requirements.

The charts are organized by department. Reference the left column “Trimester Credits Completed” and select the number of trimester credits completed in each department. Move across this row to determine the the number of semester credits needed to complete graduation requirements.

Example: If student A has completed 7 trimester credits in English, she will need 2 semester credits in order to meet the graduation requirement.

English

If you have... Trimester Credits	0	1	2	3	4	5	6	7	8	9	10
Then you need... Semester Credits	7	6	6	5	4	4	3	2	2	1	0

History (HI, US History), Science (2 Lab years), World Language (Through Level 3)

If you have... Trimester Credits	0	1	2	3	4	5	6
Then you need... Semester Credits	4	4	3	2	2	1	0

Art (1 repeat for credit), PE (Health, Letter Graded)

If you have... Trimester Credits	0	1	2	3	4	5
Then you need... Semester Credits	3	2	2	1	1	0

Math (Statistics or Trigonometry)

If you have... Trimester Credits	0	1	2	3	4	5	6	7	8
Then you need... Semester Credits	6	6	5	4	4	3	2	2	1

Course Planning Sheet – Class of 2022, 2023 & 2024

9th Grade

Fall	Spring
English 9	English 9
Historical Inquiry	Historical Inquiry
Biology	Biology

10th Grade

Fall	Spring
English 10	English 10

11th Grade

Fall	Spring

12th Grade

Fall	Spring

Bush Semester Requirements	English 7	History 4	Math 6	Science 4	Arts 3	Language 6/Level III	PE 2 + Health	AMP/ Cascade 2
9th								
10th								
11th								
12th								
Total								

Course Planning Sheet – Class of 2021

9th Grade

Fall	Winter	Spring
English 9	English 9	English 9
Historical Inquiry	Historical Inquiry	Historical Inquiry
Biology	Biology	Biology

10th Grade

Fall	Spring
English 10	English 10

11th Grade

Fall	Spring

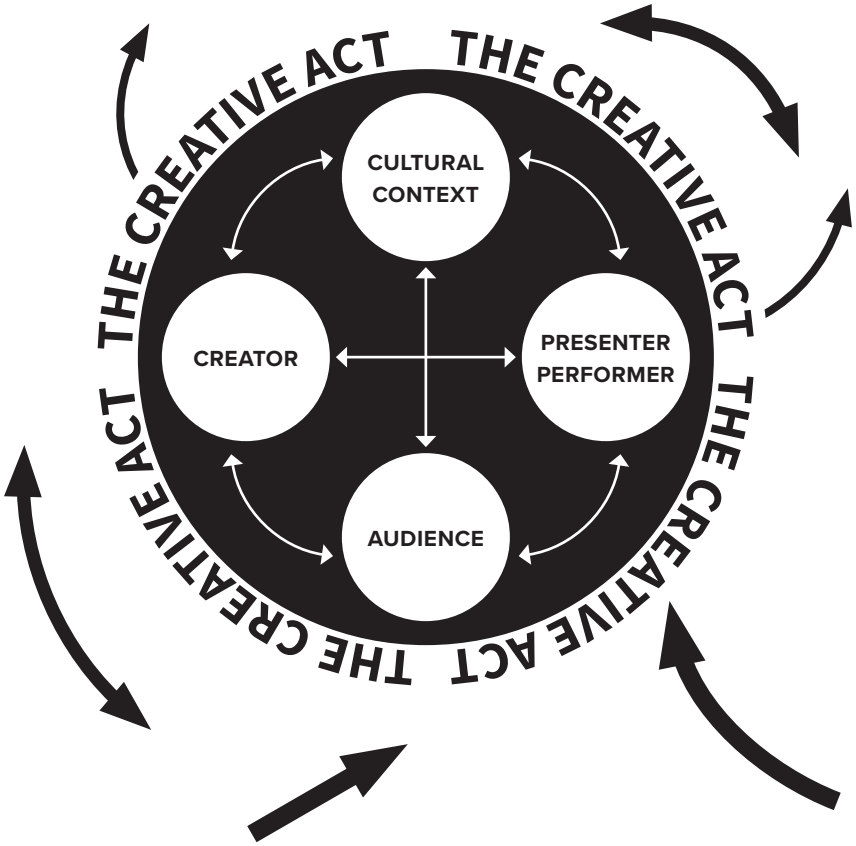
12th Grade

Fall	Spring

Bush Requirements*	English	History	Math	Science	Arts	Language	PE	AMP/ Cascade
9th								
Total Trimesters Completed								
10th								
11th								
12th								
Total Semesters Needed								

*Use the Trimester to Semester Conversion Table on page 12 to determine the number of trimesters completed and the number of semesters needed to meet Bush graduation requirements.

THE ARTS


THE CREATIVE ACT
THE CREATIVE ACT
THE CREATIVE ACT
THE CREATIVE ACT
CULTURAL CONTEXT
CREATOR
PRESENTER PERFORMER
AUDIENCE

Philosophy

To release, develop, and share our imaginative and creative selves, individually and collectively, by:

investigating elements and principles of design and performance;

exploring linear and non-linear styles of learning, risk-taking, and expressing; and

celebrating and integrating the pursuit of viewing the world aesthetically.

Expression is encouraged by providing students with a foundation of skills and experiences in order to approach the realm of ideas, symbols, and concepts. The course offerings are diverse, and are designed for a progression of skill levels and experiences in the classroom. The unique and original expression that is derived from group and individual efforts is valued. Critiques and evaluation are integral to assessing students' work.

2020–2021 Art Course of Study

The minimum course of study is three semesters of arts, chosen from drama, music, and visual arts. Art classes may be taken up to two times for credit. All art classes receive semester grades.

VISUAL ARTS

- Acrylic Painting
- Additive Multimedia Sculpture
- Black & White Photography
- Computer Art
- Digital Filmmaking
- Drawing
- Fire Arts
- Metal Design
- Silkscreen
- Tykoe Yearbook

DRAMA

- Acting I
- Acting II
- Introduction to Theater Arts
- Introduction to Theater Arts: Advanced Topics
- Makeup for the Stage
- Advanced Makeup for the Stage
- The Podcast

MUSIC

- Electronica
- Ensemble I, II, Plus
- Scoring For Interactive Digital Media
- Sound Design
- Viva Voice

Visual Arts

Acrylic Painting

FALL SEMESTER AND SPRING SEMESTER

Two canvases give students the opportunity to explore the unique expressive qualities of acrylic painting. Students stretch their own canvases and choose the subjects they wish to paint. Paintings are of all types of subject matter: people, animals (pets), still lifes, natural/man-made objects or scenes, landscapes, or things we just imagine.

Importance will be placed on the use of the imagination and the inner world of ideas, feelings, and fantasy as subject matter. How to orchestrate an image, the importance of ownership, and seeing with the "mind's eye" will guide efforts as students learn comprehensive painting techniques. Fees apply.

Additive Multimedia Sculpture

FALL SEMESTER AND SPRING SEMESTER

Additive sculptures allow students to explore working in three dimensions. In this multimedia class, students manipulate a broad range of materials such as copper, soft and hard woods, fused Bullseye glass, plaster, clay, plastics, enamels, acrylic paint, concrete, and found objects. These materials are manipulated using a shop full of equipment: table saws, band saws, belt/disc and random orbital sanders, hand drills and drill press, oxy-acetylene torches, glass cutters, and fusing kilns, hammers, punches, rollers, power nailers, and a range of hand tools. Students will design and construct forms in various ways using processes such as brazing, casting, chiseling, forging, fusing, laminating, grinding, spray painting, rolling, and spot welding. These creations range from six to twenty-four inches in scale and are limited only by the student's imagination. Fees apply.

Black & White Photography

FALL SEMESTER AND SPRING SEMESTER

This photography class provides the primary skills required for the production of traditional black-and-white photographs, including camera operation, principles of exposure, film development, and printing in a darkroom. Students photograph various subjects and solve specific problems in photo shoots outside of class. The assignments emphasize camera techniques, image composition, and the exploration of personal expression. In addition, students look at and discuss the work of important historical and contemporary photographers to gain an appreciation for the history of photography and the variety of approaches to this medium. Fees apply.

Computer Art

FALL SEMESTER AND SPRING SEMESTER

Digital photography and video initiate this class, which ends with student work presented in a professionally bound book. Online "on demand" book publishing has taken off, and students will explore image making and manipulation, design, and editing as they produce their own books. Adobe Photoshop CS6, Premiere, Topaz Adjust, and BookSmart are used to create and find solutions with images and words. Images come from sources that are scanned, downloaded, digitally photographed, videotaped, drawn on digital pads, composed, and saved within a large array of possible solutions. Students will learn and work with the Javascript library p5.js to explore how algorithms can be used to create digital artwork. A group publication and an individual publication will encourage students to explore various aspects related to computers and visual presentation. Fees apply.

Digital Filmmaking

FALL SEMESTER AND SPRING SEMESTER

In filmmaking class, students learn how to develop original stories for the big screen as they create a series of short digital films from start to finish. Technically, the emphasis is on building a student's skills and confidence filming with a DSLR camera and editing with Adobe Premiere Pro. The aesthetic side of the class focuses on visual storytelling and gaining an understanding of the conceptual tools of film needed to express one's personal vision. Through a sequence of collaborative projects, students first develop and then refine their skills in the production process, including storyboarding, screenwriting, camera operation, sound capture, and editing. Fees apply.

Drawing

SPRING SEMESTER

This drawing course puts the emphasis on seeing. Students are asked to see in an active, analytical way. Working with everyday subjects, students will experiment with a variety of drawing media and approaches designed to increase their observational skills and nurture their expressive abilities. The basic elements of drawing, including line, mass, volume, values, and proportion will be introduced. Fees apply.

Fire Arts

FALL SEMESTER AND SPRING SEMESTER

Materials that pass through the test of fire are the basis for building in this class. These materials are glass, low-fired clays, and gypsum plaster. Gypsum plaster is used in casting, creating molds for glass kiln casting, and slip casting clay. Low-fired clay can be thrown on the wheel, hand built (coil and slab), extruded, and slip cast into plaster molds. Glass is manipulated with oxy-propane torches, kiln cast, fused and slumped. Students initiate work on the torch and create pieces using the materials and processes available in the class. Students explore a wide range of working techniques as they produce their work in class. Fees apply.

Metal Design

FALL SEMESTER AND SPRING SEMESTER

In this class, students explore the fundamentals of jewelry design and fabrication techniques while designing unique and wearable jewelry in copper, brass, and silver. Over the term, students learn a range of hand-tool processes through practical exercises and imaginative concept-based projects. Students acquire skills in sawing, piercing, filing, annealing, silver soldering, riveting, enameling, and more. Aesthetically, the emphasis is on developing the student's critical-thinking and ideation skills in order to realize their vision and create original designs. Fees apply.

Silkscreen

FALL SEMESTER

Silkscreen is the ideal printmaking medium for experimentation with multicolor work. Silkscreen printing can fill a page with color in a single stroke, or convey intricate detail by utilizing multiple layers of color. In this class, students create hand-cut and photo-emulsion stencils for screen-printing. Designs are printed with water-based inks on paper to create infinite colors, textures, and shapes. Topics covered include screen preparation, composition, color theory, color mixing, and registration for multi-color prints. Fees apply.

Tykoe - Exploration in Digital Design

FALL SEMESTER AND SPRING SEMESTER

Course of Study

A student receives one art credit for each semester. Students who wish to become senior editors must plan ahead and apply a year in advance. Senior Editors will be required to enroll in Tykoe all year long and will receive two art credits—one for each semester.

Tykoe is The Bush School yearbook representing all grades, kindergarten through twelfth grade. Designed and assembled by Upper School students, Tykoe forms an important and memorable record of the school year. In addition to learning graphical software, photography, and design skills, students in the Tykoe class acquire experience in leadership and decision-making. Tykoe allows students on the yearbook design team to leave their permanent imprint on the school.

Students will acquire design and layout skills and learn the process of planning and designing a book. An emphasis will be placed on creative thinking and solving visual problems. With this in mind, students will design and create Tykoe based on a cohesive visual theme that resonates throughout the book. Each student will become comfortable and competent in photography and document the essence of the school. They will study the traditional elements of design, composition, and collaboration. Students will become fluent in graphics programs, including InDesign and PhotoShop and create digital layouts using these programs that will capture the pulse of our K-12 school. Students will work collaboratively to solve problems in concepts and design and create a cohesive meaningful yearbook that encourages individual awareness and expressiveness. Open to students in grades 9 through 12.

Drama

Acting I

FALL SEMESTER AND SPRING SEMESTER

This course is an introductory exploration of stage acting theory and methodology through exercises and beginning work on scenes and monologues from plays of the student's choosing. The course emphasizes creativity, concentration, relaxation, physical and vocal awareness, and use of the actors' individual energies.

Acting II

FALL SEMESTER AND SPRING SEMESTER

This is a course for students who have an interest in theatre or performance and want to dig deeper into acting techniques and styles. If you have been involved in theatre in the past, this class will help you find your next steps as an actor through monologues, scenes, and exercises.

Prerequisite: Completion of Acting I

Introduction to Theater Arts

FALL SEMESTER

In this class, you will learn about the world of theater by experiencing its many parts. We will read famous plays, learn about the history of theater around the world, analyze a script, design the set and costumes for a play, act out a scene, talk about how to watch live theater, watch a professionally produced play, and more. You will have the chance to dive deeply into an area of theater you connect with, or you can do several small projects to try different areas. This will be a hands-on class where we work in groups and individually throughout the term.

