

2019-20 BULLIS UPPER SCHOOL CURRICULUM GUIDE

In the Upper School, we seek to honor the unique needs and contributions of each student through a continuing process of challenge and self-reflection. We draw on a wide variety of teaching practices and learning opportunities to cultivate respect, understanding, and compassion for others. The success of our students depends on the close collaboration between Bullis School, students, parents, and families. We expect our students to work with teachers, students, and other members of the community to become independent, lifelong learners.

In educating our students, we seek not only to prepare students for success in higher education but also to equip them with the skills needed for a balanced, fulfilling, and meaningful life. The Bullis curriculum provides students with the academic background for success at the college level and serves as the cornerstone for a range of co-curricular and extracurricular activities that help develop well-rounded individuals.

Students play an active role in the process of course selection, and each student's schedule is tailored to meet his or her academic needs. Before spring break, Upper School students receive academic advising and materials for use in planning the following year's schedule. Students work out tentative course selections with their parents and advisors. The advisor then gives the tentative schedule to the academic staff for review. New students have the opportunity to meet with Upper School administrative staff regarding course scheduling.

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Graduation Requirements and Recommendations

Subject Area	Required Credits	Highly Recommended Credits
English	4 Credits	4 Credits
Social Studies	3 Credits (including Human Geography, Global History and American History)	4 Credits (including Human Geography, Global History and American History)
Science	3 Credits (including two of the following: Biology, Chemistry, Physics)	4 Credits (including Biology, Chemistry and Physics)
Math	3 Credits (through at least Algebra II)	4 Credits (through at least Precalculus)
Foreign Language	2 Credits (consecutively in the same language)	3 or 4 Credits (consecutively in the same language)
Health	1/3 Credit	
Art	1 Credit	At least 1/3 credit completed in 9th grade
Physical Education	2 Sports (1 in 9th grade and 1 in 10th)	
Extra-Curricular Activities	8 Activities or Additional Sports	

Total Required Credits (not including Physical Education and Activities) = **23 2/3**

***Students must take a minimum of 6 classes per trimester EXCEPT for seniors who can opt for two study halls for ONE trimester.**

***All student must take a minimum of 4 CORE COURSES per year.**

***Students may not take more than 4 Honors/AP courses without the permission of the Assistant Principal of Academics.**

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UPPER SCHOOL ACADEMICS

Our goal is to graduate committed and resilient students who are also kind and considerate people. Bullis helps students establish this cornerstone by presenting them with a curriculum that generates reasonable challenges for all students. Each student's schedule is tailored to meet his or her academic needs. In keeping with this goal, Bullis is concerned with the quality of students' work and the effort and integrity that go into producing that work, especially as noted in the "Bullis Code of Academic Honesty."

Recommended Course of Study

The recommended progression of the Upper School curriculum is shown below for each grade. At higher grade levels, variations often occur because of differences in a student's prior program of study and interests.

Grade 9

English (1 credit): English I or Honors English I

Math (1 credit): Algebra I, Geometry or Honors Geometry (Other options available based on completion of prerequisites)

Science (1 credit): Earth Science, Biology or Honors Biology (Other options available based on completion of prerequisites)

Social Studies (1 credit): Human Geography

Foreign Language (1 credit): Various levels in Spanish, French, Latin and Chinese

Arts (minimum of 1/3 credit-1 credit): Various options

Public Health & Personal Wellness (1/3 credit)

Physical Education (1 season minimum)

Grade 10

English (1 credit): English II or Honors English II

Math (1 credit): Geometry, Algebra II or Honors Algebra II (Other options available based on completion of prerequisites)

Science (1 credit): Chemistry or Honors Chemistry, AP Biology (Other options available based on completion of prerequisites)

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Social Studies (1 credit): Global History or AP World History

Foreign Language (1 credit): Various levels in Spanish, French, Latin and Chinese

Arts (minimum of 1/3 credit-1 credit): Various options

Public Health & Personal Wellness (1/3 credit)(as needed)

Physical Education (1 season minimum)

Grade 11

English (1 credit): English III, AP Language and Composition or Advanced American Humanities Seminar - AP Language/AP US History

Math (1 credit): Advanced Algebra & Trigonometry, Pre-Calculus, or Honors Functions (other options available based on completion of prerequisites)

Science (1 credit): Physics, Honors Physics, AP Chemistry (other options available based on completion of prerequisites)

Social Studies (1 credit): Thematic U.S. History or AP US History

Foreign Language (1 credit): Various levels in Spanish, French, Latin and Chinese

Elective Course(s) (1 credit): Based on interests

Physical Education (Optional)

Grade 12

English (1 credit): English IV or AP Literature and Composition

Math (1 credit): Calculus, AP Calculus AB or BC, Statistics, or AP Statistics

Science (1 credit) AP Biology, AP Chemistry, or AP Physics and/or other science courses

Social Studies (1 credit): AP Comparative Government, AP Psychology, American Government (I, II and III), African American History

Foreign Language (1 credit): Various levels in Spanish, French, Latin and Chinese

Elective Course(s) (1 credit): Based on interests and uncompleted graduation requirements

Physical Education (Optional)

Honors and Advanced Placement Courses

Bullis offers a wide range of honors and Advanced Placement (AP) courses for Upper School students. Honors and AP courses receive a five-point weight in a student's cumulative grade point average. All AP courses offered at Bullis are rigorous courses presented at the college level and the grading reflects the College Board's grading policies. They are designed to successfully prepare the student to take the Advanced Placement examination. All underclassmen in AP courses are required to take the AP exam. The AP exam is optional for seniors; however, those not taking the exam must continue to attend class and must take a final exam or complete a project as determined by their teacher. Bullis AP teachers incorporate three graded AP-like assessments throughout the spring.

Students may not take more than four honors and/or AP courses unless the Assistant Principal of Academics grants permission.

ADDITIONAL COURSE OPTIONS

In addition to the courses described in the online curriculum guide, Bullis offers the following course options to Upper School students:

Blended Learning

Bullis School, in its vision to prepare its students with radically different learning and living skills necessary for the 21st century, has implemented a blended learning initiative. Blended learning, which combines the delivery of curriculum in an online environment with other modes of instructional delivery, is a proven successful medium for teaching and learning and, at the upper school level, is the fastest-growing segment in the educational arena.¹ The blended approach with accessibility and flexibility of structured online curriculum combined with the "human touch" of interaction with the teacher in a face-to-face setting is an ideal paradigm for teaching and learning.

Bullis offers blended learning modules and/or courses in the Middle School and the Upper School. The modules and/or courses have been developed by the teaching staff and are housed in and taught through its web-based learning management platform called Haiku Learning Systems. The complete module and/or course descriptions are included in the listings for each division, as marked by a 'BL' at the end of a course title.

In the Upper School, the faculty authors of the courses have developed high-quality online courses that will be taught in a blended online structure. Typically, each class will

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meet with the teacher (face-to-face) in the traditional classroom setting two to three days per week. For the remaining two to three days per week, students will manage their use of time in virtual sessions; after signing in with a proctor they can do online work for their class, work on other course work, or even do off-campus work. While the workload for each blended online course is in alignment with the typical schedule rotation of the traditional class, the online work settings during the schedule rotation will provide flexibility for students to manage their time.

Class participation in the online component will require interactivity through asynchronous discussions, collaborative work using technology-rich resources, and possibly scheduled synchronous sessions via web conferencing, all with regularly scheduled due dates and deadlines. All Bullis teachers developing and teaching blended online courses have prepared their courses with formal teacher professional development in this new teaching/learning delivery style. The courses are fully developed with clearly defined goals, objectives, activities, and student outcomes that meet core academic standards.

¹from The Rise of K-12 Blending Learning, by Innosight Institute, Inc. 2011

Bullis Online

Bullis is introducing Upper School online courses available for credit during the summer and the regular school year. (See list of courses below.) For further information about each course, find the course description under its respective discipline within this guide.

Summer 2018

Online Geometry (1 credit)

Online Health (1/3 credit)

Online Writing for High School and Beyond: Grammar, Mechanics, and Analytic Writing (1/3 credit)

Online Personal Finance (1/3 credit)

2018-19 School Year

Online AP World History (1 credit)

Online AP Psychology (1 credit)

Online AP Calculus AB (1 credit)

Online Biology (1 credit)

Online Health (1/3 credit)

Independent Study

Seniors and juniors with specialized interests or abilities may request approval to explore, under the supervision of a teacher, topics outside of those available in the published curriculum. Though specific arrangements and expectations will vary, all independent study will include a final project and a presentation. The presentation will be made to a group of teachers and administrators, including the assistant principal for academics, the principal, the department chair, and others the student wishes to invite. To request approval for independent study, students must submit a written proposal to the assistant principal for academics a minimum of two weeks in advance of the trimester or year of proposed study. This proposal should be designed through discussions with the supervising teacher. Specific guidelines for written proposals may be obtained from the Assistant Principal for Academics.

Summer Study

Upper School students are encouraged to pursue summer coursework in areas that interest them. Summer courses do not need to be approved unless they are taken for the purpose of earning Bullis credit. In these cases, each course must be approved in advance by the Assistant Principal for Academics. Credit is noted on the Bullis transcript upon receipt of an official institutional transcript indicating successful completion of the course. Bullis graduation requirements may be satisfied through summer courses at the discretion of the Assistant Principal for Academics for students whom we require to take a specific summer course or for students who wish to advance the level of their coursework at Bullis.

COURSE SELECTION PROCESS

Upper School students are expected to play an active role in the process of developing their course of study and selecting courses. Each student works closely with his or her academic advisor to determine the schedule and course sequence that will best meet the student's needs and interests. This advising includes consideration of the unique signature programs that Bullis offers Upper School students.

A normal Upper School course load consists of six courses per trimester. Students may take up to seven credits per trimester. Students wishing to carry more than seven credits must receive approval from the Assistant Principal for Academics.

In the spring, each student receives a course selection worksheet for the upcoming school year. Working with his or her advisor and the updated online Curriculum Guide, he or she plans a course of study for the following year, considering available courses, teacher recommendations and graduation requirements. The student's teachers, college guidance counselors and assistant principal of academics also assist in the course selection process. Once the advisor enters the course selections electronically, parents can view their child's selection and sign a printed copy to be returned to the student's advisor. The Registrar will then build the schedule. **Upperclassmen receive priority in the class selection process. Students may not receive all of their selected courses due to schedule restraints.** Students are highly encouraged during the course registration process to select alternative courses in the event that they do not receive their first choice. Students will be notified of problems and conflicts during the summer. Schedules are not issued if a student's account is not current.

Schedule Changes

Because of the care taken to create appropriate schedules for each student, changes are rarely necessary. Should a schedule change be necessary, the student must secure approval and signatures from the appropriate teachers, the student's parent or guardian, his/her college counselor (seniors only) and the assistant principal for academics. The following policies apply to course changes and are discussed as part of the approval process:

- Any yearlong course dropped—and not replaced with a commensurate course--after the third week of the first trimester will be indicated on the transcript as "withdrawn/passing" or "withdrawn/failing"
- A student may not drop a yearlong course after the beginning of the second trimester

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- No partial credit will be given for a yearlong course not completed
- A student may not drop a trimester course after the third week of the trimester
- Any trimester course dropped after the deadline—and not replaced with a commensurate course— will be indicated as "withdrawn/passing" or "withdrawn/failing".

HOMWORK

In the Upper School, homework is a vital component of the learning experience and is an extension of the classroom. Not only does homework reinforce material learned in class and introduce new material, but it also is a vehicle for independent work, practice, and critical thinking. Upper School teachers know that Bullis students lead busy lives and, as a result, work to ensure each assignment is meaningful and appropriate while also challenging, innovative, and engaging. Homework also provides an opportunity for students to improve their memory and study skills, including time management, planning, and prioritizing, all of which are essential life skills.

Homework is expected to be completed on a daily basis as each class session builds on the assignment from the previous evening. Full completion of each assignment is essential for optimum learning. Each teacher has a set homework policy and reserves the right to give a zero for a missed or incomplete assignment. Students should expect an increased amount of homework as they progress through the Upper School, beginning with an average of 25-30 minutes per night per subject in 9th grade and growing incrementally to an average of 45 minutes per night per subject in the 12th grade. There may be nights when a student has more than the typical homework load and students should plan for these evenings in advance by planning out long-term assignments and by studying in advance for tests and quizzes. Students are expected to use study halls to begin the homework process. Students in Honors and AP classes should expect 45 minutes per night in each of those classes. When selecting courses, students should calculate the average amount of homework that will typically be assigned per night so they will understand the time commitment needed to be successful.

Homework assignments range from guided practice to open-ended inquiry and are designed to be completed independently by the student. While many assignments are meant to reinforce the work done in class, some assignments introduce new and challenging material. We expect students to approach homework with a willingness to explore and to wrestle with information; it is not acceptable to dismiss an assignment

because it appears too difficult. Homework assignments are meant to challenge and engage, which, in turn, means that students must seek to understand the material rather than foregoing it. While homework assignments are generally given in class, students can also find assignments on teacher websites. If a student does not know an assignment, they are expected to check the website or contact a peer. With the exception of an excused absence, there is no reason to miss an assignment. Upper School students are accountable for their own work. The Upper School Faculty seeks to help students understand the direct correlation between thoughtful, consistent homework completion and course success.

STUDY HALLS

Study halls are to be used for completing school-related work. Students are expected to use study hall time quietly and with a minimum of conversation, especially in the 9th and 10th grade study halls, so that work can be completed and proper study habits developed.

Students may leave study hall for extra instruction or to do research in the library with a written pass obtained in advance from the teacher overseeing the work. Study hall proctors do not write passes for students.

SIGNATURE PROGRAMS

Bullis currently offers planned courses of study in four signature program areas—Science, Technology, Engineering and Math (STEM), Entrepreneurship, Humanities and Global Studies and Visual and Performing Arts. The Signature Program model entails opportunities for interdisciplinary study, experiential education, research-based culminating/capstone experiences and student choice among curricular offerings. Signature programs are available at all grade levels, 2 through 12, to teach institutional and core academic values of the school. The Lower School accesses signature program curriculum at an emerging level, while the Middle School emphasizes exploring an issues-based, modular approach that builds readiness for some stand-alone courses in the 8th grade

Students in the Upper School may opt for rigorous, innovative courses that build on core graduation requirements. The Upper School Program allows students to concentrate on select classes related to a given signature program and deepen their experience in a chosen area. The vertical sequence moves these students through authentic experiences of their chosen area. Students participating in signature programs must also engage in a formalized mentor relationship.

ENTREPRENEURSHIP

We prepare students to become innovators and leaders in a global marketplace that requires creativity, critical thinking, collaboration, communication and resourcefulness. Students experience engaging courses based on real-world challenges as they develop the necessary flexibility for an evolving entrepreneurial landscape. Students will hone presentation skills, learn to revise and test their ideas, analyze current and future trends, become comfortable with basic business principles, and apply mathematics to fiscal models. In each division, students will participate in a capstone experience.

Program Goals

- Foster entrepreneurial thinking
- Develop personal leadership traits, including resilience and perseverance
- Establish a strong grasp of business fundamentals
- Develop confidence and skill set to think innovatively
- Encourage ethical decision-making

The Concentration Model - The signature program approach allows students to pursue areas of interest and passion, develop specialized skills, and work in applied environments through project-based learning while maintaining a liberal arts base. Students will progress through both a core curriculum as well as a “signature program” as they follow the path outlined below.

Required Credits & Courses - To earn the Entrepreneurship Signature Program denotation, students must complete 4 credits of approved courses. Students must also participate in some leadership capacity in the Bullis community. Leadership may range from formal, elected positions to informal experiences that suit students’ strengths—student government, team captain, club leadership, etc. The Entrepreneurship Signature Program strongly encourages the inclusion of four years of study in a foreign language. Entrepreneurship students are required to complete:

- Business Model Design 1/3 credit *Optional: related, approved internship 1/3 credit*
- Entrepreneurial Finance 1/3 credit
- Honors Entrepreneurship Capstone Lab 1 credit
- Design Process course 1/3 credit
- Communications 1/3 credit
- Other Entrepreneurship courses 1 2/3 credits

Credit Distribution Requirements for Entrepreneurship

Entrepreneurship	Finance	Design Process ($\frac{1}{3}$ credit)	Communications ($\frac{1}{3}$ credit)	Leadership (1 trimester or sport season)
*Business Model Design	Personal Finance	Engineering Graphics	Public Speaking	Leadership in Action
*Entrepreneurial Finance	International Business & Trade	Creative Coding	Journalism I-III	Varsity Sport Captain
*+Honors Entrepreneurship Capstone	+Calculus	Mobile App Development BL	~Writing for High School and Beyond	Student Government Officer
	+Statistics or AP Statistics	Digital Media I	+Acting II	Peer Tutor
	+AP Microeconomics	Maker Lab/ Making for Social Good	+Theatre Workshop	Club Leader
	+AP Macroeconomics	Graphic Design and Advertising I, II	+Foreign Language Level IV or Above	Community Service Activity Coordinator
		Game Design		MUN Officer
		Intermediate Making: Iteration and Design		
		+Introduction to Engineering		Approved Leadership Role
		+AP Computer Science		

*Required

+Full year course (1 credit)

~ Summer Online Course

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HUMANITIES & GLOBAL STUDIES

This program fosters an interconnected view of cultures as expressed through humanities and explores individual perspectives that make up those cultures. Students focus on social studies, literature, language, and the arts and select from a wide variety of interdisciplinary courses that develop and enrich their global competence.

Program Goals

- Connect literature and art to historical context
- Cultivate global awareness
- Emphasize historical crosscurrents and narrative
- Encourage a love of travel and exploration
- Engage in experiential learning outside the classroom
- Develop perspective through an in-depth study of foreign language and culture
- Empower students to be agents of local, national, and global change

The Concentration Model

The signature program approach allows students to pursue areas of interest and passion, develop specialized skills, and work in applied environments through project-based learning while maintaining a liberal arts base. Students will progress through both a core curriculum and then a “signature program” as they follow the path outlined below.

Required Credits & Courses

To earn the HGS Signature Program denotation, students must complete 4 credits of approved courses in addition to a curriculum-based experiential learning opportunity and extended community service initiatives. HGS students must complete:

- Honors HGS Capstone - 1 credit
- Contemporary Global Issues - 1/3 credit (prerequisite for HGS Capstone)
- Language study (through level 4) - 1 credit
- Social Studies (beyond 3 graduation required courses) -1 credit
- English / Arts – 2/3 credit
- 1 curriculum-based experiential learning opportunity (travel/internship)
- Extended community service initiatives in either the sophomore or junior year

Optional: a related, approved internship 1/3 credit

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Credit Distribution Requirements for Humanities and Global Studies

Humanities and Global Studies	English or Art History (2/3 credit)	Foreign Language (*1 credit)	Social Studies (1 credit)	Experiential Travel / Approved Internship (1 Trip)
*Contemporary Global Issues	Public Speaking	+Chinese IV	American Government I, II III (Each is a trimester)	Caring for Cambodia Trip
*+Honors Humanities and Global Studies Capstone	Journalism I, II and III	+French IV, V or AP French	Holocaust & Genocide Studies	Model United Nations Trip
	Classical Mythology I, II, III	+Latin IV, V or AP Latin	^AP Comparative Government	Art Study Trip
Making for Social Good	~Writing for High School and Beyond	+Spanish IV or AP Spanish	+African American Studies	Approved Travel (Service or Academic)
	Art History: Renaissance to Modernism	+Honors Latin American Studies	+AP Microeconomics	
	Art History: Modernism and After	+Honors Spanish Literature and Media	+AP Macroeconomics	
	+AP Art History		+AP World History	
			+AP Psychology	

*Required

^ Two-trimester course (2/3 credit)

+Full year course (1 credit)

~ Summer Online Course

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STEM

At Bullis, we believe that instruction can best be driven by an inquiry-based approach to interdisciplinary learning. Our STEM vision is built upon Bullis' core academic values and our approach encourages students to investigate real world problems and design real world solutions. Students will "Ask, Imagine, Plan, Create, Present, Evaluate, and Improve" as they engage in opportunities to make a positive impact in their community. These investigations will be focused in the areas of Science, Technology, Engineering, and Mathematics.