Introduction to Theater Arts: Advanced Topics

FALL SEMESTER

Take a deeper dive into the world of dramaturgy and play production by leading beginning students through their journey of discovering theater. You will assist the instructor and become a group leader as the class explores design and history. Prerequisite: Instructor Approval

Makeup for the Stage

SPRING SEMESTER

This course will teach students the basics of stage makeup application and design by having them apply it directly to themselves and their classmates. We will begin with the basic elements of design, learn how to manipulate those elements, and apply that knowledge through hands-on application. You will learn corrective, old age, character makeup, and fantasy/sci-fi makeup, among others.

Fees Apply

Advanced Makeup for the Stage

SPRING SEMESTER

You will continue your makeup skills and begin learning about airbrushing, life-casting, film makeup and other advanced makeup techniques. Prerequisite: Completion of Makeup for the Stage

Fees Apply

The Podcast

SPRING SEMESTER

Podcasts have exploded in popularity over the last decade, featuring everything from news to education to comedy. In this course we will listen to podcasts (like *This American Life, The Moth, Radiolab,* and many more), practice the techniques they use, and learn the skills necessary for digital production. By the end of the course you will produce and record episodes of your own podcast.

Music

Electronica

FALL SEMESTER

This course is open to musicians and non-musicians. Students will explore the techniques and art of composing and producing electronic music through the use of electronic hardware, i.e. synthesizers, samplers, sequencers, loopers, vocoders, effect devices, and software. We will examine and create with the rhythmic components of beats, patterns, loops, words and melody within a group dynamic. Attention will be paid to creating a working musical language along with techniques for the structuring, developing and orchestrating for all composed pieces by the ensembles. There will be a presentation and multi-track recording of the produced pieces at the end of the term. No previous experience required.

Ensemble I

FALL SEMESTER AND SPRING SEMESTER

Do you play any instrument or sing? This course is open to all students who want to explore the process of composing, arranging and orchestrating original pieces in a musical group context. Beginning theory concepts will be taught and applied along with the techniques for structuring rhythm, melody and harmony into lead sheet form. Emphasis will be placed on the importance of building strong group dynamics along with a working musical language. At the end of the term there will be a live presentation of the produced material. No previous experience or expertise required.

Ensemble II

FALL SEMESTER

Coursework will explore intermediate theory and the process of utilizing these concepts in composing, arranging, orchestrating, recording, and producing for both electric and acoustic works within an ensemble. Attention will be given to learning how to structure, develop and orchestrate within the range and timbre of each instrument and vocal within the arrangements. Basic recording and production techniques will be taught and applied to the multi-track recordings for all produced pieces. There will be a live presentation of the produced material at the end of the term. Prerequisite: Ensemble I, Vocal Ensemble, Electronica or consent of instructor.

Ensemble Plus

SPRING SEMESTER

Ensemble Plus is open to instrumentalists and vocalists. Course work will explore intermediate theory and the process of utilizing these concepts in the composing, arranging, orchestrating and recording of scores. Techniques will be taught and applied to the structuring of rhythm, melody and harmony into manuscript form by utilizing supplied notation software. The ensemble will fit the musical pieces to a chosen visual (i.e. video/film, spoken word, advertisements, animation) and play live to it. Emphasis will be placed on learning how to apply the techniques used when writing and playing music within an ensemble to a live visual. All scores will be recorded into recording software and mastered into a master two track, along with a live presentation of the produced material at the end of the term. Prerequisite: Ensemble I, Vocal Ensemble, Electronica or consent of instructor.

Scoring For Interactive Digital Media

FALL SEMESTER

This course begins with an introduction to Pro Tools recording and editing software. Students will study the audio created from many different digital soundtracks that will be provided. Each student will be in partnership with a coder and will create within Pro Tools a multi-track theme and effects. Throughout this process, emphasis will be placed on learning and applying scoring and orchestration techniques and the way to place them within a digital environment. Students will be given an opportunity to explore the technical skills used for “mixing down” their multi-track effects and theme, which will reside within their two-track masters. All masters will be synched up within their partner’s programmed digital media. There will be a presentation of the projects at the end of the term.

Sound Design

SPRING SEMESTER

This course is open to all students who are interested in exploring the components of sound production through the use of software programs, multi-track recorders, samplers, mixers, equalizers and multi-effects. The class will explore sound design from many different genres of production and then focus on learning how to listen to the components of a pre-existing sound design. They will redesign these individual tracks into a new song through the use of Pro Tools, which will require them to learn how to "mix down" multi-tracks into new two-track masters. Students will present their masters at the Venue, which is at the end of the term. No previous experience or expertise is required.

Viva Voice

SPRING SEMESTER

This course is open to all students who want to explore singing within a vocal group. The ensemble will select songs to be produced and compose all arrangements and orchestrations utilizing notation software. Proper vocal technique and interpretation will be taught and then expanded upon. Emphasis will be placed on the importance of building strong group dynamics and how these apply to the creative process. There will be a presentation of the material at the end of the term. No previous experience or expertise required.

ENGLISH

2020–2021 English Course of Study

Seven semesters of English are the minimum course of study. The Ninth and Tenth Grade courses are required of every student. Courses in the Eleventh and Twelfth Grades are chosen from the pool of electives. Eleventh and Twelfth Grade students cannot take any elective more than once.

REQUIRED COURSES

- English 9
- English 10

2020-2021 ELECTIVE COURSES

- African American Stage and Screen
- Creative Writing: Poetry and Vignettes
- Creative Writing: Short Fiction
- Creative Writing: The Essay
- Cross-Cultural Encounters
- From the Fantastic to Magical Realism
- Global Literature
- Humans and Animals
- Inquiry into Truth
- Literature and Psychology
- Literature of Resistance
- Modernism
- Postcolonial Voices
- Queer Voices
- Romanticism
- Satire
- Shakespeare & Kurosawa

ELECTIVES ON ROTATION NOT OFFERED IN 2020-2021

- Feminist Theory
- Genre Studies: Great Plays
- Immigrant Narratives
- Latinx Voices
- Literature and Ethics
- Literature of Underworlds and Afterlives
- Modern American Poetry
- Origins of Western Literature
- Speculative Fiction

The English Department offers two tiers of courses. The initial level is a two-year core that provides Ninth and Tenth Grade students with vocabulary, techniques, and background for electives that encourage students in the Eleventh and Twelfth Grades to pursue specific areas of interest in greater depth and complexity.

Through active reading and writing, students gain the tools to investigate the power of the written word. By offering a significant and diverse range of non-fiction, fiction and poetry, we help our students place literature in a global and historical context.

Writing is a process. Students pre-write, compose, revise, and re-evaluate their ideas in dialogue with their classmates and teacher. In doing so, they develop critical thinking skills and the ability to pursue and to interrelate relevant and dynamic ideas. Inquiry, expression, and versatility in style and imagination are encouraged.

Required Courses

English 9
YEAR-LONG

The English 9 course is an introduction to basic literary genres: the short story, dramatic literature, the novel, poetry, and non-fiction writing. Students practice the fundamentals of the writing process: prewriting, composing, revision (editing, proofreading), and publication. The types of writing explored are analytical, expository, creative, and autobiographical. Skills that are emphasized in both literary study and writing are vocabulary acquisition and recognition, and proofreading for grammatical, spelling, and usage errors. Reading skills emphasized are annotation of text, plot outlining and summarizing, and keeping a reader's journal. Sample texts: *The God of Small Things*, *Life of Pi*, *Songs of Innocence & Experience*, *Romeo and Juliet*, and *Purple Hibiscus*.

English 10
YEAR-LONG

English 10 focuses on American literature written in a variety of genres and from diverse perspectives. Students analyze this literature through discussion and frequent writing practice, with an emphasis on close-reading the specific language of texts as well as making connections between texts. Students write in multiple genres, building skills for writing clear, organized, and vivid prose. In their analytical writing, they focus on effectively using quotations as evidence and developing argumentative structures beyond the five-paragraph essay. Sample thematic units include "Borders" and "Legacies." Sample texts include Their Eyes Were Watching God, The Round House, Citizen, and The Great Gatsby.

Elective Courses

African American Stage and Screen
SPRING SEMESTER

In African American Stage and Screen, we will be reading, viewing, and analyzing a variety of twentieth- and twenty-first-century works by African American dramatists and filmmakers. Readings may include stage plays by August Wilson, Lorraine Hansberry, Suzan-Lori Parks, Anna Deavere Smith, and Lynn Notage. Viewing may include films directed by Oscar Micheaux, Julie Dash, Charles Burnett, Spike Lee, and Ava DuVernay. To supplement and contextualize the creative content, we will read a sampling of literary and film criticism. Class time will also be spent familiarizing ourselves with film and theater terminology to better articulate our observations and conclusions. Students should expect to write analytically, comparatively, and creatively in response to texts and films.

Creative Writing: Poetry and Vignettes
SPRING SEMESTER

This creative writing course invites students to find and develop their own poetic voices through reading and writing a variety of poems and vignettes (including "flash fiction" and the fifty-five-word "drabble"). This process has several parts: 1) in-class exercises, such as defamiliarizing images and collaborative poetry; 2) reading and discussing poems and poets; 3) composing; 4) revising; and 5) publishing in a portfolio. Students acquire the vocabulary for talking about poems, as well as creative techniques and approaches to writing poems. They will deepen their understanding of image, simile, and metaphor, as well as other tropes, and develop an ear for the music of the poetic line, rhythm, and rhyme. Students will write and revise several poems or vignettes each week, and gain fluency in refining their work for publication. They will form a writing community, as they read pieces aloud, share work one-on-one, and collaborate in peer editing/feedback groups. The final portfolio includes a minimum of twenty poems and five vignettes. Texts include: *Handbook of Poetic Forms*, ed. Ron Padgett; *Staying Alive: Real Poems for Unreal Times*, ed. Neil Astley; and an anthology that will be provided by the teacher.

Creative Writing: Short Fiction

FALL TERM

In this class we will read a variety of pieces of short fiction, studying the elements (including character, voice, point of view, dialogue, plot, and setting) that work together to make short stories powerful. The focus of the class will be on writing your own original, compelling short stories, and we will engage in numerous writing exercises to help you generate ideas for these stories. We will begin by writing stories that feel authentic and true to life, and then we'll experiment with alternate structures and realities (such as stories-within-stories, non-linear chronology, speculative fiction, magical realism, fairy tales, ghost stories, and myths). Learning to give and receive feedback in peer workshops will be an important part of the course. The culminating project will be a portfolio of revised work, along with a cover letter that describes your growth as a writer and your learning in the class.

Creative Writing: The Essay

FALL AND SPRING SEMESTER

Students in this course will read and compose a variety of creative nonfiction. In class, students will generate ideas and practice the writing habit by responding to personal narrative prompts. Reading assignments, which include selections from noted essayists Amy Tan, Jamaica Kincaid, and Eula Biss, will help students consider structure, style, and voice in their own craft. Students should expect to compose three creative nonfiction essays. The term's first assignment encourages students to take a narrative risk by experimenting with point of view, tense, and organization in sharing a personal story. For their second creative nonfiction piece, students will write a more purposeful essay that uses personal examples as a means to convey what Anne Lamot calls a "moral point of view." The term's final assignment is a multimedia oral essay on a topic of the student's choice.

Cross-Cultural Encounters

FALL SEMESTER

An intensely globalized world creates encounters between people from various backgrounds ever more frequently, compelling them to confront cultural differences at closer quarters. What is the human attitude towards difference? Do we celebrate it, or do we deride it? Do we judge it, or do we accept it? Adopting an anthropological lens, we will analyze the concepts of culture shock, ethnocentrism and cultural relativism as they play out in human behavior and practice in diverse contexts. At times, the miscommunication and misunderstanding stemming from cross-cultural encounters may either give rise to hilarious, memorable anecdotes or, on occasion, result in rather grim, sometimes even devastating, consequences. Regardless, such interactions tend to inspire deeper awareness of self and the presumed other. By being cognizant of cultural variation, we are forced to question our own assumptions and biases, hopefully achieve greater appreciation of human diversity, and, at best, develop compassion and empathy for those different from us. Texts may include: Elenore Smith Bowen's *Return to Laughter*; Anne Fadiman's *The Spirit Catches You and You Fall Down;* Amara Lakhous' *Clash of Civilizations Over an Elevator in Piazza Vittorio*; Aravind Adiga's *Amnesty; Terry Eagleton's Across the Pond: an Englishman's View of America;* Firoozeh Dumas' *Funny in Farsi;* and other short pieces. Students will script creative pieces and produce argumentative essays.

From the Fantastic to Magical Realism

FALL SEMESTER

This course will study literature and film from the genres of the Fantastic and Magical Realism. The literature of the Fantastic, which emerged in many different cultures, can be characterized by an uncertainty of the reader and the characters as to whether the described phenomenon, often supernatural, is real, whereas Magical Realism, a twentieth-century Latin American movement, takes this notion of the Fantastic and blends it into a realistic atmosphere where uncanny events become like normal occurrences within the context of the narrative. Throughout this class, students will explore what drives authors to a representation of the supernatural, whether a political, metaphorical, or literal belief in a wider and stranger world. The class will explore this fascination with the supernatural as we read two novels, *Eva Luna*, by Isabel Allende, and *One Hundred Years of Solitude*, by Gabriel García Márquez, and watch several films, such as *The Golden Door* and *Like Water for Chocolate*.

Global Literature

FALL SEMESTER

Global Literature explores issues of voice, dialogue, place, and identity through novels and short stories from across the globe. Questions we will ask include: what does it mean to "speak for" your country, culture, or part of the world through literature? What opportunities and pitfalls exist in reading literature outside of our cultural context? How might reading global literature help us become better global citizens? What role does fiction have in creating empathy and bridging differences? Assignments will likely include both analytical and creative writing.