Program Goals

- Think like a scientist/engineer
- Explore design concepts
- Specialize in areas of interest
- Develop adaptability
- Problem solve
- Pose productive questions

The Concentration Model - The signature program approach allows students to pursue areas of interest and passion, develop specialized skills, and work in applied environments through project-based learning while maintaining a liberal arts base. Students will progress through both a core curriculum and then a "signature program" as they follow the path outlined below.

Required Credits & Courses

To earn the STEM Signature Program denotation, students must complete 4 credits of approved courses beyond graduation requirements in Science, Technology, Engineering, and Math. STEM students are required to complete:

- Research Design & Methods 1/3 credit
- Honors STEM Capstone 1 credit
- Technology course 1/3 credit
- Engineering 1/3 credit
- Other STEM courses 2 credits
- Optional: related, approved internship 1/3 credit

Credit Distribution Requirements for STEM

STEM	Science	Technology ($\frac{1}{3}$ credit)	Engineering ($\frac{1}{3}$ credit)	Math
*Research Design & Methods	Marine Biology	Mobile App Development BL	Robotics I, II	Decision Theory
*+Honors STEM Capstone	Environmental Science I, II	Creative Coding	Engineering Graphics	+Precalculus
Maker Lab	Epidemiology BL	Audio Engineering	Engineering Applications for Theater	+Statistics
Making for Social Good	+Astronomy	Computer Music I, II	+Introduction to Engineering	+AP Statistics
Intermediate Making: Iteration and Design	+AP Physics C	Sound Design & Programming	+Honors Material Science	+Honors Functions
	+AP Chemistry	Digital Media I		+Calculus
	+AP Biology	Cyber Security Foundations		+AP Calculus AB
	+Honors Molecular Biology	Digital Media II: Inform and Inspire		+AP Calculus BC
	+Anatomy & Physiology	+AP Computer Science Principles		+Hon. Vector Calculus & Linear Algebra
	+Food Science	+AP Computer Science C		
	+Kinesiology and Rehabilitation			
	AP Physics 1			

*Required

+Full year course (1 credit)

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VISUAL & PERFORMING ARTS

We prepare students who are interested in lifelong engagement in the arts by giving them a deep working knowledge of the classics of their chosen art forms, emphasizing the interdisciplinary nature of the arts, and developing a specialized skill set. The program culminates in a capstone course in which the student is expected to produce an advanced body of work. Students will also work closely with an arts advisor who will advise them in their discipline of choice.

Program Goals

- Provide a personalized, challenging, engaging, comprehensive and dynamic learning experience
- Energize student creativity through unique application of artistic and interdisciplinary skill sets
- Expose students to a mixture of the masters of each discipline and contemporary working artists
- Develop a student's abilities for appreciation, understanding and application
- Complement students' education as a whole, while creating a niche for distinguished visual and performing arts students

Concentration Model - The signature program approach allows students to pursue areas of interest and passion, develop specialized skills, and work in applied environments through project-based learning. With the guidance of advisors and the VPA Director, students will create a customized and individualized program of study that reflects identified artistic interests and personal goals.

Credit Requirements for VPA Signature Program - To earn the VPA Signature Program denotation, **students must complete 5 credits of approved courses beyond the 1 credit graduation requirement in the Arts (6 credits in all)**. Bullis arts activities or productions may also be applied towards up to one credit of the total.

Overview

Grade	Courses	Credits
9th	Arts Elective(s)	$\frac{1}{3}$ - 1
10th	Arts Elective(s)	1-2
11th	Arts Elective(s)	1-2
12th	Honors VPA Capstone and Arts Elective(s)	2

Total Credits	6
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*Most students will take two credits in either the sophomore or junior year to fulfill VPA Capstone requirements. All VPA Signature Program students will take the Capstone and one additional arts/approved elective(s) credit during the senior year.

Sample Pathways

Design Your Own Program: Personalized Arts Capstone or Interdisciplinary Experience	Courses	Total Credits (inc grad req)
Core Discipline Arts Courses	Selected from trimester and year-long arts electives	3-4
Additional Electives	Proposed from STEM, HGS, Entrepreneurship or other electives Bullis Arts Activity or Production Credits ($\frac{1}{3}$ each, up to 1 credit total)	1-2
Honors VPA Capstone	Prerequisite: <i>completion of 4 arts/approved elective credits by end of junior year</i>	VPA Capstone

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Total Credits	6
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Digital Media Focus	Courses	Total Credits (inc grad req)
Digital Media Courses	Audio Engineering CAD Design Creative Coding Computer Music I Computer Music II Graphic Design I Graphic Design II Game Design Digital Media I Mobile App Development (BL) Sound Design and Programming	3-4
Additional Electives	Any performing arts, visual arts or other approved electives Bullis Arts Activity or Production Credits ($\frac{1}{3}$ each, up to 1 credit total)	0-1
Honors VPA Capstone	Prerequisite: <i>completion of 4 arts/approved elective credits by end of junior year</i>	VPA Capstone

Total Credits	6
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Performing Arts Focus	Courses	Total Credits (inc grad req)
Performance Ensemble Courses (Dance, Music, Theatre Perf and Technical Theatre)	Intro to Dance Dance II Dance Ensemble Adv. Dance Ensemble Intro to Theatrical Design and Production Theatrical Design and Production II Advanced Theatrical Design	3-5

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	Engineering Applications for Theatre Intro to Acting Acting II Theatre Workshop Chamber Singers Concert Choir Concert Band Concert Band/Jazz Ensemble Concert Band/Jazz Ensemble/Jazz Workshop String Ensemble	
Additional Electives	Music Theory Audio Engineering Computer Music I Computer Music II Sound Design and Programming Any visual art or other approved electives Bullis Arts Activity or Production Credits ($\frac{1}{3}$ each, up to 1 credit total)	1
Honors VPA Capstone	Prerequisite: <i>completion of 4 arts/approved elective credits by end of junior year</i>	1

Total Credits	6
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Visual Arts Focus	Courses	Total Credits (inc grad req)
Core Visual Art Series	Studio Art Advanced Studio Art Advanced Studio Art II AP Studio Art	4
Additional Electives	Art History: Modernism and After* Sculpture Drawing Painting Drawing and Painting II Ceramics I	1

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	Ceramics II Graphic Design I Graphic Design II Darkroom Photography I Darkroom Photography II Any performing arts or other approved electives Bullis Arts Activity Credits ($\frac{1}{3}$ each, up to 1 credit total)	
Honors VPA Capstone	Prerequisite: <i>completion of 4 arts/approved elective credits by end of junior year</i>	VPA Capstone

Total Credits	6
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ENGLISH

Graduates apply effective reading, writing, speaking, and listening skills across a variety of media as thoughtful participants in a global community. The major skill components are Reading, Writing, Listening, and Speaking.

English Honors and Advanced Placement Requirements

Text selection, reading pace and level of analysis distinguish honors and AP courses from non-honors. Overall, the honors and AP level requires a sophisticated level of writing and textual analysis, as well as the ability to engage with challenging supplemental texts. Honors courses assume strong reading comprehension across genre. AP and Honors placement requires a fall and winter trimester average of an 88 and department approval. Students must maintain an average of unweighted 83 in order to remain in an honors and AP class. New and transfer students must complete an English Placement Exam. We do not accept writing samples that are not produced during an on-campus testing session.

CORE COURSES

Freshmen

English I: Universal Voices

In English I, students explore archetypes in both western and global literature in order to identify moments of cross-cultural experience. Through the study of mythology, including Homer's *Odyssey*, and texts such as *Purple Hibiscus* and *Romeo and Juliet*, students analyze characters' quests for identity and meaning in the larger world. Students consider such questions as: How does literature reflect universal experiences? How do literary forms, devices, and structures help authors impart meaning in stories and aid our understanding? How do elements within and beyond our control shape personal identity? Throughout the course, students develop active reading and analytical writing skills while deepening their understanding of narrative structure, figurative language, and symbolism. On average, students in English I will be assigned 15 to 20 pages of reading and annotation per night or a short writing assignment, such as focus questions or essay components. Typically, students should expect approximately 25 to 35 minutes of homework per night. Credit: 1

Honors English I: Universal Voices

Prerequisites: 88 in English 8 and departmental approval.

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Sophomores

English II: Individual and Society

In English II, students develop their analytical skills both by executing close readings of passages and by drawing connections between the world in which they live and texts such as *The Strange Case of Dr. Jekyll and Mr. Hyde*, *Persepolis*, *Brave New World*, *Much Ado About Nothing*, and *Extremely Loud and Incredibly Close*. In addition to these core texts, students explore poetry, short stories, nonfiction, drama, film and/or other short novels. Students will consider such questions as: How does literature explore the complex conversation between the self and society? How do individuals respond to feeling both a part of, and apart from, a community? How can individuals act as agents of change to influence their communities? The course continues to focus on writing strategies, including the ability to develop and sustain longer and more complex arguments. Throughout the year, students hone their mastery of vocabulary, grammar and literary devices. On average, students in English II will be assigned 15 to 20 pages of reading and annotation per night or a short writing assignment, such as focus questions or essay components. Typically, students should expect approximately 30 to 40 minutes of homework per night. Credit: 1

Honors English II: Individual and Society

Prerequisites: 88 in English I and departmental approval or 83 in Honors English I

Juniors

English III: American Visions

Students in English III turn their focus to the diverse voices that construct and continually redefine American literature. The course texts provide students with an opportunity to analyze such concepts as implied social hierarchies and rebellion against traditional and political structures. Texts have included early Puritan essays and poetry, the American Transcendentalists, *The Adventures of Huckleberry Finn*, *The Great Gatsby*, and *Invisible Man*. Students will consider such questions as: Where, why, and how do we read the visions of America that continue to shape our lives today? How do the founding ideologies of the United States influence contemporary literature? What is the role of writers in changing and/or conserving American values and ideals?

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Throughout the year, students work toward fluency, clarity, and critical thinking in both written and verbal expression. On average, students in English III will be assigned 15 to 25 pages of reading and annotation per night or a short writing assignment, such as focus questions or written analysis. Typically, students should expect approximately 35 to 40 minutes of homework per night. Credit: 1

AP Language and Composition

Prerequisites: 88 in English II and departmental approval or 83 in Honors English II

AP Language and Composition fulfills the junior year English requirement and will prepare you to take the Advanced Placement Language and Composition exam. Students will consider such questions as: Where, why, and how do we read the visions of America that continue to shape our lives today? How do the founding ideologies of the United States influence contemporary literature? What is the role of writers in changing and/or conserving American values and ideals? You will examine the literary heritage of the United States through a combination of primary documents, interpretive secondary sources, and representative works of American literature. Close, critical analysis, responsible oral discourse, and expository writing are emphasized. Students may expect a range of 45-60 minutes of homework for this course. Credit: 1

Advanced American Humanities Seminar: AP Language and Composition & AP United States History

Prerequisites: 88 in English II or Global History and departmental approval OR 83 in Honors English II or AP World History

This interdisciplinary course combines AP Language and Composition and AP United States History. The course fulfills both the junior English and Social Studies requirements, and will prepare students for both the Advanced Placement Exam in United States History and in Language and Composition. In a team-taught double period, students examine the social, economic, political, and cultural heritage of the United States through a combination of primary documents, interpretive secondary sources, and representative works of American literature, art and music. Close, critical analysis, responsible oral discourse, and expository writing are emphasized. Though the topics in this course are by design “American,” students train to become “Global” thinkers. Students may expect a range of 60-90 minutes of homework for this double block course. Credits: 2

Seniors

English IV: Constructions of Identity

This seminar course provides students with a variety of critical approaches to units on race, class and gender. Students explore relevant texts from various genres including poetry, short stories, nonfiction, drama, film and novels. Texts have included *The Stranger*, *Hamlet*, *Wide Sargasso Sea*, *Heart of Darkness*, and *The Brief, Wondrous Life of Oscar Wao*. Students will consider narrative structure and how it intersects with socio-historical contexts in ways that connect the personal and the literary critical. The class will consider such questions as: How does literature represent and explore otherness? How does the human capacity to imagine a perspective other than one's own offer the possibility of overcoming the gulf between others and ourselves? How do language, form, and narrative structure deepen our experience of literature and further create meaning? Students are also challenged to hone their writing in a variety of modes that offer greater creative and research-based opportunities to develop their individual written voices. On average, students in English IV will be assigned 15 to 25 pages of reading and annotation per night or a short writing assignment, such as focus questions or written analysis. Typically, students should expect approximately 40 to 45 minutes of homework per night. Credit: 1

AP Literature and Composition

Prerequisites: 88 in English III and departmental approval or 83 in AP Language and Composition or AHS

AP Literature and Composition focuses on the topic of Constructions of Identity and provides students with a variety of critical approaches to units on race, class and gender. Students explore relevant texts from various genres, including poetry, short stories, nonfiction, drama, film and novels, and literary periods ranging from the Elizabethan age through the present day. Texts will include (but are not limited to): *The Stranger*, *Hamlet*, *Wide Sargasso Sea*, *Heart of Darkness*, and *The Brief, Wondrous Life of Oscar Wao*, along with numerous companion pieces. Students will consider narrative structure and how it intersects with sociohistorical contexts in ways that connect the personal and the literary critical. The class will consider such questions as: How does literature represent and explore otherness? How does the human capacity to imagine a perspective other than one's own offer the possibility of overcoming the gulf between others and ourselves? How do language, form, and narrative structure deepen

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our experience of literature and further create meaning? Students are also challenged to hone their writing in a variety of modes that offer greater creative and research-based opportunities to develop their individual written voices. On average, students in AP Literature and Composition will be assigned 20 to 25 pages of reading and annotation per night or a short writing assignment, such as focus questions or written analysis. Typically, students should expect approximately 45-60 minutes of homework per night. Credit: 1

Online AP Literature and Composition [Not offered 2019-20 School Year]

Prerequisites: 88 in English III and departmental approval or 83 in Honors English III or AHS

Students will complete the coursework described above. Students should be prepared to spend 8-10 hours working online each week. Credit: 1

Elective Courses

Expository Writing [Not offered 2019-20 School Year]

Prerequisite: Open to transfer junior and senior students at department's recommendation

The year-long blended course will expose students to various forms of writing. While expository writing is central to all three trimesters, students will also practice descriptive, narrative, and persuasive forms. Most week-long unit assignments follow a pattern. Students will be introduced to an assignment, summarize it, research and discuss the assignment with classmates virtually, and then compose their own draft. After receiving feedback from the instructor and fellow classmates, students have a chance to revise the work at the end of the trimester. Students in this course can expect to have approximately 3 hours of homework per week outside of face-to-face and virtual class time. Credit:1

Journalism I: Newswriting and Reporting BL

Prerequisite: Open to sophomores, juniors, and seniors

This single trimester course focuses on the fundamental skills necessary for journalistic writing. After an introduction to the first amendment and journalism ethics, students will determine news elements and consider audience as they explore methods to create stories of their own. Through interactive exercises and potentially published

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submissions to the print and online version of *The Bulldog*; students will then learn the structure and style of a news story and will hone their interviewing skills. Towards the conclusion of the trimester, students will also be introduced to the forms and styles of opinion writing and feature writing. Throughout, students will also be expected to keep apprised of current events. Journalism I will be given unit assignments on a topic of the week. Outside of virtual and face-to-face time, students can expect two hours of homework per week. Credit: 1/3

Journalism II: Editorial and Feature Writing - BL

Prerequisites: Open to sophomores, juniors, and seniors. Completion of Journalism I.

This single trimester course is a continuation of the Journalism I course. Students will begin by focusing on more specific news writing such as sports reporting and speech stories and will then hone their skills as editorial and feature writers, specifically crafting the profile and the column. Students will also engage further in media studies and will be introduced to the principles of online journalism by employing a multimedia storytelling option. Students will also be expected to submit at least four contributions to either the print or online version of *The Bulldog*. Students in Journalism II will be given a different type of news or feature article assignment per week. While face-to-face and virtual time is used for analyzing and discussing models, students will typically have three hours of homework per week consisting of researching, writing, and editing their articles. Credit: 1/3

Journalism III: Editorial and Feature Writing - BL

Prerequisites: Open to sophomores, juniors, and seniors. Completion of Journalism I.

This single trimester also serves as a follow up to the Journalism I course and runs parallel with the Journalism II course, for those interested in taking three journalism electives throughout the year. Students will begin by focusing on more specific news writing such as political and meeting coverage and will then hone their skills as editorial and feature writers, specifically crafting the human interest story and the satirical piece. Students will also engage further in media studies and will be introduced to the principles of online journalism by employing a multimedia storytelling option. Students will also be expected to keep apprised of current events and to submit at least four contributions to either the print or online version of *The Bulldog*. Students in Journalism III will be given a different type of news or feature article assignment per week. While

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face-to-face and virtual time is used for analyzing and discussing models, students will typically have three hours of homework per week consisting of researching, writing, and editing their articles. Credit: 1/3

Advanced Journalism: Online and Print Production

Prerequisites: Open to juniors and seniors. Completion of Journalism I and II and departmental approval.

This yearlong course is intended for those students interested in attaining leadership positions in campus media. The course will cover all the skills required to produce five print publications and maintain and develop the online Bulldog. Student leaders will be editing and managing a team of writers, applying the principles of layout and media design, studying further the importance of journalism in a democracy and writing articles on a weekly basis. On average, homework for students in Advanced Journalism will consist of editing their section of the thebullisbulldog.com, planning a pitch session, or researching and writing articles of their own. Typically, this will take three hours per week outside of virtual and face to face class time. Credit: 1

Public Speaking

Prerequisite: Open to sophomores, juniors, and seniors.

In this course, students will be asked to deliver a variety of speeches, including the following types: informational, persuasive and personal. Students will study successful speeches from the past and use video analysis to enhance their work. Students will learn about the speech-writing process and will spend a significant amount of time addressing the importance of composure and purpose before an audience. Students will also learn tools and techniques to engage their audience. A major component of the course will be peer feedback in a workshop atmosphere. Students in Public Speaking will typically be assigned homework consisting of outline construction, speech preparation, and speech practice. On average, students should expect approximately 30 minutes of homework per night. Credit: 1/3

English Intensive

Prerequisite: Open to international students

In the English Intensive course, students expand their knowledge of both the English language and American culture. Offered for International Students in their first year at Bullis, English Intensive serves to support students in their transition into the American

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classroom. Students complete a variety of language tasks throughout the year—including building academic English vocabulary, refining grammatical control, organizing and clearly expressing ideas in written essays, and defending viewpoints in class discussions—in a structured environment. These tasks are designed to practice and build the skills needed to communicate in English in all other disciplines. Students are also encouraged to share observations and insights into life in the United States. These discussions are designed to help them navigate the social and cultural differences they will face as they acclimate to new surroundings. On average, students in English Intensive will receive short reading or writing assignments for homework, such as vocabulary preparation, discussion questions, or essay components. Typically, students should expect approximately 25 to 35 minutes of homework per night. Credit: 1

ENTREPRENEURSHIP

Leadership In Action

Prerequisite: Open to sophomores and juniors. Open to seniors only in first trimester.