Humans and Animals

FALL SEMESTER

Beginning in prehistoric times, when cave dwellers chiseled vivid portraits of animals on walls, all the way up to the technologically advanced animated films of modern times, animals have featured conspicuously in human art forms. So arresting is their hold on the human imagination, that animals of all species, shapes and sizes have appeared in numerous fables, fairytales and even adult fiction. By reading real life accounts of human-animal ties across cultural contexts, we will probe the complexities of such relations that are often caricatured or misrepresented in fictional works. Why do we anthropomorphize animals? Why is it that despite the absence of language and the dramatic variations across species, the depth of some human-animal bonds transcends that of human relationships? The texts in this course address such questions and compel us to challenge longstanding boundaries between the wild and the tamed. Moreover, we will depart from an anthropocentric paradigm that privileges Homo sapiens as the pinnacle of evolution and investigate whether non-human species are deserving of more sophistication than we give them credit for. Texts may include: Joy Adamson's *Born Free: A Lioness of Two Worlds*; Helen Macdonald's *H is for Hawk*; J. H. Williams' *Elephant Bil*l; chapters from the acclaimed series by English veterinarian, James Herriot; and others. Assignments will focus on creative interpretations and critical analyses of texts. Students will also write an original, imaginative piece.

Inquiry Into Truth

SPRING SEMESTER

Students in Inquiry into Truth will explore the notion of truth as it is developed through the mind, imagination, and being. How do we know what we know? How do we feel that something is right? What role does faith play? Where do measurement and empirical observation come into play? Does one trust rational abilities above anything else the body says? Some people hold the development of rational thought to be the history of philosophy and believe that philosophy is ultimately the highest discourse that we know. What varying traditions have developed out of rational thought? Is there more in heaven and earth than Horatio imagined in his philosophy? (*Hamlet*) How else do we know, feel, imagine, or dream? This course explores these questions through a number of films, texts, and practices. The reading will include excerpts from early natural and rational philosophers up through Aristotle and Plato in *Sophie's World*, by Jostein Gaarder; *The Republic* by Plato; *The Way of Chaung Tzu,* an early Taoist text; and *A Conflict of Visions*, by Thomas Sowell. Viewing will include *My Dinner with Andre*, *Waking Life*, *Mind Walk*, and other films. In addition to the reading, the students will write two analytical essays, give one presentation, and take one test.

Literature and Psychology

SPRING SEMESTER

The human quest for self-understanding and making meaning of one's life transcends time and disciplinary boundaries. This course examines narratives that offer psychological insight into the human struggle for establishing oneself in the face of personal or external hardship. How do children and adults demonstrate resilience in adversity? How may interpersonal relations support or hinder personal growth and development? Theories of psychologists such as Carl Rogers and Erik Erikson will be explored in relation to texts that may include: Virginia Axline's play therapy classic, *Dibs in Search of Self*; Mark Haddon's mystery novel *The Curious Incident of the Dog in the Night-Time*; Holocaust survivor and psychiatrist Viktor Frankl's *Man's Search for Meaning*; acclaimed writer William Styron's *Darkness Visible: A Memoir of Madness*; and works by Oliver Sacks. Films, such as *A Beautiful Mind*, *Ordinary People*, and *As Good As It Gets*, among others, may be viewed. Students will write reflective and analytic essays and make a presentation.

Literature of Resistance

SPRING SEMESTER

Why are books banned? Why are writers imprisoned or forced into exile? What do they represent that so threatens the powers that be? This course probes such issues by examining narratives of resistance to totalitarian regimes. Despite circumstances that systematically dehumanize individuals, where basic rights to freedom and dignity are denied, protest squelched, and the odds stacked so heavily against human existence, people still strive for self-expression. In such oppressive conditions, writing often emerges as a political act and a book an impassioned manifesto. The written word becomes a validation of voice, a vindication of views held steadfastly despite vicious opposition. The firsthand accounts of survival we will focus on will compel us to consider the strategic significance of speech and silence in restrictive environments. Specific case studies will highlight the different and resourceful ways in which people choose to convey dissent. We will also explore the enduring effects of state repression and violence, the psychological imprisonment that persists long after release or escape. Authors may include Egyptian feminist writer and psychiatrist, Nawal El Saadawi; Brazilian writer, Julián Fuks; North Korean defector, Kang Chol-hwan; German-American political theorist, Hannah Arendt; and others. Students will make presentations and write analytical essays.

Modernism

SPRING SEMESTER

At the beginning of the twentieth century, especially after World War I, a deliberate and radical break with some of the traditional bases of Western art, literature, and culture occurred. This course concentrates on the literature, although students will also study the art and music that emerged from this period. In what ways did the 19th century foreshadow a new kind of consciousness in the writing of Friedrich Nietzsche, Joseph Conrad, and W. B. Yeats? The class examines the experimentations with narrative, automatic writing, social conventions, and structural form as they are explored through the high modernism of Virginia Woolf, T. S. Eliot, James Joyce, and others. Students also study various notions of the avant-garde and look at the movements of Dadaism, Futurism, and Cubism. Modernism is a complex concept that covers many cultural changes and schools of thought. The class examines the concept within its historical context and discusses the ways that it still applies to our lives today. The students will write several analytical essays and give at least one presentation.

Postcolonial Voices

SPRING SEMESTER

This course explores how writers from around the globe have responded with resistance and resilience to the effects of European colonialism. Along with the larger questions of identity, language, representation, power, and assimilation that unite our course texts, we'll also consider how specific cultural contexts and literary strategies shape these themes. Texts will include two novels, Kiran Desai's *The Inheritance of Loss* and Thomas King's *Green Grass, Running Water,* as well as shorter pieces by writers such as Ama Ata Aidoo, Mia Alvar, NoViolet Bulawayo, Assia Djebar, Eduardo Galeano, Keri Hulme, V. S. Naipaul, and Zoe Wicomb. We will also read brief excerpts from postcolonial theory to ground our work. Students can expect to do multiple types of analytical writing and to lead a class discussion.

Queer Voices

FALL SEMESTER

Literature has been—and continues to be—a crucial way for people who identify as lesbian, gay, bisexual, transgender, and queer to understand themselves, connect with one another, build communities, and advocate for social and political change. This class will focus on works of fiction, nonfiction, and poetry that explore the complexities of gender, sexuality, love, embodiment, and difference. We will ground our reading of these texts in a handful of important concepts from queer theory and will consider how factors such as history, geography, race, gender identity, and social class influence the specific forms that queer literature takes. Ultimately, the class will ask what kinds of stories we tell about queer identities and experiences, and why these stories matter. Students will work in book groups to read a classic queer text such as James Baldwin's *Giovanni's Room*, Radcliffe Hall's *The Well of Loneliness*, E. M. Forster's *Maurice,* Jeannette Winterson's *Oranges Are Not the Only Fruit,* or Virginia Woolf's *Orlando*. Authors of shorter pieces may include Alison Bechdel, Dionne Brand, Michael Cunningham, Leslie Feinberg, Audre Lorde, Chinelo Okparanta, Adrienne Rich, David Sedaris, and Danez Smith. Students will write one analytical and one personal essay and complete a book group project.

Romanticism

FALL SEMESTER

In this course students study the literature and aesthetic foundations of Romantic thought. We will focus mainly on poetry, fiction, and philosophy from the late 18th century to the mid-19th century, concentrating on a number of traditions that came together to create a heightened sense of consciousness and a literary and artistic movement that continues to reverberate into our own time. The poetry will include such writers as William Blake, William Wordsworth, Samuel Taylor Coleridge, John Keats, Percy Bysshe Shelley, and Lord Byron, while the fiction will be drawn from such writers as Johann Wolfgang von Goethe, E.T.A Hoffman, Emily Bronte, Alexander Pushkin and Mary Shelley. As the class reads the literature, listens to music, and looks at art and nature throughout the term, the students will develop a complex understanding of this era of rapid change and cultural production that was driven with high passion toward new notions of love, freedom, and the transcendent power of the imagination. Beholding these promising vistas, we will look at the dark shadows and consequences that emerge from the obsessive tendencies of this passion and the subsequent ruptures that occur in the traditional order. We will also look at some early Romantic origins and the progeny that exists today. The students will write several analytical essays and give at least one presentation.

Satire

SPRING SEMESTER

Alain de Botton, in his 2004 book Status Anxiety, claims that “the apparent innocence of jokes enables comics to convey with impunity messages that might be dangerous or impossible to state directly.” In this course, we will explore humor and satire as forces for social criticism and change. We will trace the classical origins of satire, study its flourishing during the Age of Enlightenment, and consider its role in contemporary culture. Primary course texts may include Voltaire’s Candide and Kurt Vonnegut’s *Slaughterhouse Five*. Supplemental reading will include essays by Juvenal, Jonathan Swift, Mark Twain, Dorothy Parker, and Binyavanga Wainaina. Satirical films will also be screened in class. Students in this course should expect to write a literary analysis, complete a creative project, and write an original satire.

Shakespeare and Kurosawa

FALL SEMESTER

This course will explore the works of British playwright William Shakespeare and Japanese filmmaker Akira Kurosawa. Separated by time, place, and culture, these masterful storytellers are connected by their ability to capture the wonderment of their respective audiences. We will focus primarily on Hamlet, Macbeth, and King Lear along with Kurosawa’s corresponding film adaptations of those plays: The Bad Sleep Well, Throne of Blood, and Ran. We will also view an additional Kurosawa film, Seven Samurai, which is not a direct adaptation of Shakespeare’s work. In class, we will discuss the artists individually, but also consider the ways in which they are in dialogue with one another. Students should expect to write analytical, comparative, and creative pieces.

HISTORY

History promotes students' awareness of the relationship between mankind's past experience and the present, and allows students to experience the past in its own terms. Emphasis is placed on critical thinking and understanding of the historical method. Course offerings cover the great themes of Western Civilization, the basic values of the United States, aspects of the history of the non-Western world, and current world issues.

The History curriculum presents two years of required courses and an array of electives.

2020–2021 History Course of Study

One year of Historical Inquiry and one year of United States History are the minimum course of study. Successful completion of the Historical Inquiry and United States History research papers is required for graduation.

Incoming sophomores who have not previously taken a Historical Inquiry course or its equivalent, which includes an in-depth research paper, are required to take the full year of Historical Inquiry.

United States History must be completed during the Eleventh Grade or Twelfth Grade year.

REQUIRED COURSES

- Historical Inquiry (Year-long)
- United States History (Year-long)

2020-2021 ELECTIVE COURSES

- American Women's Studies
- Civics: Defending Our Rights
- Civics: Understanding Our Rights
- Comparative Government
- Contemporary Europe
- Contemporary Migration Crisis
- Contemporary Issues through Media
- Cultural History of the West: Greek to Medieval
- Cultural History of the West: Renaissance to Modern
- Global Women's Issues
- Imperial Japanese History
- Indigenous North American History
- Introduction to Psychology
- Mexico City Journeys
- Modern China
- Modern Latin America
- Peace Studies
- Race in America
- The Vietnam War
- World War II on the American Home Front

Required Courses

Historical Inquiry

YEAR-LONG: FALL SEMESTER

The first part of this year-long course develops historical thinking skills using primary sources, interactive discussion, and historical fiction. Students examine the emergence of the modern world to build skills in critical thinking, close reading, analytical writing, and interpreting historical materials. A larger focus is for students to develop empathy, understand multiple perspectives, and to apply their understanding to their own place in the world.

YEAR-LONG: SPRING SEMESTER

This part of the course is required for all Bush students and must be taken by the end of the junior year. Students learn to write history research papers in carefully monitored stages. The semester includes study of the early 20th century and a short, guided research paper. It is followed by a major paper on a non-Western topic of the student's choice. Extensive material is available through The Bush School resources, but students are offered an introduction to online libraries and databases as well.

United States History

YEAR-LONG

This year-long survey course takes a thematic approach to the major topics of US History, which builds upon the foundations of learning established in Historical Inquiry. Skills emphasized include writing analytical papers, argumentation through oral presentation and debate, and critical reading of primary and secondary sources. Students learn the techniques of research and analysis in writing a major research paper. A larger focus is for students to expand the narrative of American identity, understand multiple perspectives, and examine how various groups and identities experienced America differently. Students will achieve this by questioning, investigating and discussing in an effort to better understand their own place in American society.

Eleventh and Twelfth Grade students only

Elective Courses

American Women's Studies

FALL SEMESTER

This course introduces a survey of women's experiences primarily in the United States. We examine social, political, economic, educational, historical and legal issues pertaining to women. A major goal is to introduce analytical skills that will help students think critically about gender in the past, present, and future. Focusing on women's experiences, we also explore such contemporary issues as work force participation, roles in the family, sexuality, reproductive rights, economics, and politics. Students engage in a co-learning environment in which they have control over readings and develop an individual course plan.

Civics: Defending Our Rights

SPRING SEMESTER

Our democracy is premised on the idea of popular participation; this class is an opportunity for just that. The civic action project that each student will undertake goes beyond an opportunity for "community service" and will require students to identify an issue that matters to them, explore the roots of the problem, and, after considering possible solutions, develop a plan to demand action -- of elected officials, of other citizens, of institutions -- that might lead (eventually) to a solution to the problem, not just treat and palliate the symptoms. At the end of the class, students will, I hope, feel themselves to be well-informed citizens, able and willing to participate in and strengthen the democracy in which they live

Civics: Understanding Our Rights

FALL SEMESTER

A premise of American democracy is that it is government "of, by, and for the people," but to what extent is this true? How do we as a nation strive to make sure that every voice and vote counts, and that all are served by the actions of our government? Study of the Constitution and Bill of Rights is undertaken at the beginning of the term, and time is devoted to understanding several of the landmark decisions around civil liberties, from both sides of the argument. This class grounds students in the history of our government, but puts them in the thick of things as participants in our democracy. Students will be encouraged to engage the political process through attendance at public meetings, interviews with public officials, and writing letters and petitions. The aim is for students to become well-informed citizens, able and willing to engage with the democracy in which they live.