Leadership in Action will teach students to build and grow teams, identify leadership opportunities, and to provide leadership at Bullis. The course will follow case studies on leadership, teams, ethics and will culminate in a leadership-in-action opportunity for students. 20-30 Minutes of homework a night can be expected. Credit 1/3

Business Model Design

Prerequisite: Open to sophomores, juniors, and seniors. Recommended for juniors.

This trimester course introduces students to the concepts of customer development, business model canvas, MIT's 24 steps and iteration and design concepts. The students learn to deconstruct existing business models and to create their own business models. Students will use analytical thought and analysis to determine the viability of different business models based on the methodology and concepts taught in class. On average, 30 minutes of homework will be assigned per night. This course is a prerequisite for the Entrepreneurship Capstone Lab. Credit: 1/3

Entrepreneurial Finance

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Prerequisites: Open to sophomores, juniors, and seniors. Completion of or concurrent enrollment in Algebra II.

Students will be asked to read balance sheets, evaluate case studies, analyze market and economic trends, and employ microeconomics. In addition to developing and applying their evaluative skills, students will survey business history and contemporary examples of entrepreneurship. Students practice blending creative approaches with analytical insight through project-based learning as the class prepares students for the independent application aspects of Entrepreneurship Lab. On average, 30 minutes of homework will be assigned per night. Credit: $\frac{1}{3}$

International Trade & Business

Prerequisite: Open to sophomores, juniors, and seniors

An international trade and business course will enable students to apply methods and concepts learned in previous entrepreneurship courses to build comprehensive, competitive business models. This course will emphasize international trade agreements such as WTO signed accords, NAFTA, CAFTA and comparative agreements between the Mercosur countries and Columbian, Chilean and Peruvian block. On average, 30 minutes of homework will be assigned per night. Credit: 1/3

Personal Finance

Prerequisite: Open to sophomores, juniors, and seniors

This course will teach students on how to make practical financial decisions throughout their lives. Each student will play the “the game of life” starting with college choice and ending with retirement and estate planning. Throughout their lives, they will learn to how to budget, balance their checkbook, complete tax forms, save, invest, and use credit. They will also learn the fundamentals about purchasing a home, a car, and various types of insurance plans. This course will provide students with a solid foundation for making sound financial decisions throughout their lives. On average, 30 minutes of homework will be assigned per night.

ONLINE Personal Finance (Offered during the summer and 2019-20 school year)

Prerequisites: Open to sophomores, juniors, and seniors

This course will teach students how to make practical financial decisions throughout their lives. Each student will play the “the game of life” starting with the development of financial goals. This will include saving for college and ending with retirement and estate

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planning. Throughout their lives, they will learn to how to budget, balance their checkbook, complete tax forms, save, invest, and use credit. They will also learn the fundamentals about purchasing a home, a car, and various types of insurance plans. This course will provide students with a solid foundation for making sound financial decisions throughout their lives. Students should expect to spend 4-6 hours working online each week. Credit: 1/3

Advanced Placement Microeconomics

Prerequisites: Open to juniors and seniors. Completion of or concurrent enrollment in Precalculus or departmental approval.

AP Microeconomics is an introductory course that applies the principles of economics to individual economic decision makers such as the household and the firm. Particular attention is paid to demand and supply analysis and the evaluating the efficiency of microeconomic outcomes such as price and quantity. Students evaluate different market structures, such as competition and monopoly, in terms of society's welfare. They learn how governments play a role in achieving efficiency and equity in the economy. Students will use data and graphs to analyze and explain economic concepts. On average, students can expect to have 45 minutes of homework per night. Credit: 1

Advanced Placement Macroeconomics

Prerequisites: Open to juniors and seniors. Completion of or concurrent enrollment in Precalculus or departmental approval.

AP Macroeconomics is an introductory course that applies the principles of economics to the economy on an aggregate level. The course focuses on the interaction and behavior of the consumer sector, the government, the business sector, and the rest of the world. Students will learn the roles these sectors play in attaining desirable economic outcomes. Particular attention is paid towards performance measures such as Gross Domestic Product, Unemployment, and Inflation. Students will learn how these measures are constructed and apply them to evaluate the economic well-being of an economy. Students will use data and graphs to analyze and explain macroeconomic concepts. On average, students can expect to have 45 minutes of homework per night. Credit: 1

Honors Entrepreneurship Capstone

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Prerequisites: Open to seniors. Completion of Business Model Design and Entrepreneurial Finance. Recommendation from Business Model Design teacher and an interview with the Capstone instructor.

This course provides the tools and structure for students to plan, develop, and launch a small business. The courses will alternate case studies, field trips, and guest speakers with the time to pilot students' attempts to develop their own projects. Students will spend the majority of their time individually or in teams to develop a viable business plan. Students will enter their plans in an entrepreneurial challenge competition. Seed money will be available to the winning business plan. On average, 45 minutes of homework will be assigned per night. Credit: 1

FOREIGN LANGUAGE

The desired overall goals and outcomes of the Bullis foreign language program are for students to: (a) function in the target language, (b) understand and respect the cultures that use the target language, and (c) form interdisciplinary and personal connections through the study of the target language and culture.

Chinese I

In this course, students will build and develop basic comprehension in listening tasks, provided with both controlled and authentic audio materials. They will build a more extensive vocabulary in daily life situations as well as develop reading comprehension in short passages. Homework typically includes reviewing and learning vocabulary, doing writing, speaking, or listening exercises, or doing writing practice. After successful completion of this course, students will be able to ask and answer questions about themselves and their surroundings, write sentences and simple paragraphs, and grasp main ideas from authentic texts. Credit: 1

Chinese II

Prerequisite: 70 or above in Chinese I or departmental approval.

At this level students will increase fluency in both speaking and reading by means of continued vocabulary expansion, listening, reading, grammar studies and oral interactions. They will develop the ability to make inferences in context. They will have writing tasks in everyday situations using more connecting words, which will allow for

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more complexity in expression. Homework typically includes reviewing and learning vocabulary, doing writing, speaking, or listening exercises, or pre-reading materials for later discussion in class. Credit: 1

Chinese III

Prerequisite: 70 or above in Chinese II or departmental approval.

Chinese III will be more intensive in developing skills in the language including communication in writing and speaking. Students will learn to express themselves in greater depth and detail. Student textbooks will be supplemented with readings from Chinese language and cultural magazines, and movie clips. This course will be taught mostly in Chinese and students will be expected to speak in the target language. Topics covered include travel, shopping, etc. Homework typically includes reviewing and learning vocabulary, doing writing, speaking, or listening exercises, or reading or watching materials in advance of the next lesson. Credit: 1

Chinese IV

Prerequisite: 70 or above in Chinese III or departmental approval.

Chinese IV will be more intensive in developing skills in the language including communication in writing and speaking. Students will learn to express themselves in greater depth and detail. Student textbooks will be supplemented with readings from Chinese language magazines and movie clips that highlight cultural similarities and differences between the US and China. This course will be taught almost exclusively in Chinese and students will be expected to speak in the target language. Homework typically includes reviewing and learning vocabulary, viewing authentic Chinese materials in a variety of modes, or doing extended writing. Credit: 1

French I

The French I course introduces students to the language, history, and culture of France and the Francophone world. The primary objective of the course is to familiarize students with the sounds and elementary structures of the language. Basic sentences and everyday vocabulary are introduced to facilitate both oral and written communication. Students begin to communicate through modeling examples in the target language. Homework typically includes textbook and workbook exercises and review of vocabulary. After successful completion of this course, students will be able to ask and answer questions about themselves and their surroundings, write sentences

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and simple paragraphs, and grasp main ideas from authentic texts. Credit: 1

French II

Prerequisite: 70 or above in French I or departmental approval.

The French II course continues to strengthen basic skills while introducing more complex grammatical structures and expanding students' vocabulary. Students at this level begin to communicate independently, and their comprehension—both listening and reading—is greatly increased. Homework typically includes reviewing grammar and vocabulary, and doing exercises to reinforce topics being practiced in class. After successful completion of this course, students will be able to sustain short conversations, write short stories with multiple paragraphs, and read simple texts with increased understanding of detail. Credit: 1

French III

Prerequisite: 70 or above in French II or departmental approval.

Level III expands students' communication skills to intermediate proficiency in oral and written areas. Students review vocabulary and grammar from prior levels before moving into more nuanced vocabulary and sophisticated grammar structures. Students use the language to express themselves in writing and speaking in common daily situations. Students also apply and develop their skills through creative projects and collaborative activities. Homework typically includes textbook and workbook exercises, short reading or listening exercises in French, and regular review of older material. Credit: 1

Honors French III

Prerequisite: 88 or above in French II or departmental approval.

Students in Level III Honors begin to study the language from a more academic approach. By incorporating integrated skills into daily activities, students learn to place equal emphasis on the reading, listening, written, and spoken aspects of the language. Students in the Honors course are expected to do some independent reading and writing and to develop an understanding of complex grammatical structures. Homework typically includes reading, grammar, and review exercises. Credit: 1

French IV

Prerequisite: 70 or above in French III or Honors French III or departmental

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approval.

This course will expose students to French-speaking regions in an immersive, culturally-focused class. Taught exclusively in French, this course focuses on building advanced proficiency in French so that students have an academic overview of the role that French plays in the literatures, cultures, and politics of countries on all five continents where it is present. Interaction with the local French-speaking community and the global community via technology will reinforce practical application of speaking skills gained in class. Homework typically includes reading, grammar, and review exercises. Credit: 1

Honors French IV

Prerequisite: Unweighted 88 or above in Honors French III or departmental approval.

At this level, students will improve all linguistic skills with a focus on using French as a tool for receiving and conveying information with a global perspective. Taught exclusively in French, this course covers a variety of subjects using integrated skills. Students will learn to understand and communicate without always knowing an exact word. Through discussions and compositions, students will analyze authentic sources of French and increase the complexity of their expression. Homework typically includes reading and listening exercises in French designed to prepare students for the next lesson, and reviewing previously learned material. This course is necessary for successful transition to work at the AP level and is consistent with national expectations for advanced-level language study. Credit: 1

Advanced Placement French

Prerequisite: Unweighted 88 or above in Honors French IV or departmental approval.

The Advanced Placement course is designed to prepare students for the College Entrance Board's Advanced Placement French Language and Culture examination. Taught exclusively in French, this course stresses mastery of complex grammatical structures and integration of listening, speaking, reading, and writing skills. Authentic materials are used to examine register and dialect as well as diversity of perspectives in the Francophone world. Listening comprehension and oral expression are emphasized through discussions and presentations in the target language. Analysis of texts as well as complexity and accuracy of expression are emphasized through the writing of emails, persuasive essays, and creative compositions. Homework typically includes reading and listening exercises in French designed to prepare students for the next lesson, and

reviewing previously learned material. All students are strongly encouraged to take the AP examination. Credit: 1

Latin I

Latin I introduces students to the language, history and culture of Ancient Rome. Students practice reading, writing, and speaking Latin; master a basic Latin vocabulary; and lay a foundation of Latin grammar for future study. Throughout the course, students will be encouraged to transfer their newly acquired knowledge and skills to linguistic and cultural material they encounter in other classes. Cultural units include: Roman family life, houses, dress, names, slaves, travel, the city of Rome, the history of Rome from the kingship to the end of the republic, Latin expressions in English and classical mythology. Homework typically includes textbook and workbook exercises and reading passages of Latin. Credit: 1

Latin II

Prerequisite: 70 or above in Latin I or departmental approval.

Students in Latin II strengthen their linguistic skills, while tackling more complicated grammatical structures. Students will translate passages of graded difficulty, compose in Latin and continue to increase their Latin vocabulary. By the end of the course, students will be ready to study original works in unadapted form. The emphasis on the influence of Latin on English continues with the study of more complicated derivatives, prefixes and suffixes. Students will expand their exposure to the language, history, mythology, and culture of the Latin-speaking world from the fall of the Roman Empire until the Enlightenment. Homework typically includes translating Latin into English, doing grammar exercises to reinforce material learned in class, and reviewing older grammar and vocabulary. Credit: 1

Latin III

Prerequisite: 70 or above in Latin II or departmental approval.

Latin III provides a complete review of Latin grammar and develops proficiency in translating authentic Latin texts. Students take responsibility for their own learning as they practice translating and analyzing texts on their own. The course covers a selection of texts from the late republic and early empire, which may include the works of Caesar, Cicero, Augustus, Pliny, Catullus, Ovid or Sallust. Students will come to appreciate the esthetic and rhetorical features of these texts and criticize them as historical sources.

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Advanced composition exercises reinforce and refine grammatical skills. Homework typically includes reading and translating extended passages of Latin, doing grammar exercises to reinforce concepts practiced in class, and occasional translations into Latin. By the end of this course, students will be able to read and understand authentic prose texts of moderate difficulty and develop a sense of the history of classical Latin literature. Credit: 1

Honors Latin III

Prerequisite: 88 or above in Latin II or departmental approval.

Honors Latin III provides a complete review of Latin grammar and develops proficiency in translating authentic Latin texts. The course covers a larger selection of texts from the late republic and early empire than Latin II, and students will undertake more independent work. Students will come to appreciate the esthetic and rhetorical features of these texts and criticize them as historical sources. Advanced composition exercises reinforce and refine grammatical skills. Homework typically includes reading and preparing extended passages of Latin, and review of previously learned material. By the end of this course, students will be able to read and understand authentic prose texts of moderate difficulty and develop a sense of the history of classical Latin literature. The course also prepares students to take Advanced Placement Latin. Credit: 1

Latin IV

Prerequisite: 70 or above in Latin III or departmental approval.

This course offers advanced practice in the translation and analysis of classical Latin texts. Students will read extended selections from Vergil's Aeneid or selections from Horace, Catullus, Cicero, Ovid, Livy, Sallust or Pliny. They will master a variety of meters and rhetorical devices used by these authors. Homework typically includes reading and preparing passages of Latin poetry, looking up and reviewing vocabulary, and reviewing figures of speech. By the end of the course, they will be able to analyze passages of the authors in terms of the major themes and symbols of the works, historical considerations and rhetorical effect. Credit: 1

Latin V

Prerequisite: 70 or above in Latin IV or departmental approval.

This course offers further advanced practice in translation, composition, and analysis of

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Latin texts. Students will read extended selections from a variety of authors, potentially including Vergil, Caesar, Ovid, Livy, Pliny, or others. Students will be expected to work more independently and to assimilate a greater amount of material than in previous years. Advanced composition exercises will reinforce vocabulary, idiom, and meter. Homework typically includes extensive reading of Latin, reading scholarly articles, or independent composition in Latin. By the end of the course, students will be better able to read and analyze a variety of authors and styles from the classical and post-classical world. Credit: 1

Advanced Placement Latin

Prerequisite: Unweighted 88 or above in Honors Latin III or Latin IV or departmental approval.

The Advanced Placement course prepares students for the College Entrance Examination Board's Advanced Placement Latin Examination. Students will read selections from Caesar's *De Bello Gallico* and Vergil's *Aeneid* in Latin and other selections in translation. They will master dactylic hexameter and the use of tropes in golden-age literature. By the end of the course, they will be able to analyze passages of Latin in terms of the major themes and symbols, historical considerations, and rhetorical effect. Homework typically includes preparing ~20 lines of Latin daily, reviewing previously read material, and occasionally reading scholarly articles designed to enhance understanding of the Latin. All students are strongly encouraged to take the AP examination. Credit: 1

Honors Latin V

Prerequisite: Unweighted 70 or above in AP Latin.

This course offers advanced students an opportunity to read and analyze classical and post-classical Latin texts as further opportunities to develop fluency and mastery of Latin. Students will read extended selections from Vergil's *Aeneid* or selections from various authors that could include Horace, Catullus, Cicero, Ovid, Livy, Sallust, or Pliny, among others. Post-classical authors could include Augustine, Bede, St. Jerome, or Milton, among others. Students will be expected to work independently to read and assimilate a greater amount of material and then to lead discussions with their peers demonstrating how the works fit into the larger literary corpus of Western thought. They will read secondary sources and engage in comparative analysis of various genres and/or various styles within a single genre. Students will write a paper of considerable length on a topic chosen in consultation with the instructor. Homework can include

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reading extensive passages of Latin, translating into Latin, and reading scholarly articles on a variety of topics. By the end of the course, students will be able to read and analyze a variety of texts from different genres and authors and discuss their works in terms of themes and symbols, historical considerations, and rhetorical effect. Credit: 1

Spanish I

The first-year course introduces students to the language, history and culture. The primary objective of the course is to familiarize students with the sounds and elementary structures of the language. Basic sentences and everyday vocabulary are introduced to facilitate both oral and written communication. Students begin to communicate through modeling examples in the target language. Homework typically includes textbook and workbook exercises and review of vocabulary. After successful completion of this course, students will be able to ask and answer questions about themselves and their surroundings, write sentences and simple paragraphs and grasp main ideas from authentic texts. Credit: 1

Spanish II

Prerequisite: 70 or above in Spanish I or departmental approval.

The second-year course continues to strengthen basic skills while introducing more complex grammatical structures and expanding students' vocabulary. Students at this level begin to communicate independently, and their comprehension—both listening and reading—is greatly increased. Homework typically includes reviewing grammar and vocabulary, and doing exercises to reinforce topics being practiced in class. After successful completion of this course, students will be able to sustain conversations, write lengthy paragraphs and read authentic texts with increased understanding of detail. Credit: 1

Spanish III

Prerequisite: 70 or above in Spanish II or departmental approval.

Level III expands students' communication skills to moderate proficiency in verbal and written communication skills. Students review vocabulary and grammar of levels I and II before expanding their skills as they improve their proficiency. Students learn to use their skills to express themselves verbally in any given situation. The students also have the ability to develop their skills through creative means such as projects. Homework typically includes textbook and workbook exercises, short reading or listening exercises

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in Spanish, and regular review of older material. Credit: 1

Honors Spanish III

Prerequisite: 88 or above in Spanish II or departmental approval.

Students in Level III Honors begin to study the language from a more academic approach. By incorporating integrated skills into daily activities the students learn to place equal emphasis on the verbal, reading, listening, and written aspects of the language. Students in the Honors course are expected to do more independent reading and writing and to develop an understanding of complex grammatical structures. Homework typically includes reading, grammar, and review exercises. Credit: 1

Spanish IV

Prerequisite: 70 or above in Spanish III or Honors Spanish III or departmental approval.