Comparative Government

FALL TERM

Looking at both contemporary and historical examples, and at developing and developed nations, this class will take a comparative approach to studying the world's varied political systems, and the economic systems with which they are intertwined. Students will have the opportunity to examine the different approaches to both universal and particular issues that are possible (and likely to be pursued) under systems as varied as those of Great Britain and China, of Singapore and South Africa. Essential questions for the class will be about who the political and economic actors and beneficiaries are in a given nation's systems. Who is served or excluded by different systems and policy decisions? Daily class discussions and periodic policy reviews and debates will ask students to grapple with questions surrounding political cultures, theory and ideology, the organization and function of government institutions, and the dual influence that exists between the people and their governments.

Contemporary Europe: From Occupation to European Union

FALL SEMESTER

This course addresses the political and social history of contemporary Europe, from 1950 to the present. Focusing on France, Germany, Italy, Britain, and the Czech Republic, we consider the devastation of Europe by two wars and study how Europe rose to become a new world power through the European Union. The course explores the Cold War, Communist repression, the mission of the European Union, types of European government, immigration issues, and European environmental practices. The focus is on European contemporary problems. Several Europeans visit the class for student interviews. Students work in teams for project work and presentations, and readings come from current journalism.

Contemporary Migration Crisis

SPRING SEMESTER

Why, in 2016, did more than 65 million people struggle for survival as "forcibly displaced persons," and what are their stories? War and persecution—in Syria, Myanmar, Yemen, the Central African Republic, Afghanistan, South Sudan, and elsewhere—have forced people out of their homes to seek safety and a second chance. Simultaneous with this spike in displacement, elections in the United States and several western European nations show a surge in nationalist political parties. What has this meant for those millions of refugees? What are the obligations of other nations to those from developing or war-torn nations who are seeking asylum, or simply a better life? These are some of the questions considered as we research and listen to the stories of refugees themselves and examine the political and social roots and present-day realities of Western immigration and refugee policies. Interviews, debates, and crisis simulations, as well as research and written analysis and reflection are some of the ways in which students engage with the topic.

Contemporary Issues through Media

FALL SEMESTER

This course is an introduction to contemporary social and political thought as presented and analyzed by mainstream media. The course presents the student with an ability to comprehend and interpret the media's examination of major trends unfolding in real time while also exploring earlier roles of media. The class will investigate such issues as bias, propaganda, censorship, partisan politics, First Amendment questions, and the need for increased media literacy. Students will also explore public attitudes about the credibility, social value, and salience of the news media.

Cultural History of the West: Greek to Medieval

FALL SEMESTER

This course covers the art, architecture, and music history of Western culture, from Greek origins through the medieval period, to the early Renaissance, and includes discussion of relevant literature and philosophy. The fall semester explores Greek and Roman mythology, sculpture and architecture, the great Catholic cathedrals of the Gothic period, and ends with an introduction to what inspired the Renaissance. The course focuses on the analysis of art and culture, and meaning and message.

Cultural History of the West: Renaissance to Modern

SPRING SEMESTER

The term explores the full range of art, sculpture, music, and architecture of the Italian and Northern Renaissance. We then journey through the Baroque, Impressionist, and modern periods, and a study of classical music from Bach to Chopin. The course focuses on the analysis of art and culture, and meaning and message. Students may take any combination of Cultural History terms.

Global Women's Issues

SPRING SEMESTER

This course examines the challenges facing women in developing countries, specifically those in Africa, Asia, and the Middle East. We explore the cultural differences in these societies, and also identify the common threads that link them together and with women in the Western world. The study of these communities of women is overlaid with issues of girls' education, marriage, child care, health care, and economic opportunities. We outline the challenges and look for solutions. The focus of this course is on analysis of current events, readings from current journalism, documentaries, research, and presentations. Several community experts visit the class.

Imperial Japanese History

SPRING TERM

Samurai, geisha, ninja, kabuki, sushi, Zen: these are evocative words that describe a strikingly unique society. This course examines Japanese history from the Heian period (800-1200) to the opening of Japan to the Western world in 1868. This was the time during which Japan developed much of its classical culture and highly organized political structure. We will consider the formation of Japan's national identity and explore artistic traditions, literature, writing systems, gender roles, environmental practices, and the impact of Buddhism and Bushido.

Indigenous North American History

FALL SEMESTER

Through both historical and contemporary perspectives, this course studies Native American cultures north of Mexico and west of the Mississippi, from prehistory through the twentieth century. We explore regional types and styles of cultural production, mythology, environment, and tribal traditions, with emphasis on social function. The course explores native response to the arrival of European culture, that impact on native culture, and the current change and growth in indigenous culture today. Particular focus is on Pacific Northwest, Southwest, and Plains tribes.

Introduction to Psychology

SPRING SEMESTER

This course deals with the fields of psychology and neurobiology. We look at the brain as an organ, and then at the mind with regard to how both brain and mind influence behavior. We review major schools of psychology including Psychodynamic, Social, and Cognitive-Behavioral theories. In a more general sense, we talk about why people behave the way they do. These discussions include personality development, learning, and the conversations surrounding the brain and the mind.

Mexico City Journeys

FALL SEMESTER

Mexico City is almost too fantastic to be real. It is at once ancient, modern, artistic and dystopic. A short walk through its city center reveals a pastiche of hundreds of historical moments crammed atop each other. It may be impossible to truly know the city, but this course attempts to familiarize students with some of its most transformative moments, which may include the Spanish Conquest of the Aztecs, the War for Independence, the Porfiriato, and the Great Revolution of 1910. In this way we peel back the layers of this great metropolis and understand why it has taken the shape it has today. Students will also consider our own country's history when it makes sense to do so, particularly in light of our own notions of equality, natural rights, and economic growth. Finally, the knowability of the past will be debated as we contemplate how historical narratives come to be written, and what they conceal.

Modern China

SPRING TERM

What can we learn by studying the history of the most populous country in the world with the fastest growing economy, military, and carbon footprint? How does a Communist country lead the world in manufacturing and millionaires? Take an in-depth look at not just these questions but at the history of a country that answered 4,000 years of continuous civilization with 100 years of continuous revolution. This course explores Chinese history starting with the Qing dynasty (1644-1911), Western Imperialism, and the Nationalist Revolution, then moves to explore the Communist Revolution, Cultural Revolution, and China's 20th century transformation. The course is designed to give students an overview of the transformations that China has undergone and the challenges it faces in the 21st century.

Modern Latin America

SPRING SEMESTER

In this course we will examine major themes in Latin American history since the end of the colonial period. We will cover economic and political developments from both national and international perspectives, as well as the social and cultural histories of race, ethnicity, and gender. Topics include colonial legacies, independence struggles, nation-building in the nineteenth century, revolution, counterrevolution, populism, authoritarianism, democratic transitions, and neoliberalism in the twentieth century. A focus of our study of Latin America will come from an examination of primary and secondary texts, films, art, and music to understand the everyday lives of people and the broad historical changes that have taken place over time. Students will engage with one another through weekly discussion seminars to critically assess historical documents and come to conclusions on not just the what and the why of historical events, but how we have come to know what we know. Students will continue to develop their historical thinking skills to corroborate evidence, assess sources, identify bias, and ascertain who shapes the historical narratives that shape our understanding of the people, cultures, and history of Latin America.

Peace Studies

FALL SEMESTER

This is a course about international relations, global conflict, national sovereignty, and personal responsibility. In this course we will explore a series of 20th and 21st century episodes in the human experience to expose students to the effects of war and violence and to teach students to embrace and critically examine a new way of viewing global, national, local, and personal problems and solutions. Topics of study include: human rights and international law, equity and social justice, non-violent conflict resolution, response to genocide, and civil war and governance. Discussion, seminar, research, and civic engagement will be the predominant methods used to investigate issues and to engage in dialogue about how to make decisions based on promoting a culture of peace. "A culture of peace will be achieved when citizens of the world understand global problems, have the skills to resolve conflicts and struggle for justice non-violently, live by international standards of human rights and equity, appreciate cultural diversity, and respect the Earth and each other. Such learning can only be achieved with systematic education for peace." Hague Appeal for Global Campaign for Peace Education

Race in America

SPRING SEMESTER

In 1900, the African-American scholar W.E.B. Dubois wrote, "the problem of the twentieth century is the problem of the color-line." This course, which spans the 20th century, focuses on the way in which the Black community experienced a century of legalized American apartheid, and how they managed to subvert it. Topics may include the early years of Jim Crow, the Great Migration, the birth of the blues and jazz, through the Civil Rights movement, Black Nationalism, and beyond. Ultimately, we will strive to understand present-day issues through the prism of the past to discover the possibilities for change and honest dialogue. We will use a variety of sources for this exploration, from primary and secondary documents to multimedia resources, and our core text for this course will be Isabel Wilkerson's *The Warmth of Other Suns.*

The Vietnam War

FALL SEMESTER

The conflict in Vietnam was much more than a war between two nations; the complex geo-political arena of the mid 20th century pitted the Soviet Union, China, and the United States against one another in a proxy war that would devastate three southeast Asian countries, create domestic upheaval in the U.S. and result in the death and displacement of millions. Our study of the Vietnam War will delve into French colonial control of Indochina, Japanese imperial control in the early 20th century, the emergence of a nationalist movement for independence, and the American involvement in Vietnam and the rest of Indochina. The course will explore the domestic political and social conflict within Vietnam, the broader complexities of the Cold War as it pertains to the containment of Communism, the effects on the neighbouring countries of Laos and Cambodia, and ethical questions of utilizing new technologies of war.

World War II on the American Home Front

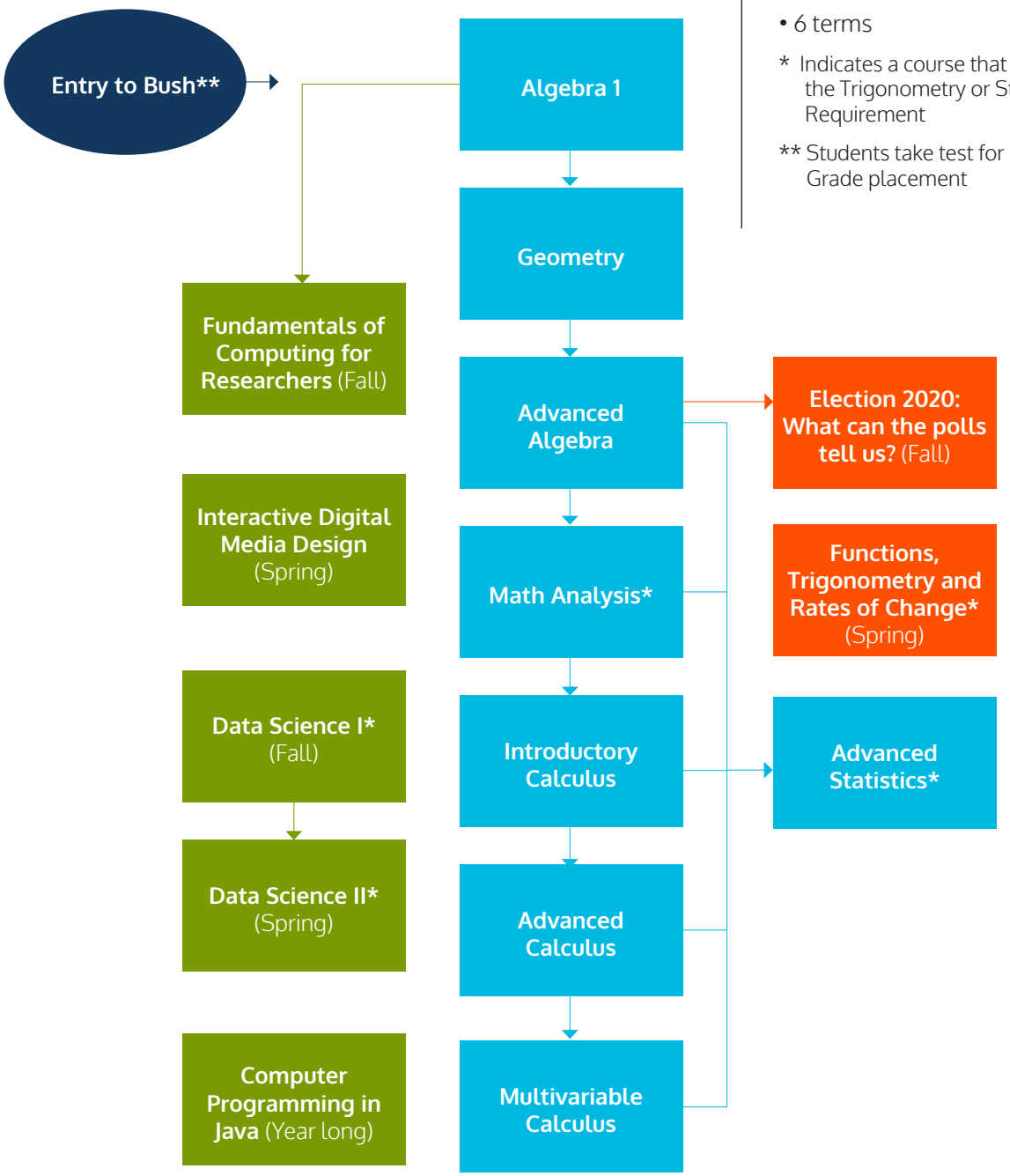
SPRING SEMESTER

World War II not only marked a turning point in America's role as a world power, but it also embodied near-universal support for the war effort financially, militarily, and occupationally. While the battles fought in Europe and in the Pacific stand to define the American war effort, citizens who remained at home contributed in a significant fashion and were impacted substantially. The course traces expectations, actions, and the role of media in supporting the war effort. Additionally, we discuss the impact of the home front effort on the developing anti-Communist sentiment of the post-WWII era.