Level IV reviews and reinforces the skills learned in Level III and moves students toward intermediate-high proficiency in speaking, listening, writing and reading ability. Through surveys of Hispanic groups in the United States as well as Latin America students explore major points of history, culture, and civilization while also discussing some of the contemporary issues of these regions. Students utilize authentic Spanish language resources to reinforce comprehension, and students strengthen their writing and presentational skills through opinion questions, compare and contrast prompts, response essays, and presentations. They also strengthen their oral skills through research and presentations. Homework typically involves short readings and reviewing relevant-topic videos. Credit: 1

Honors Spanish IV

Prerequisite: Unweighted 88 or above in Honors Spanish III or departmental approval.

At this level students will improve all linguistic skills with a focus on using the Spanish language as a tool for receiving and conveying information with a global perspective. This means a variety of subject areas are covered in the language using integrated skills. Students will learn to communicate or try to understand without always knowing an exact word. Through compositions and essays students will analyze and develop an appreciation for the great works of literature and increase the complexity of their original expression. By listening to broadcasts and programs they will become familiar with a

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wide range of dialects and increase their aural comprehension skills. This course is necessary for successful transition for work at the AP level and is consistent with the national expectations for advanced language study before AP. Homework typically includes reading and listening exercises in Spanish designed to prepare students for the next lesson, and reviewing previously learned material. Credit: 1

Spanish V

Prerequisite: 70 or above in Spanish IV or departmental approval.

This course focuses on increasing students' proficiency levels. This course will fine-tune students' ability to interpret reading and listening, speak and write in both a presentational and interpersonal manner. Students will use both authentic resources and novels to explore the culture of Spanish-speaking countries and continue their study of the language. These may include but are not limited to level appropriate readers, telenovelas, music, and newspaper articles. Homework includes listening and reading short topics which will prepare them for class.

Seniors may opt to take this course as a Pass/Fail course. Seniors who wish to take this as a Pass/Fail course must complete the necessary paperwork before the end of September. Once the deadline has passed, students will not be allowed to change their grading preferences. Credit: 1

Advanced Placement Spanish

Prerequisite: Unweighted 88 or above in Honors Level IV or departmental approval.

The Advanced Placement course is designed to prepare students for the College Entrance Examination Board's Advanced Placement Language examination. The course stresses mastery of complex grammatical structures via a coordinated curriculum, which integrates listening, speaking, reading and writing. Authentic materials are used to examine register and dialect. Listening comprehension and oral expression are emphasized through discussions, public speaking and presentations in the target language. Homework typically includes reading and listening exercises in Spanish designed to prepare students for the next lesson, and reviewing previously learned material. All students are strongly encouraged to take the AP examination. Credit: 1

Honors Latin American Studies

Prerequisite: 70 or above in Spanish V or departmental approval.

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Honors Latin American Studies explores pertinent issues regarding the people, culture, and history of Latin America. The course deeply examines topics such as the colonization of Central and South America; the distinctions between terms such as Latino and Hispanic; the history of the Cold War and how Latin America was used (and even abused) by democratic and socialist regimes; and the modern reality of Latin America as each country seeks its own way forward in the 21st century. The course emphasizes extensive reading of primary sources, research, and discussion. Speaking and writing skills are equally valued. Readings come from a textbook as well as contemporary media from Spanish-speaking Latin America. Assessments include presentations, debates, tests, and essays, culminating in a major research project. Homework typically includes reading or engaging with other media in anticipation for class discussions. Apart from some introductory work, this class is conducted entirely in Spanish. Credit: 1

Honors Spanish: Communication and Culture BL

Prerequisite: Unweighted 70 or above in AP Spanish or Spanish V or departmental approval. Open to Seniors only.

With a focus on authentic material from around the world, this proficiency based learning course combines both historical and modern cultural aspects of Spain and Latin America. This blended course – both online and face-to-face – is designed for students who are interested in further developing speaking, reading, writing and listening skills in Spanish. While some study of vocabulary and grammar will be included, students will study this contextually in each unit. Students will cover thematic units which include Spanish art, music, travel, film, online media, and short stories. Class evaluations will be solely Integrated Performance Assessments (IPAs). Participation in class discussion both in class and online is required. Credit: 1

Honors Spanish Literature and Media [Not offered 2019-20]

Prerequisite: Unweighted 70 or above in AP Spanish or departmental approval.

This post-AP Spanish course offers students the opportunity to study Spanish literature and media at an advanced level. Students will further their interpersonal, interpretive, and presentational communication skills as they understand and create connections between literature and media in the Spanish-speaking world. Complex discussions and essays will be required. Students will understand and create connections between literature and media in the Hispanic culture while deepening their proficiency in Spanish. Homework typically includes watching or listening to media, writing summaries, opinion

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pieces, or reflections, and review. Credit: 1

HEALTH

Instruction in Health supports our mission of encouraging excellence through balance for each Bullis student. We use a skills based approach that includes project based learning, media literacy assignments, and collaborative group work to investigate topics related to personal health, health and safety, mental health, and global health. The primary goal of each health course at Bullis is to positively influence the knowledge, attitudes, and behaviors of students in order to promote a healthier lifestyle during adolescence and beyond.

Public Health and Personal Wellness

Public Health and Personal Wellness is a skills-based course that examines a variety of topics that fall within the curricular strands of personal health, mental health, health and safety, and public health. Students will debate, research, discuss and even build models to develop an understanding of mental, physical, and emotional wellness. By the end of the course each student should have a better understanding of what health is and why it matters to each one of us. The knowledge and skills from this course are intended to positively influence critical thinking and adolescent decision making in order to promote a healthier lifestyle now and in the future. This course is a graduation requirement. On average, students can expect 20 minute per night of homework. Credit: $\frac{1}{3}$

Online Public Health and Personal Wellness (Offered during the summer and 2019-20 school year)

This course covers the same amount of material and requires the same expectations as the Public Health and Personal Wellness course; however, it is completed entirely online. This course is open to sophomores, juniors and seniors who are unable to fit the regular health class into their schedule. Rising freshman may take this course online over the summer. Students will not receive an additional study hall to take this course. On average, students can expect 5-6 hours of work per week when taken during the school year and 10-12 hours per week when taken during the 6-week summer course. Credit: 1/3

HUMANITIES AND GLOBAL STUDIES

Public Speaking (Cross-listed with English)

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Prerequisite: Open to sophomores, juniors, and seniors.

In this course, students will be asked to deliver a variety of speeches, including the following types: informational, persuasive and personal. Students will study successful speeches from the past and use video analysis to enhance their work. Students will learn about the speech-writing process and will spend a significant amount of time addressing the importance of composure and purpose before an audience. Students will also learn tools and techniques to engage their audience. A major component of the course will be peer feedback in a workshop atmosphere. Students in Public Speaking will typically be assigned homework consisting of outline construction, speech preparation, and speech practice. On average, students should expect approximately 30 minutes of homework per night. Credit: 1/3

Classical Mythology I

Prerequisite: Open to sophomores, juniors, and seniors.

In this course students will examine ancient attitudes regarding the worship of deities. In addition, we will discuss and debate the role of man, the gods, and fate in ancient mythology and reflect on how those attitudes have evolved over the millennia. Students will write summaries and analyses around themes, topics, and questions found in ancient mythology. This will help students to work toward understanding the universal nature of these stories. Credit: 1/3

Classical Mythology II

Prerequisite: Open to sophomores, juniors, and seniors.

In this course students will examine ancient attitudes towards heroism, war, and man's role in society. Through a close reading of Homer's *Iliad* students will examine ancient attitudes towards war and heroism and analyze modern attitudes towards the same. In addition, students will discuss and debate the role of man, the gods, and fate in ancient mythology and reflect on how those attitudes have evolved over the millennia. Students will write summaries and analyses around themes, topics, and questions found in ancient mythology. This will help students to work toward understanding the universal nature of these stories. Credit: 1/3

Classical Mythology III

Prerequisite: Open to sophomores, juniors, and seniors.

In this course students will examine ancient attitudes regarding heroism. In addition,

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they will discuss and debate the role of man, the gods, and fate in ancient mythology and reflect on how those attitudes have evolved over the millennia. Students will be expected to write summaries and analyses around themes, topics, and questions found in ancient mythology. This will help them to work toward understanding the universal nature of these stories. Credit: 1/3

Contemporary Global Issues: Investigate and Take Action

Prerequisite: Open to sophomores and juniors

This trimester-long elective provides an introduction to modern global issues and challenges. The course builds on the 9th grade Human Geography curriculum, but allows the opportunity for students to investigate modern global issues in greater depth. Students will examine contemporary topics of concern and importance, ranging from human rights, to water, to health, to gender equality and will be given intellectual freedom to research a topic in greater depth. Drawing on curriculum developed by the Asia Society's Center for Global Education and the United Nations Global Issues, students will develop five key skills as they investigate and research the world and formulate possible solutions to modern problems: identify key global issues, investigate the world, recognize perspectives, communicate ideas, and take action. This course seeks to bring to life one key aspect of our mission statement, to develop global citizens, and also to provide an entry point to the Humanities and Global Studies Capstone. Credit: 1/3

Honors Humanities and Global Studies Capstone

Prerequisites: Open to seniors. Completion of American Humanities Seminar OR Honors English III and AP US History for Class of 2017 only. Completion of Contemporary Global Issues for all others.

The capstone class is the culminating experience for students participating in the Humanities and Global Studies Signature program. Seniors work together online as well as in person during this yearlong class to independently investigate a project idea, which they design, develop and implement. Although topics may vary widely, this course provides the necessary structure and guidance for students' work. Students will employ previously acquired research and analytical skills to see a project through from the beginning proposal to the final presentation and defense delivered to a panel comprised of teachers, administrators, and mentors from a chosen field of interest. Students are encouraged to identify meaningful outcomes, which can be implemented to make a meaningful difference in their community and society in general. On average,

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students will be assigned 20-30 minutes two to three times per week. Credit: 1

MATHEMATICS

Through research, problem solving, and current technologies, Bullis mathematics students in the classroom and in their daily homework will seek and discern patterns in mathematical ideas; they will also apply theoretical concepts to other scientific disciplines and learn to communicate their solutions effectively. Math classes assign homework daily following the time expectations listed in the handbook. Homework assignments consist of problem solving and review handouts, textbook problems, technology explorations, corrections and reflections for assessments, watching instructional videos, and reading new material.