MATHEMATICS

US Mathematics Curriculum Map 2020-21

Key: Year Long Math Classes | Semester Math Classes | Computer Science Classes



Graduation Requirements

- 6 terms

* Indicates a course that fulfills the Trigonometry or Statistics Requirement

** Students take test for Ninth Grade placement

2020-2021 Mathematics Course of Study

Each student must successfully complete three years of mathematics in the Upper School as the minimum course of study. Students must complete through Advanced Algebra in the sequential courses listed on the Curriculum Map. Trigonometry or statistics is a requirement that can be completed through indicated course offerings. Students will earn mathematics credit for the computer programming electives that count toward the three-year minimum course of study.

SUMMER OFFERINGS: While a summer class cannot replace the experience of a full-year course, a variety of courses is regularly offered through The Bush School Summer Program. The intention of these classes is to help students strengthen skills in a focused area before moving to another level. Bush School credit is not offered for summer work, but placement for the following year is based upon the successful completion of an exam and the recommendation of the department.

The Bush School currently offers Geometry, Math Analysis and Introductory Calculus in the Summer Program.

YEAR-LONG COURSES

- Algebra 1
- Advanced Algebra
- Advanced Calculus
- Advanced Statistics
- Geometry
- Introductory Calculus
- Math Analysis
- Multivariable Calculus
- Computer Programming in Java

TERM-LONG COURSES

- Interactive Media Design Javascript (Spring)
- Functions, Trigonometry, and Rates of Change (Spring)
- Data Science I (Fall)
- Data Science II (Spring)
- Election 2020: What Can the Polls Tell Us? (Fall)
- Fundamentals of Computing for Researchers (Fall)

Mathematics provides structures and strategies to explore the ever-increasing complexities found in the world. Through the study of mathematics, students learn to ask critical questions and to develop strategies for testing hypotheses. Mathematics is a symbolic language that enables us to articulate relationships, patterns, and ideas.

Our program fosters curiosity and encourages the practice of questioning assumptions through collaboration, conversation, and exploration with analytical skills, calculators, computers, and coding. Our goal is to provide a setting in which students practice skills, increase confidence, and develop a solid foundation through which they can explore practical ideas as well as mathematical abstractions.

The math department guides each student's program of study through the sequence of classes in collaboration with the faculty advisor by considering their interest and readiness to handle the various demands of the mathematics program.

Year-Long Courses

Algebra I
YEAR-LONG

Algebra 1 is a foundational math course. The course focuses on six major topics: functions, equations and inequalities, graphing, informal geometry, and data analysis. A main focus of this class is to develop good math habits and skills. In addition, this class is designed to build a foundation of pattern recognition, problem-solving techniques, and computational skills with real numbers and variables. The analysis of and translation between verbal statements and the language of mathematics is also emphasized. Graphing calculators are used to develop and confirm intuition, and find connections between topics.

Advanced Algebra
YEAR-LONG

This intermediate course reviews, extends, and builds upon the skills and concepts of a first-year Algebra class. Linear and quadratic functions are studied more in-depth, while variation, sequences, polynomials, composition of functions, and logarithms are introduced. These topics are studied abstractly, and mathematical modeling is employed to deepen students' understanding of functions. Graphing calculators are used to develop and confirm intuition and find connections between topics. The problem-solving skills of a traditional second-year Algebra program are interwoven throughout the year.

Prerequisite: Geometry

Advanced Calculus
YEAR-LONG

This course develops and solidifies students' understanding of the previously introduced ideas of rates of change, accumulation, and the limit by studying these topics numerically, graphically, analytically, and through practical applications. Students extend these ideas by observing relationships among the topics and applying the key principles to other subjects. The course includes a formal treatment of differential and integral calculus. It meets the outline of the Advanced Placement BC Calculus. Prerequisite: Introductory Calculus

Prerequisite: Introductory Calculus

Advanced Statistics
YEAR-LONG

This course introduces students to the practice and application of statistics. Students learn statistical tools and the language to analyze and interpret real data for patterns and relationships. Students model data through simulations and theoretical probability and gain understanding sampling distributions used for inference. Within the study of inference, students summarize research studies by scrutinizing sampling and design methods as well as interpreting the P-value critically. Topics covered in Advanced Statistics meet the curriculum specified by the Advanced Placement Statistics program. This class fulfills the statistics/trigonometry requirement.

Prerequisite: Math Analysis or Probability and Statistics

Geometry
YEAR-LONG

This course approaches the fundamental geometric concepts and relationships from various points of view. Inductive reasoning is used to develop conjectures about these concepts and deductive reasoning is used to prove them. Topics include angles, triangles, quadrilaterals, polygons, circles, area, volume, similarity, right triangle trigonometry, and coordinate geometry. A heavy emphasis is placed on using algebra to solve geometric problems and the Geogebra application is used to investigate conjectures. All of this preparation leads to a thorough unit on formal proofs.

Prerequisite: Algebra

Introductory Calculus
YEAR-LONG

This course is intended to synthesize a student's preceding math experiences. Ideas and problems are treated as part of a comprehensive mathematical structure. While building upon familiar ideas, students are asked to pull together skills and concepts in new contexts and to develop new relationships among these ideas. Topics new to students have included polar coordinates, vectors, and parametric functions. The limit concept is developed throughout the year, and a more formal approach begins with the study of sequences.

Prerequisite: Math Analysis

Math Analysis
YEAR-LONG

This course integrates an analysis of data with a formal development of functions encompassed by real-world applications. The students' study of data motivates the need to develop an understanding of functions in order to model variable relationships. Many families of functions are investigated including linear, quadratic, polynomial, exponential, inverse, logarithmic, and trigonometric. In addition, the students continue their study of sequences by examining series. The students are introduced to probability concepts and data analysis tools, as well. Throughout the year, graphing calculators and other technology such as Geogebra, Excel, Grapher, and Desmos are heavily utilized to allow students to make connections between graphical and analytical approaches. This class fulfills the statistics/ trigonometry requirement.

Prerequisite: Advanced Algebra

Multivariable Calculus
YEAR-LONG

This course builds upon the skills and ideas developed in Advanced Calculus. Topics include differentiation and integration of multivariable functions, optimization, parameterization, vector fields, line integrals, surface integrals, Green's Theorem and Stoke's Theorem. Three-dimensional graphing software including online applets and Geogebra are utilized to visualize surfaces and curves.

Prerequisite: Advanced Calculus

Computer Programming in Java
YEAR-LONG

In this year-long computer science course, you will learn the basics of programming in the Java language. This course includes a broad view of computer operation, the global impact of computing, and then introduces Java programming concepts, including variables, selection and object-oriented design. This course is for anyone interested in taking a first-level computer-programming course. No previous programming knowledge is needed. We are looking forward to helping you explore this exciting new world! Topics covered in this course meet the curriculum specified by the Advanced Placement Computer Science A program.

Semester-Long Coursess

Interactive Media Design Javascript
SPRING SEMESTER

Software influences all aspects of contemporary visual culture. This course is an introduction to computer programming within the context of the visual art. Students in this course will learn the fundamentals of computer programming -- conditional control structures, iteration, data structures, functions, classes, objects, and event-driven design. We will create projects based on student interest including, but not limited to video games, installation art, and simulations of biological and social phenomena.

We will learn and create using the programming language Javascript and the library p5.js, a full featured library that allows one to create interactive digital art for the web. To see examples of the interactive digital media you can create with code, watch this video by the creators of p5.js.

Functions, Trigonometry, and Rates of Change
SPRING SEMESTER

The course begins with a review of the study of functions. Students are asked to draw upon their earlier experiences in these contexts and apply their increasingly sophisticated understanding to relevant topics such as pH, population growth, and carbon emissions. Following functions, trigonometry is approached from its right triangle roots and the unit circle. These definitions are used to develop theorems and graphs of the six trigonometric functions. Students apply right triangle trigonometry and trigonometric functions to laws of motion and sound. This class fulfills the trigonometry requirement.

Prerequisite: Advanced Algebra

Data Science I

FALL SEMESTER

Given data arising from a real-world phenomenon, how do we analyze that data to understand that phenomenon? Data Science is about drawing useful conclusions from large and diverse data sets through exploration, prediction, and inference. In the fall semester, students will focus on exploration through data visualization and table manipulation. Applying this approach will require learning computer programming. This course incorporates a complete introduction to programming that assumes no prior knowledge. Data science also requires reasoning about quantities as well as careful use of statistics language. Throughout the semester, students will construct the foundations of experimental design, sampling, appropriate descriptive statistics and visualizations in their framework of understanding.

Prerequisite: Math Analysis

Data Science II

SPRING SEMESTER

In the second semester of data science, students study inferential statistics. Statistics is a central component of data science because statistics studies how to make robust conclusions with incomplete information. Inference involves quantifying our degree of certainty: will those patterns we found also appear in new observations? How accurate are our predictions? Students will study randomness, simulation, and sampling distributions as well as the process of hypothesis testing and creating confidence intervals. Students apply basic probability rules, two-way tables, t-distributions, and bootstrap sampling to draw conclusions. This class fulfills the statistics/trigonometry requirement.

Prerequisite: Data Science I

Election 2020: What Can the Polls Tell Us?

FALL SEMESTER

How can statistics be used to understand and convey information about voting and voter behavior? What has the past taught us and how can we use it to inform predictions? How is voting behavior changing? These questions and more are at the core of this course. We will examine voting patterns, how polls are conducted, best practices in polling, and the common errors that can occur when we try to predict elections. Within the course, students will study sampling methods, survey practices, data analysis, and sampling variability. We will assess our learning by making predictions about the upcoming elections incorporating polling results and historical voting behavior to justify our reasoning. After the elections, we will review our successes and failures to continue to improve our future predictions.

Prerequisite: Advanced Algebra

Fundamentals of Computing for Researchers

FALL SEMESTER

This course is designed to introduce computing as a basic set of skills that everyone needs, regardless of whether you are a learner or teacher; we are all both. Develop skills to tackle computational problems applicable across many disciplines. We will develop algorithms and implement them using the Python programming language – a language with simplistic syntax and a robust set of tools and packages. Topics we will cover and skills we will develop include, but are not limited to: Problem Solving, Working within a Project Team, Jupyter Notebooks, Markdown Syntax, Python Language, and Graphical data representations. Also included will be Device programming using Raspberry PI and Python.

PHYSICAL EDUCATION & HEALTH

Physical Education activity classes emphasize regular physical activity in promoting an individual's health and quality of life. Opportunities are provided to develop and maintain fitness through individual activities and team sports. Students are instructed in both skills and strategies, so that they may be educated participants and spectators in a variety of activities. As students gain exposure to new activities, as well as traditional contests, instructors in the Physical Education department emphasize sportsmanship, healthy competition, and mutual respect. The ultimate goal is to provide students with a breadth of experience from which they will discover activities they can enjoy for a lifetime.

Health is a required course that presents academic aspects of wellness. Students take this course during their tenth-grade year. Along with the Health course, the Physical Education program offers a wide selection of electives for students to choose from.

2020–2021 Health/PE Course of Study

MINIMUM COURSE OF STUDY: Three semesters. Health is a graduation requirement (can only be taken during sophomore year) along with the completion of two different electives, which may include up to ONE credit from sport participation.

**Prerequisites exist for class*

FALL SEMESTER	SPRING SEMESTER
• Backpacking • Climbing and Mindfulness • Advanced Weight Training • Lifetime Sports	• Mountaineering • The Great Outdoors • Olympic Lifting • Sports Sampler
FALL SEMESTER AND SPRING SEMESTER General Fitness Health (Tenth Grade only) Strength and Conditioning Wilderness First Aid Bush Interscholastic Sport Independent Athletic Pursuit	

Fall Semester

Backpacking

FALL SEMESTER

Fall in the Cascades is truly magical. Come enjoy the rich colors, spectacular views, and expansive alpine terrain right in your backyard! No experience necessary. The first part of this course will be spent preparing for our backpacking trip. Students will practice and gain confidence with the many skills involved, such as: tent and stove use, menu planning, tarp setup, water purification, food storage, navigation, lightweight packing, and more. Sometime between late September and mid-October we will venture out on a three or four day backpacking trip, which will be adventurous, physically challenging, and incredibly rewarding. Students should expect to miss two days of classes for the trip. During the second part of the semester, students will learn and practice more advanced wilderness skills. Additionally, with their acquired knowledge from the first half of the semester, students will complete a final group project of independently planning and executing one more short outing for the class to take in November or December.

Climbing and Mindfulness

FALL SEMESTER

Let's climb together! Climbing is an incredibly fun and engaging sport that will teach your body and mind to move and think in new ways. Climbing is also challenging and rewarding, and hopefully it will be something to look forward to every week! No prior climbing experience is necessary--all are welcome. This class will teach the essentials of successful rock climbing, both physically and mentally. At least once per week we will practice climbing technique at the Seattle Bouldering Project. Additionally, students will work on a progression of rope climbing skills throughout the semester that will match their experience level. After learning the fundamentals, students will have the option of practicing more advanced skills, such as lead-climbing, rappelling, or anchor building. In October, the class will take a 3-4 day trip to climb our hearts out. Students should expect to miss two days of school for this trip. This course will also explore the significant mental aspect of climbing. Students will learn about mindfulness and practice incorporating it into their climbing and everyday lives. Mindfulness has the ability to improve one's sense of awareness and appreciation for the present moment; it can also be a useful tool to apply in the management of stress and anxiety. Sir Edmund Hillary said about climbing, "It's not the mountain we conquer but ourselves."

Advanced Weight Training

FALL SEMESTER

This course will focus on weight training principles for hypertrophy, neural activation, and functional movements. Students will gain an understanding of various weight training techniques and disciplines, perform weight training exercises with precise form, and work hard to improve strength and endurance. Students will learn how to develop their own strength training protocol and how to effectively implement a goal-based training regimen in their fitness routine. A general knowledge of weight training techniques is recommended but not required to enroll in the class.

Lifetime Sports

FALL SEMESTER

This course provides students with samplings of sports and activities that can be enjoyed at any age. Students will learn the rules, regulations, and strategy around many games popular in our culture today. Some examples include: learning how to hit a golf ball, practice bouldering at the climbing gym, perfecting bowling technique, and strategy during a doubles match in pickleball. Students will be taken off campus weekly for experiences at courts, fields, and courses in the greater Seattle area.

Spring Semester

Mountaineering

SPRING SEMESTER

Have you been eyeing those giant snowy volcanoes and mountains across the lake? Do you ever feel the desire to climb them? I hope so, because the Cascades provide a perfect venue for learning how to mountaineer. This course is designed for students who already have some backpacking experience. The first part of the semester will be spent learning and practicing fundamental mountaineering knowledge and skills, such as, proper clothing and equipment, navigation and route finding, cold weather self-care, campsite construction, glaciology and crevasse patterns, glacier rigs and knots, roped travel on a glacier, crevasse rescue, ice axe and crampon use, as well as risk management and decision making. We will also partake in mountaineering-specific physical training, in the weight room as well as on local stairs and hills. In mid-April the class will take a culminating 5-day mountaineering trip, for which students will miss three days of classes plus a weekend. The trip will be demanding, hiking with a 50-60 lb backpack up to a high base camp as well as a long summit day on steep terrain. These efforts will be rewarded with unbeatable views and an incredible sense of adventure, fun, and accomplishment. *Prerequisite: Students need to have taken an Upper School backpacking course, or another equivalent wilderness program.

***Prerequisite: Students need to have taken an Upper School backpacking course, or another equivalent wilderness program.**

The Great Outdoors

SPRING SEMESTER

Sign up for this class if you want to spend time outside! This class is for everyone, whether you are a wilderness explorer or if you hardly ever get outside. This course is all about connecting more deeply with the outdoors here in Seattle's beautiful parks and green spaces. Not only is it fun, but spending time outside is one of the best activities we can do for our mental, emotional, and physical health. Throughout the term, we'll learn about and practice fun ways to spend time outside, such as field sketching and journaling, survival skills, animal tracking, birding, cloud and weather observation, tree identification, lawn games, and much more! We'll also get our hands dirty and take on some sort of environmental project, such as building a rain garden to help manage storm water runoff and keep our waters cleaner. This class will be a refreshing and fun part of your week, and it will provide you with tools to enjoy and understand your natural surroundings more deeply.

Olympic Lifting

SPRING SEMESTER

This advanced course is designed for the student who has a solid background in fitness and is looking to take their training to the next level. Students will learn the principles behind resistance training, targeting individual muscle groups for increased neural activation and hypertrophy. Safe and proper form will be taught and practiced, with a focus on the Olympic lifts of the "snatch" and the "clean and jerk."

Sports Sampler

SPRING SEMESTER

This course provides students with samplings from many of the other Physical Education electives. The class provides students with the opportunity to experience a variety of Physical Education activities from team sports such as volleyball, futsal, ultimate Frisbee and team handball to individual and racket sports such as badminton, pickleball and table tennis. Some of the course content is determined by student interest.

Both Semesters

General Fitness

FALL SEMESTER AND SPRING SEMESTER

This class is an introduction to the principles of strength and cardiovascular training. Instruction in the use of free weights, resistance machines, and cardiovascular equipment will develop muscular strength and endurance, cardiovascular conditioning and flexibility. Students are exposed to various training methods such as plyometrics, circuit training, yoga, high intensity interval training, and aerobic training.

Health

FALL SEMESTER AND SPRING SEMESTER

The goal of this class is to give information to students so that they can make productive decisions about their health. Units include substance use and addiction, sleep, hygiene, mental health and suicide, reproductive health, gender and sexual orientation, and healthy relationships. All students are required to take this course in tenth grade.

Strength and Conditioning

FALL SEMESTER AND SPRING SEMESTER

Are you a competitive athlete looking to get in shape for your sport? If so, this class is for you. Strength and conditioning will focus on the three components of sport (power, speed, and agility) through intense, focused daily workouts. Students will learn the principles of resistance training, plyometrics, and aerobic training, with specific connections to their sport of choice. This class will be highly beneficial to those who participate in: basketball, volleyball, cross country running and skiing, rowing, badminton, bowling, baseball, soccer, ultimate, rowing, rugby, and track.

Wilderness First Aid

FALL SEMESTER AND SPRING SEMESTER

Get outside, have fun, be adventurous, be safe, and be prepared! This course is recommended for everyone. Even with smart decision-making, accidents happen all around us. This class will teach incredibly valuable skills that will allow you to help out when things don't go according to plan. This course will provide intensive wilderness first aid training, and students will have the opportunity to earn a WFA certification. Students will learn about risk management and injury prevention, responding effectively in a stressful situation, how to conduct a thorough patient assessment, how to treat common injuries and environmental problems, how to make decisions about evacuation, and how to perform basic rescue skills. This course will be hands-on and experiential. Students will gain a great deal of practice by working through realistic scenarios as patients and responders, often outside.

Bush Interscholastic Sport

FALL SEMESTER AND SPRING SEMESTER

Students who commit to participating on a Bush interscholastic team will automatically be registered to receive a Physical Education credit for that season. One sport credit may go toward a student's graduation requirements. The Athletic Director and Physical Education Department Head can provide information and answer questions regarding the general criteria for successful completion of a Bush Interscholastic Sport; however, the specific criteria is determined by the head coach of each sport. Bush team sports that meet this requirement include: cross country running, volleyball, soccer, cross country skiing, baseball, bowling, basketball, track, golf, tennis, and ultimate Frisbee. Students will be automatically registered to receive a Physical Education credit for every season in which they participate on a Bush Interscholastic Team. Only one PE credit earned through interscholastic sports participation can be applied to graduation requirements. Grading for this elective is pass/fail.

Independent Athletic Pursuit

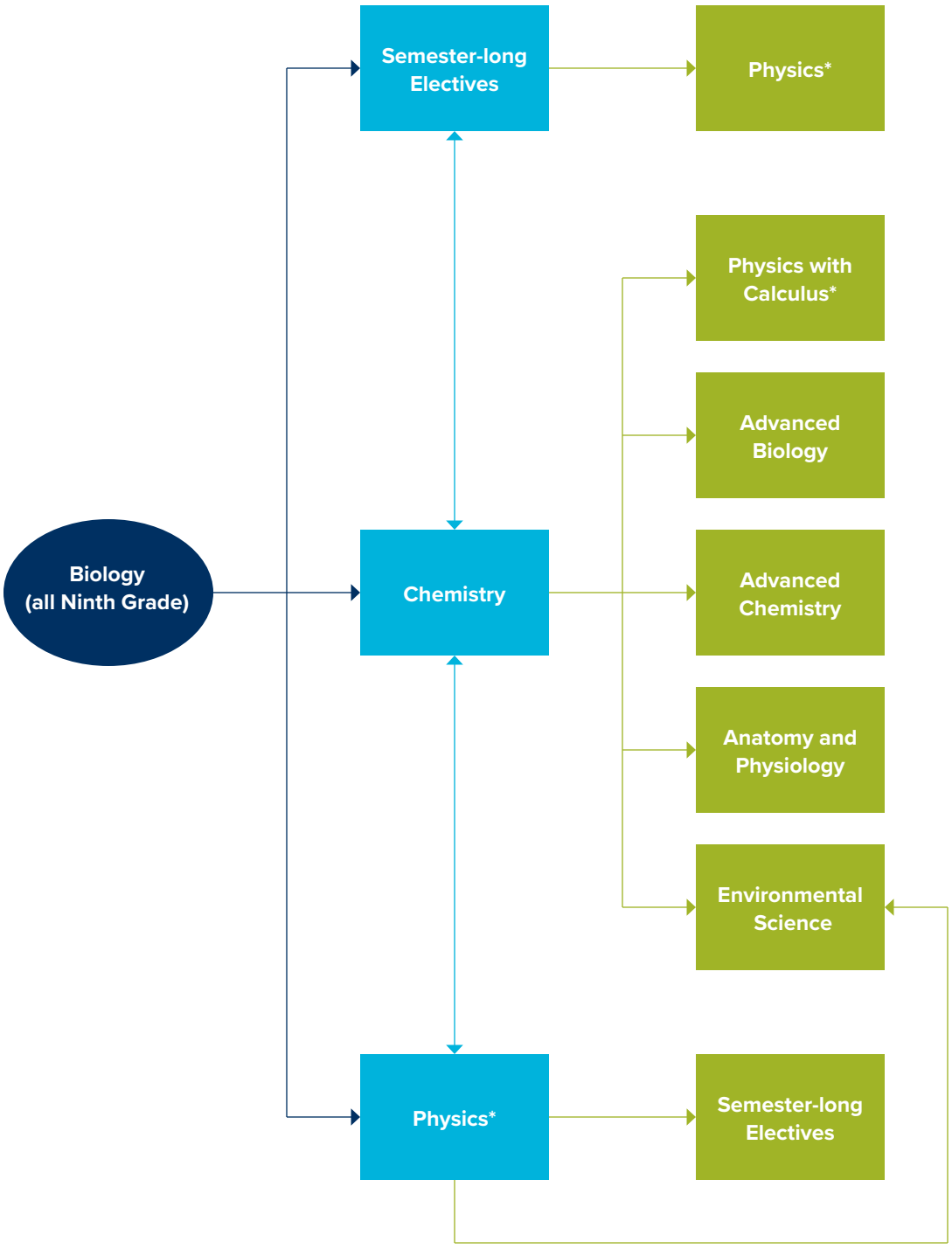
FALL SEMESTER AND SPRING SEMESTER

Students may earn up to one physical education credit for participation in an extracurricular sport or activity not offered within The Bush School athletics program. The intent of this offering is to allow students the opportunity to gain physical education credit for participation in an athletic endeavor outside of our regular school program. The FULL CRITERIA for successful completion of this offering may be picked up in the Upper School Office or from the Physical Education department head. To receive credit for an Independent Athletic Pursuit, students must submit a written proposal at the start of their competitive season. Only students whose proposals have been approved by the Physical Education department head will be eligible for credit for this course. One of the required elements of this offering stipulates that this endeavor must include either a competitive event or performance. Examples of athletic activities that likely meet this requirement include but are not limited to: W.I.A.A. sanctioned sports not offered by The Bush School but available at another neighborhood school (example: Garfield HS Football), participation in Pacific Northwest Ballet or other similar dance program, or participation on a competitive crew team.

SCIENCE

Science Curriculum Map

*Math prerequisite



Science is a way of thinking rather than merely a body of knowledge. The science curriculum encourages students to engage in the process of science. Laboratory work and critical thinking are emphasized as a means of propelling students into greater depth and inquiry. The goal is for students to understand and utilize scientific ideas. There is a natural progression from learning basic skills (writing, applying mathematics, and observing) to using those skills to answer questions and solve problems.

2020–2021 Science Course of Study

The offerings of the Science Department address several audiences. Many of our students will pursue further education and careers in science. Some students may not have any more formal science education after Bush. The needs of all students are met by offering a wide variety of courses so that we achieve scientific literacy for everyone and a more advanced course of study for those who want it.

COURSE OF STUDY (Graduation year 2021 and beyond): Two years of laboratory science. All students must successfully complete one year of biology and one year of physical science (either chemistry or physics).

The Science Department strongly suggests that each student take a third year in science, although it is not a graduation requirement.

REQUIRED COURSES

- Biology
- Chemistry or Physics

2020-2021 ELECTIVE COURSES

Year-Long Electives

- Advanced Biology
- Advanced Chemistry
- Anatomy and Physiology
- Engineer Your World
- Environmental Science
- Physics with Calculus

Term-Long Electives

- Astronomy
- Forensic Science
- Geology of the PNW
- Physics of the Body
- Marine Biology

Required Courses

Biology

YEAR-LONG

This required course provides an introduction to the Upper School science sequence. The course covers concepts and laboratory skills fundamental to all branches of science while introducing students to major biological principles. The focus of this course is laboratory work, enabling students to generate questions for investigation, design, and conduct experiments, as well as to interpret and analyze data. Through this course, students understand that science is a process based on observation and experimentation. Students in this class will gain an understanding of the atomic nature of matter, the molecular basis of biological structures, and cellular function. Students will also investigate the fundamentals of DNA, protein synthesis, and the genetic basis of traits and disease. Finally, students will explore how populations, communities, and ecosystems develop and change over time.

Chemistry

YEAR-LONG

This lab-based course offers a strong foundation in the fundamental principles of chemistry, quantitative problem-solving, and laboratory techniques. Students will learn to utilize equipment, communicate, and calculate as scientists. Topics covered include concepts of matter (classification, properties, changes), reaction rates, atomic structure, periodic trends, chemical bonds, molecular structure and effects on physical properties (polarity and solubility), thermochemistry, intermolecular forces and effects on physical properties, compound nomenclature, chemical equations and reactions, stoichiometry, gas laws, solutions, and acids and bases. Students will have opportunities to apply their knowledge and skills to real-world topics and current issues. Throughout this course, students will be pushed to design and implement laboratory investigations and will work collaboratively to solve problems relevant to chemical principles and reactions.

Prerequisites: Biology

Physics

YEAR-LONG

Through building knowledge and models from experimentation, students will explore the major theories of physics focusing on Newtonian mechanics and electricity and magnetism (E&M). Mechanics topics include the nature and causes of motion, rotational motion, momentum, energy, work, and power. Electricity and magnetism topics include forces and fields, circuits, Faraday's Law of Induction, and electromagnetic radiation. Time permitting, other possible topics of study include the nature of waves, sound, light and optics, thermodynamics, atomic structure, nuclear energy, and particle physics.

Prerequisite: Math Analysis, Biology

Year-Long Electives

Advanced Biology

YEAR-LONG

Advanced Biology builds on the concepts and skills learned in a full year of both introductory Biology and Chemistry. In this course, students explore the overarching principles of evolution and biochemistry while applying the methods of science to their studies of metabolism, genetics, comparative physiology, and ecology. Students in Advanced Biology are expected to complete extensive laboratory experiments and are encouraged to be creative as they design experiments on their own. Students also engage in class discussion, collaborative group projects, research, and analytical writing that pushes them to develop an appreciation for and understanding of the complexities of modern biology. Prerequisite: Biology, Chemistry, and permission of the Science Department

Advanced Chemistry

YEAR-LONG

This chemistry course builds upon the knowledge and skills developed in the year-long chemistry course. A broad selection of topics including modern atomic theory, molecular geometry, gas laws, stoichiometry, thermodynamics, equilibrium, acid-base chemistry, electrochemistry, and organic chemistry will be covered. Throughout the year, students will use design thinking to solve problems, design their own lab experiments, build iterative prototypes, and write journal-style lab reports. Laboratory work will heavily rely on collaborative teamwork and will require full integration of course content across units. Students will use data-collecting software, spreadsheets, and mathematical skills regularly as they collect, process and analyze data. Prerequisite: Biology, Chemistry, and permission of the Science Department

Anatomy and Physiology

YEAR-LONG

Anatomy is the science concerned with the construction and composition of the body. Physiology is the study of how body parts function. The two fields of study are connected; by understanding both form and function, we can recognize the relationships between the individual components within the human body, and how they work to maintain balance in the face of an ever-changing environment. Building on students' previous science background, students develop a thorough understanding of cell structure and function and the homeostatic mechanisms that drive the human body. As the course progresses, students explore several different body systems and their connection to one another. In each section, students learn basic terminology and structures, build and test functional models, collect real-time data, and utilize laboratory dissections (on animal parts) to deepen their understanding. Students also use case studies to explore common medical conditions that result from the failure of the body to maintain homeostasis. This is both a project-based and a laboratory-based course where students will be encouraged to generate an understanding of anatomical and physiological principles in a collaborative and dynamic environment. Prerequisite: Biology and Chemistry

Engineer Your World (EYW): Engineering Design and Analysis

YEAR-LONG

This course is a hands-on, design-based, inquiry-focused science course that engages learners in authentic engineering experiences and inspires them to embrace an engineer's habits of mind. Student-directed projects allow students to discover the engineering design thinking process, make data-driven decisions, and work collaboratively in multi-level teams to solve complex challenges. Students explore mechanical, chemical, civil, electrical, and aerospace engineering through a series of design challenges that illustrate how engineering can improve people's lives and health, meet special needs of different customer groups, and even enable creativity in the arts.

Environmental Science

YEAR-LONG

Environmental Science is a unique interdisciplinary science that draws on biology, chemistry, and earth sciences in an effort to understand environmental processes and problems. This course is designed to immerse students in some of the most pressing environmental issues of our time and the science behind these issues. Students learn that generating potential solutions to environmental problems requires not only fluency in the basic sciences, but also a consideration of economic, political and social factors. Topics of study will include human populations, climate change, ecology and ecosystems, biodiversity and endangered species, water quality field project, agriculture and food security, fisheries, land use, environmental toxins, energy sources & usage, and materials usage. In this course, students will gather lab and field data, practice analyzing and communicating data, reading and interpreting graphs, observing natural processes, and critiquing the scientific literature. Most importantly, students will be asked to employ innovative problem-solving to address difficult, multifaceted challenges. Prerequisite: Biology and either Chemistry or Physics

Physics with Calculus

YEAR-LONG

Physics with Calculus builds knowledge, understanding, and calculus-based models of nature from experimental results. Students will explore the two major classical theories of physics: Newtonian mechanics and electromagnetism (E&M). Mechanics topics include the nature and causes of motion, rotational motion, momentum, energy, work, power, and equilibrium. Electricity and magnetism topics include forces and fields, circuits, Faraday's Law of Induction, and electromagnetic radiation. Time permitting, other possible topics of study include the nature of waves, sound, light and optics, color, thermodynamics, atomic structure, nuclear energy, and particle physics. Prerequisite: Chemistry and Introductory Calculus. Must also be concurrently enrolled in or have completed Advanced Calculus.

Semester-Long Electives

Astronomy

FALL SEMESTER

Astronomy is a one-term lab course that examines the fundamental question of our place in the universe. By modeling the work of astronomers, students will gain an understanding of astronomical concepts through analyses of telescope data from a variety of sources. Historical concepts will be linked with modern ideas as we begin our exploration with the study of our local neighborhood, the solar system, and our nearest star, the sun. Using the sun as an example and looking outward, students investigate the life cycle of a star: gestation and birth, life, and death, both spectacular and mundane. Conglomerations of stars as galaxies, including quasars, larger groupings of clusters and superclusters, and finally the universe as a whole is explored. The origin of what we call the universe and its fate will be investigated, as well as the fundamental question, "Are we alone in the universe?"

Prerequisite: Students should have completed or be concurrently enrolled in Advanced Algebra.

Forensic Science

FALL SEMESTER

Forensic science takes on the task of introducing students to a number of techniques employed in the study and investigation of crimes and accidents. Students will explore physical, chemical, biological, and mathematical concepts and relationships through inquiry-based activities and data collection labs, and then integrate these methods of analysis into their study of mock crime scenarios. The fundamentals of crime scene sketching, determination of the time of death, fingerprint analysis, blood spatter analysis, micro-expressions, DNA analysis, forensic anthropology, hair and fiber analysis, and handwriting analysis are all investigated in the class. Students will then use their understanding of forensic science techniques to research and present a case of their choosing.

Prerequisite: Biology

Geology of the PNW

SPRING SEMESTER

Have you ever wondered how the amazing mountains in the Northwest were formed? Or why Mount Rainier and Kilauea (in Hawaii) produce very different volcanic eruptions? Did you know that 3,000 feet of glacial ice used to cover most of the Puget Sound area? Are you a rock hound who is craving to know the story behind each stone? In this course, we will cover all of these topics and more. The goals of the course are for students to learn about the regional geology of the Pacific Northwest, to improve their ability to think and work scientifically through explorations and investigations, to conduct field studies or observations, and to become familiar with research studies relevant to the course material. During this course, students will examine the dominant geologic processes that have shaped the landscape of our region. The course will begin by looking at the processes that have created our mountain ranges and then will shift focus to the processes that continue to change our landscape such as glaciers and rivers. To better understand the more recent story of our region, students will evaluate current natural hazards (such as earthquakes, volcanic eruptions, landslides, and avalanches). Throughout the course, there will be opportunities to explore local geologic features of the Seattle region (through field trips) and learn about current research underway at local universities from resident scientists.

Prerequisite: Biology

Physics of the Body

SPRING SEMESTER

Muscles move the entire body's skeleton and you should always lift with your legs, not your back. Why? Blood flows through arteries and veins, and we monitor it by measuring blood pressure. What are we measuring? Nerves send signals to and from the brain. Exactly what are those signals and how are they transmitted? These are just a few of the questions that will be explored in Physics of the Body (iatrophysics). We will explore how Physics can inform us and deepen our understanding of the functioning of various organ systems. Our understanding will be developed through examining the physics of the particular system and the equipment (CT, PET, MRI, EEG, etc.) that allow us to observe the systems. Examples of the systems that could be explored are the musculoskeletal system, heart and circulatory system, the eye, the ear, and the nervous system.

Prerequisites: Biology, Advanced Algebra

Marine Biology

FALL AND SPRING SEMESTER

Marine Biology is a semester-long elective. This course is designed to deepen students' understanding of the evolution, taxonomy, behavior, morphology, and ecology of the major forms of marine organisms. Students are introduced to the diversity of life in our seas, from the surface-dwelling phytoplankton, macro-invertebrates, whales and schooling fishes, to the bizarre forms that inhabit the cold dark realm of the abyssal floor. Student projects, labs, and activities are geared toward gaining an appreciation for the marine life that swim, drift, and inhabit the seas. Emphasis is placed on understanding ecological principles, the many threats facing the oceans today, and their possible solutions. Diverse in-class labs, investigations, activities, field trips, and projects reinforce students' understanding of concepts covered during discussions, lectures, and readings.

Prerequisites: Biology, Chemistry

WORLD LANGUAGES

The World Language Department provides each student with the ability to understand and interpret experience from a different cultural viewpoint. We seek to introduce and foster communication through the skills of listening, speaking, reading and writing in a second language. Based on the proficiency standards published by the American Council on the Teaching of Foreign Languages (ACTFL), the goal for students is to reach the intermediate mid/high level after successfully completing graduation requirements. These guidelines apply to all languages offered at Bush. Electives are offered in all languages, which challenge students to work toward an advanced level of proficiency.

2020–2021 World Languages Course of Study

Students must complete through level three and have four semesters of the same world language. The World Language department encourages students to exceed this minimum requirement by studying four years of a language or three years of one language and one year of another. Newly admitted students take a proficiency test to determine the most appropriate placement. Students enrolled in Level IV remain in the class for a year as part of the IV/V cycle and will receive one grade for the year. Students in Level V or VI may take single-semester courses. For all courses, a minimum grade of C- for the year is required to advance to the next level. Students going on a language-based Intercultural Study travel program must be enrolled in that language the semester prior to travel departure.

FRENCH

- Level I
- Level II
- Level III
- Level IV
- French V

French V/VI Electives:

- 20th Century Novel (Fall)
- Topics in the French-Speaking World (Spring)

SPANISH

- Level I
- Level II
- Level III
- Level IV

Spanish V Electives:

- 20th Century Literature (Fall)
- Topics in the Spanish-Speaking World (Spring)
- Spanish VI Elective Fall
- Spanish VI Elective Spring

MANDARIN

- Level I
- Level II
- Level III
- Level IV
- Level V

French Courses

Level I

This beginning class introduces students to the French language and culture with emphasis on producing meaningful, authentic communication. To develop proficiency in listening, speaking, reading and writing in French, students will be expected to actively communicate about familiar topics, focusing on themselves, their families, school and friends, their interests, and hobbies. Cultural material is introduced in non-historical progression.

Level II

This course continues to increase students' proficiency in the domains of listening, speaking, reading, and writing. Students will engage in highly interactive and meaningful activities. Throughout the year, students will be introduced to more vocabulary and grammar structures in authentic life circumstances. Students are expected to practice their listening, speaking, reading, and writing skills through contextualized and interactive games, storytelling, and hands-on projects on a daily basis. Cultural topics in French include France, Canada, the Caribbean, and Africa.

Level III

Level III French is designed to improve students' ability to communicate effectively and appropriately in real-life social contexts. Students review and fine-tune basic grammatical structures of French, and more complex structures and vocabulary are introduced through different topics. Oral presentations provide students with additional speaking opportunities. Writing is stressed to strengthen the sequential patterns of the language and the complex system of irregular verbs. Reading and conversation are combined with cultural material, with an overview of French history.

Level IV

This course includes frequent oral presentations and spontaneous conversation about various aspects of contemporary francophone cultures. Reading and discussion of supplemental materials and practice speaking French in a variety of functional, everyday situations allow students to expand their vocabulary and to solidify previously learned grammatical structures. Selections of French-speaking videos and readings are used to deepen knowledge and understanding of francophone cultures.

French V/VI Elective: 20th Century Novel

FALL SEMESTER

The focus of this term is primarily developing further fluency in conversation, reading, and writing. This course provides an overview of grammar with the purpose of integrating the more refined aspects of grammar into a student's writing. Syntax, structure, and style are the focus of writing assignments based on an in-depth reading of a modern novel.

French V/VI Elective: Topics in the French Speaking World

SPRING SEMESTER

Through the use of the Internet, newspapers, magazines, essays, short literary readings, and film, this course explores social, historical, and cultural traditions of francophone communities. The course emphasizes the development of conversational language skills (listening and speaking) through class discussions and presentations. Also, students work on writing concise, organized, and grammatically correct short essays on relevant topics.

Spanish Courses

Level I

This beginning class introduces students to the Spanish language and culture with emphasis on producing meaningful, authentic communication. To develop proficiency in listening, speaking, reading and writing in Spanish, students will be expected to actively communicate about familiar topics, focusing on themselves, their families, school and friends, their interests, and hobbies. Cultural material is introduced in non-historical progression.

Level II

This course continues to increase students' proficiency in the domains of listening, speaking, reading, and writing through highly interactive and meaningful activities. Throughout the year, students will be introduced to more vocabulary and grammar structures in authentic life circumstances. Students are expected to practice their listening, speaking, reading, and writing skills through contextualized and interactive games, storytelling, and hands-on projects on a daily basis. Examples of additional vocabulary building activities include, but are not limited to: playing games, reading stories, reading and writing dialogues, describing pictures, etc.

Level III

The goal of this course is to advance students' competence communicating effectively in increasingly complex real-life situations. Students review and fine-tune basic grammatical structures of Spanish, and more complex structures and vocabulary are introduced through different topics. Examples of student work includes: presentations, dialogs, summaries etc. about topics relevant to everyday life, culture, and events.

Level IV

This course emphasizes conversation through presentations and discussions, and enhances students' reading and writing skills through exposure to and analysis of different literary sources. The goal is for students to be able to communicate functionally and effectively, incorporating an assortment of vocabulary and grammatical structures refined and extended from the knowledge acquired in previous years.

Spanish V Elective: 20th Century Literature

FALL SEMESTER

The focus of this term is developing further fluency in conversation, reading, and writing. Students will read, discuss, and analyze either a contemporary novel written by a known Spanish writer or a selection of short stories written by renowned Latin American authors (such as Isabel Allende, Gabriel García Márquez, Juan Rulfo, or Abelardo Castillo, among others). Form and context will be the target of our study, as well as any additional relevant information regarding the historical and cultural frame corresponding to the time period of the author, or pertaining to the story. Even though students will practice both analytical and creative writing, more emphasis will be placed on the latter through the production of their own "novel," script, or other written project to be determined.

Spanish V Elective: Topics in the Spanish-Speaking World

SPRING SEMESTER

Through the use of different media sources—which include but are not limited to newspaper articles, essays, and Internet—this course explores a given historical period of Latin America and Spain along with a review of current events. The course develops and deepens conversational language skills through class discussions and presentations. Also, students work on writing concise, organized, and essays and paragraphs about relevant topics with an eye toward increasing (grammatical) accuracy. The specific content of the course is to be determined by the teacher.

Spanish VI Elective

FALL SEMESTER

Students will explore a variety of themes in this course, including but not limited to politics, literature, and history. Within each theme and through a variety of media sources, students will explore the historical background, the impact on the current world, and its evolution in society. There will be a strong focus on accurate written and spoken production and interaction. The vocabulary used in written and spoken work during this term will be more formal.

Spanish VI Elective

SPRING SEMESTER

During this semester we will tie the political, historical, and literary themes explored in the first semester to modern modes of communication, including social media, visual and performing arts, cinema, and music. Students will continue working on their writing and speaking skills. There will also be a stronger focus on aural and reading comprehension for greater accuracy. The vocabulary used this term in written and spoken work will be more informal and will explore informal varieties across the Spanish-speaking world.

Mandarin Courses

Level I

This beginning class introduces students to the official Chinese Mandarin language and culture with emphasis on producing meaningful, authentic communication. To develop proficiency in listening, speaking, reading and writing in Chinese, students will be expected to actively communicate about familiar topics, focusing on themselves, their families, school and friends, their interests, and hobbies. Classes also emphasize students' acquisition of Chinese characters and range of vocabulary, standard Mandarin pronunciation, and tonal accuracy. Mandarin I also incorporates film, video, and interactive experiences such as skits, role-playing, games, and hands-on projects in order to broaden students' understanding of the language and Chinese cultural traditions.

Level II

This course continues to increase students' proficiency in the domains of listening, speaking, reading, and writing. This class introduces more vocabulary and grammar structures in authentic life circumstances. Students will engage in highly interactive and meaningful activities such as learning Chinese raps, songs, writing and conducting mini Chinese lessons for fellow students, ordering food at a Chinese restaurant, etc. Students will complete several video projects to demonstrate their comprehensive skills in writing and speaking. Students are expected to practice their listening, speaking, reading, and writing skills through contextualized and interactive games, storytelling, and hands-on projects on a daily basis.

Level III

Level III Chinese is designed to improve students' ability to communicate effectively and appropriately in real-life social contexts. Students review and fine-tune basic grammatical structures of Chinese, and more complex structures and vocabulary are introduced through different topics. Oral presentations provide students with additional speaking opportunities. Selections from Chinese videos and other materials are used to deepen students' knowledge and understanding of Chinese culture and ways of thought. In addition, students demonstrate an understanding of the relationship between the products and perspectives of Chinese society by participating in holidays, festivals, and cultural activities.

Level IV

This course includes frequent oral presentations and spontaneous conversation about various aspects of contemporary Chinese culture. Reading and discussion of supplemental materials and practice speaking Chinese in a variety of functional, everyday situations allow students to expand their vocabulary and to solidify previously learned grammatical structures. Selections of Chinese videos and readings are used to deepen knowledge and understanding of Chinese culture.

Level V

This course provides students with both Chinese language enforcement and a profound knowledge of the Chinese culture. It covers a wide range of content, such as current news, social media, origins of diverse thoughts or behaviors, ancient innovations, cultural norms and traditions in various regions, social structures, and some cultural trends or issues of the present day. Flexible teaching methods are adopted as much as possible in this class – techniques that allow plenty of student participation, such as sharing points of view, active discussion, and critical-idea exchanges, to achieve a most satisfactory and effective learning atmosphere.

EXPERIENTIAL PROGRAMS

At The Bush School, students learn through engaging in a process and a mode of inquiry — direct, active experiences that result in real responsibility for outcomes.

Experiential learning promotes the pursuit of passions, interests, risk-taking, and innovation. Students learn the subject matter and learn about themselves by being involved in activities and taking ownership of their learning. Trust has been a defining characteristic of The Bush School's approach since its founding — faculty trust students to stay engaged and push themselves to achieve their greatest potential. This level of trust and autonomy frequently results in learning that is rich and unexpected.

Field trips, international travel, and wilderness outings are the most visible examples of experiential education at Bush. However, hands-on, inquiry-based learning is just as prevalent in the classroom. Faculty design and execute intentional, instructive experiences for students with clear objectives, authentic assessment and reflection.

Cascades Program

Cascades are an essential part of the Upper School Experience. The Upper School program is divided into two semesters, Fall and Spring, and two three-week Cascades in January and May.

During each Cascade, students take a single interdisciplinary course of study, led by interdepartmental teaching teams. These thematic immersive experiences are comprised of students across all grade levels. Cascades are academically engaging, challenging, and require students to solve complex problems and real-life challenges both on and off campus.

Cascades Requirements

Students are required to complete two credits in the Cascades Program each academic year.

Students will sign up for Cascades via the online registration form in the spring for the January session.

Program Partners: Intercultural Immersion

While the programs below are not officially part of The Bush School program, students from The Bush School have participated in these programs and received academic credit.

School Year Abroad (SYA)
SYA.ORG

Official transcript should be sent from the school to the Upper School director for a transfer credit audit. Grades will not be included in student's overall GPA.

The Island School
ISLANDSCHOOL.ORG

Official transcript should be sent from the school to the Upper School director for a transfer credit audit. Grades will not be included in student's overall GPA.

Global Visionaries Program
GLOBAL-VISIONARIES.ORG

Two-week social justice programs to Guatemala.

The School for Ethics and Global Leadership
SCHOOLFORETHICS.ORG

Official transcript should be sent from the school to the Upper School director for a transfer credit audit. Grades will not be included in student's overall GPA.

Passepartout French Exchange Program
PASSEPARTOUTPROGRAM.WORDPRESS.COM

Passepartout is an international partnership between high schools in the Region of Nantes, France, and high schools in Washington State. The program is administered by the Ministry of Education in France. It is a cultural and educational program based on reciprocity. Bush participants will host a French student for ten weeks in the Spring semester (December–March) and then will be welcomed for a ten week stay that spring in the home of the student they have just hosted. Our sister school is Lycee Victor Hugo, which is located in Chateau Gontier, a two-and-a-half-hour train ride from Paris.

Credit: 5 general credits will be offered in this exchange

Cost: Cost of travel (plane, train), spending money, $150 administrative fee for Bush participants.

Financial Aid: Financial Aid is available on a limited basis.

Applications are specific to each program and must be researched by any student who is interested in participating. For SYA, The Island School, and The School of Ethics and Global Leadership, it is recommended that students inform their advisors of their intent to participate in one of these programs, and then work in conjunction with their advisor, college counseling, and the Upper School Director to map out exit and entry plans. For Global Visionaries, students are asked to work with their advisor, college counseling, and the experiential programs manager.

Students participating in a partner program will be required to take a leave of absence from Bush for the duration of their program.

SENIOR PROJECTS

Senior Projects provide students the opportunity to work with The Bush School, local, regional, and/or world resources in pursuit of an experiential project that specifically extends skills and ideas that they have developed during their high school years. The purpose of the program is to allow a student to further develop and demonstrate significant new understanding while making a difference in the greater community. Students must outline in the Formal Proposal that they have the credentials to advance to a new level, in addition to the time and resources required to make the project a success.

In order to fulfill the vision of The Bush School, a Senior Project must be clearly based on the educational foundations of the school:

- Critical, independent, and creative thinking
- Ethical judgment and action
- Intercultural fluency
- Local and global citizenship

A Senior Project Formal Proposal must demonstrate that the goal of the project is to "make a difference" in one or more of these areas. The Final Presentation provides an opportunity to reflect on the events and achievements of the project.

Seniors should observe the following guidelines as they prepare their Senior Project Formal Proposals:

- The stronger the student's background, the better. Serious prior coursework, training, and experience indicate commitment, credentials, and an ability to succeed.
- Senior Projects should begin on the first day of the program. Time spent traveling, scouting locations, making contacts, or assembling materials is time lost to the project.
- The results of Senior Projects must be evident and measurable. Projects that produce largely internal results cannot be evaluated by supervisors or the school and will not be considered. Please keep in mind that projects that lay the groundwork for a later event or process but do not carry it out are very difficult to evaluate and may not earn a student credit until the final event is complete.
- Senior Projects must make a difference in the greater community beyond the individual.
- While students are encouraged to consult family members, friends, faculty, and members of the Senior Projects Committee in the brainstorming process that occurs before submitting Formal Proposals, they are expected to design and carry out the actual Senior Project independently or with one partner.
- The less important money is to the results of the project, the better. Projects that make a difference or are evaluated on the basis of how much money they make are very risky, because if no one donates or purchases a product, the project will fail.

INTERSCHOLASTIC TEAM SPORTS

The interscholastic athletic program is designed to provide every student with the opportunity to participate on an interscholastic team. Involvement in sports is an integral part of the high school experience, whether students are participants or supporters. While varsity teams play at a competitive level, athletes of all ages and levels of achievement are needed to comprise a successful program. Most teams offer junior varsity participation, where a student new to a sport can learn appropriate skills and strategies and enjoy competing at his or her own level. For many, playing at the junior varsity level provides experience that will later allow them to make the varsity team. Being a member of a team is a valuable experience and one that requires dedication and a spirit of cooperation. We participate in the Emerald City 1A League with other schools in the greater Seattle area.

Offerings

Fall

- Girls' Cross Country Running
- Boys' Cross Country Running
- Boys' Golf
- Girls' Soccer
- Boys' Tennis
- Boys' Ultimate Frisbee
- Girls' Volleyball

Winter

- Girls' Basketball
- Boys' Basketball
- Girls' Bowling
- Cross Country Skiing (coed)

Spring

- Boys' Baseball
- Girls' Golf
- Boys' Soccer
- Girls' Tennis
- Girls' Track & Field
- Boys' Track & Field
- Girls' Ultimate Frisbee

CO-CURRICULAR AND OTHER PROGRAMS

Students should have a wide range of experiences outside the classroom. Bush aims to place students in situations where they learn from taking risks, having real responsibility, and performing service. These experiences can be powerful tools for developing values, building confidence, and defining interests.

Drama Productions

The Upper School mounts two major productions per year. The bulk of rehearsal time takes place after school. Students are involved in all aspects of the production: acting, stage management, lights, sound, scenery, costumes, and props.

Network Program

The Network of Complementary Schools is a group of diverse schools, both public and private, who have joined together to share their special programs. Bush students may apply to attend one of 26 member schools for a two to three week stay, taking part in special programs or attending regular classes. Housing is provided and the only major cost is for transportation. Bush families, in turn, are encouraged to host Network students visiting Seattle.

Publications

The Rambler is the Bush Upper School student newspaper. The purpose of *The Rambler* is to consistently produce a school newspaper that's informative, entertaining, well-written, and relevant to the Bush Upper School community. In addition to providing readers with coverage of school issues, politics, and art, among other subjects, *The Rambler* also provides a platform for students to share their opinions and passions. Short-story writers and visual artists have a place to share their work, and non-fiction writers have the opportunity to refine their thinking on current affairs. Among the students and faculty that comprise *The Rambler* staff, the overriding goal of every issue is to spark thinking and debate on issues most pressing to our school, our community, and our country.

Senate

The Bush Upper School Student-Faculty Senate convenes each week to deliberate on specific campus issues and wider concerns present in the school. In the past year, topics considered by the Senate have included respect for others on campus, the need for more public art in Wissner Hall, faculty evaluation, and a school-wide food drive. Two at-large representatives selected by the student body join four student representatives elected by each grade level. Senate visitors take an active role in debates, and all are welcome.

STEM Center

Staffed by upperclassmen, the STEM Center provides support for all Upper School students in any mathematical or scientific venture. STEM Center coaches are expected to contribute two hours a week to the project by meeting one-on-one with students who need help, organizing and leading group study sessions, and meeting as a group to discuss challenges and ideas for making the Center more effective. The STEM Center is almost entirely student-driven, and demands of its coaches a high level of responsibility, organization, and attention to detail. All students enrolled in the STEM Center must have completed or be in the process of completing the Math Department's trigonometry requirement, and they must be recommended to the program by a math teacher. The half math credit for this class may not be used to satisfy the minimum course of study requirement in math.

Writing Center

Staffed by upperclassmen who have taken at least one writing course at Bush, the Writing Center provides consultation and feedback to Upper School students at all stages of the writing process. Writing Center coaches are expected to contribute two hours a week to the project by meeting one-on-one with students who need help with their papers, working with English and other classes on the drafting and revision process, and meeting as a group to discuss challenges and ideas for making the Center more effective. The Writing Center is almost entirely student-driven, and demands of its coaches a high level of responsibility, organization, and attention to detail. All students enrolled in the Writing Center must be recommended to the program by an English teacher. The English credit for this class may not be used to satisfy the minimum course of study requirement in English.

The Bush School

EXPERIENCE EDUCATION