Algebra I

This course is designed to develop students' algebraic thinking through the introduction of algebraic concepts and skills, the use of technology, the discussion of mathematical ideas and the analysis of problems. Areas of study include real numbers, algebraic expressions, functions and relations, linear functions, linear inequalities, polynomials, systems, quadratic functions, statistics and data analysis. There is also an emphasis on linking algebraic and geometric representations when appropriate. Credit: 1

Geometry

Prerequisite: Completion of Algebra I

This course presents an integration of plane, solid and coordinate geometry, using both inductive and deductive modes of reasoning. Geometer's Sketchpad is used as a tool for investigation and proof. Topics include interrelation of points, lines and planes, parallel lines, congruent triangles, quadrilaterals, polygons, similar triangles, circles, right triangle trigonometry, area and volume. Credit: 1

Honors Geometry

Prerequisite: Completion of Algebra I and departmental approval

This course will emphasize a study of geometry accomplished through discovery, understanding, and proof of relationships within a plane and space. The course will make use of definitions and investigations as well as computerized models to facilitate a

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deep understanding of the material. Geometer's Sketchpad will be used extensively throughout the course as a tool for investigation and proof. Topics include logic and methods of reasoning, properties of polygons and circles, similarity, congruence, right triangle trigonometry, area, volume. Credit: 1

ONLINE Geometry (Summer Only).

Prerequisite: Completion of Algebra I

This fully-online course presents an integration of plane, solid and coordinate geometry, using both inductive and deductive modes of reasoning. Geometer's Sketchpad is used as a tool for investigation and proof. Topics include interrelation of points, lines and planes, parallel lines, congruent triangles, quadrilaterals, polygons, similar triangles, circles, right triangle trigonometry, area and volume. Students should expect to spend 4-6 hours working online each week. Credit: 1

Algebra II

Prerequisite: Completion of Geometry or Honors Geometry

This course seeks to improve the level of algebraic sophistication of students by building on concepts introduced in earlier courses. Particular emphasis is placed on the study of functions and their usefulness in modeling data. Computer programs, including Excel, are used extensively both in learning about properties of functions and in using these functions to model data. In addition to linear and quadratic functions, students explore rational, logarithmic, exponential, power, and trigonometric functions. Students will solve algebraic equations associated with functions and their inverses, transform base functions, model data with functions, and use models to make decisions. Credit: 1

Honors Algebra II

Prerequisite: Completion of Geometry or Honors Geometry and departmental approval.

This course continues the study of algebra, emphasizing the discovery and exploration of families of functions. Once a familiarity with individual functions is established, these various functions are utilized in finding models for real data. Functions investigated include linear, absolute value, polynomial, piecewise, exponential, logarithmic, power and trigonometric. Other topics addressed include algebraic and graphical solutions of equations and inequalities in one and two variables, operations with rational expressions, and complex numbers. The course also makes use of the TI-83/84

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calculator to facilitate understanding and discovery of many of the topics covered.
Credit: 1

Advanced Algebra with Trigonometry

Prerequisite: Completion of Algebra II

This course will continue to deepen the study of algebra and its applications while also solidifying algebra skills. The course will introduce topics that allow students to improve connections with previously learned material. This course will also enhance the use of technology and calculator skills necessary to experience success in the mathematical world. Topics studied include: linear functions, quadratic and exponential modeling, trigonometry, sequences and series, probability, basic statistical methods. Credit: 1

Precalculus with Data Analysis

Prerequisite: Completion of Algebra II and departmental approval

This course is designed to give students a thorough background in functions and trigonometry while also introducing basic methods of statistical inquiry. The course endeavors to link functions to data as a means of understanding their characteristics and transformations. The course makes extensive use of the graphing calculator to facilitate understanding and discovery of the concepts. Topics studied include linear and quadratic functions, polynomial functions, exponential and logarithmic functions, descriptive statistics, curve fitting and models, trigonometric functions, trigonometric equations and identities, triangle trigonometry, sequences and series, limits, and continuity.. Credit: 1

Honors Functions

Prerequisite: Completion of Algebra II or Honors Algebra II and departmental approval

This accelerated course is required for admission to Advanced Placement Calculus. The content of the course includes linear and quadratic functions, polynomial functions, rational functions, exponential and logarithmic functions, trigonometric functions, trigonometric equations and identities, triangle trigonometry, sequences and series and makes use of the TI- 83/84 calculator as well as computer programs to facilitate understanding and discovery of many of the topics covered such as local and global behaviors. The concept of limits is woven throughout the course. Credit: 1

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Calculus

Prerequisite: Completion of Honors Functions or Precalculus and departmental approval

This course offers a study of functions with applications and an introduction to differential and integral calculus. Precalculus topics such as mathematical modeling with elementary functions, rates of change, and logarithms and exponential functions, are reviewed and deepened with the understanding of calculus. Topics include graphical interpretations of the derivative, numerical approximation of the derivative, differentiation, optimization, anti-differentiation, initial value problems, and the Fundamental Theorem of Calculus. Emphasis is placed on intuitive understanding of concepts and on mechanical manipulation. Credit: 1

Advanced Placement Calculus (AB)

Prerequisite: Completion of Honors Functions or equivalent and departmental approval

This rigorous course is presented at the college level and is designed to successfully prepare the student to take the Advanced Placement examination. The study of calculus continues with the derivative applied to velocity and acceleration problems and to related rates problems, antiderivative procedures, basic differential equations, the definite integral, the integral applied to area and volume problems, the calculus of the trigonometric, logarithmic, and exponential functions. Credit: 1

Online Advanced Placement Calculus (AB)

Prerequisite: Completion of Honors Functions or equivalent and departmental approval. May be taught by an adjunct teacher.

This fully online, yearlong course is presented at the college level and is designed to successfully prepare the student to take the Advanced Placement examination. The study of calculus continues with the derivative applied to velocity and acceleration problems and to related rates problems, anti-derivative procedures, basic differential equations, the definite integral, the integral applied to area and volume problems, the calculus of the trigonometric, logarithmic, and exponential functions. Students should plan to spend 8-10 hours working online each week. Credit: 1

Advanced Placement Calculus (BC)

Prerequisite: Completion of Honors Functions and departmental approval

This fast-paced and rigorous course is presented at the college level and is designed to successfully prepare the student to take the Advanced Placement examination. In addition to covering all of the material seen in Advanced Placement Calculus (AB), this course covers derivatives and integrals with parametric equations, derivatives and integrals in polar coordinates and the Taylor Polynomials as well as some smaller topics. Approximately 30% more material is covered in the BC course than as compared to the AB course in the same time span. Students are expected to independently learn topics, work collaboratively with peers, understand new ideas quickly, and connect new ideas to previous learning on a daily basis. Credit: 1

Honors Vector Calculus and Linear Algebra

Prerequisite: Completion of Advanced Placement Calculus AB or BC and departmental approval

This course introduces students to areas of mathematics that they are traditionally not exposed to until they are in college. While not intended to replace a college course, students are introduced to the fundamentals of vectors, geometry, functions and calculus in three dimensions, matrices, matrix equations and vector spaces. In addition, depending on student interest and initiatives, this class explores additional topics, engages students in rich projects and uses computer algebra systems to investigate mathematics. Students are expected to have a strong background in calculus, a desire to explore challenging mathematics, and a willingness to struggle with difficult problems independently and cooperatively. Credit: 1

Statistics

Prerequisite: Completion of Algebra II

This age of information requires statistical literacy in order to be responsible consumers of goods, services and the news. Does that new product really do what the advertisement claims? What do the results of the latest newspaper poll really mean? This course provides students with the tools to process and analyze quantitative data to make rational decisions and intends to demonstrate the pervasiveness of statistical concepts in a variety of career paths. Throughout the year, students will participate in cooperative learning projects that explore topics such as gambling, standardized testing, and opinion polls. Topics will include: data collection methods, univariate and bivariate data analysis, probability, estimation using confidence intervals and basic

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hypothesis testing. This course will emphasize application rather than proof or theory and is not designed to cover all of the required topics in the AP College Board curriculum. Credit: 1

Advanced Placement Statistics

Prerequisites: Completion of or concurrent enrollment in Precalculus with Data Analysis or Honors Functions and departmental approval.

The purpose of the Advanced Placement course in statistics is to introduce students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Students will be exposed to four broad conceptual themes—exploring data: observing patterns and departures from patterns; planning a study: deciding what and how to measure; anticipating patterns in advance: producing models using probability and simulation; and statistical inference: confirming models. Important components of the course include the use of technology, such as the TI-83/84 and Excel, projects and simulations, cooperative group problem solving and writing as part of a concept-oriented instruction and assessment. Ultimately, students will be able to build interdisciplinary connections with other subjects and with their world outside school. Credit: 1

Decision Theory

Prerequisite: Open to juniors and seniors. [Not offered 2019-20 School Year]

This course teaches students to apply mathematical reasoning to competitive encounters in real world situations. The main focus of this course is the mathematics of decisions, Game Theory. This branch of mathematics focuses on the application of mathematical reasoning to competitive behavior. Game theory has applications in many different fields of study including, economics, politics, law and biology. Students will be exposed to classic finite games and learn how to calculate payouts and player advantages. This will lay the basis for exploring 2-person zero-sum games, opening the possibility to explore many complex situations in which people need to understand all perspectives of a conflict to determine their best strategy. Credit: 1/3

SCIENCE

At Bullis, we believe that science instruction is driven by students' natural curiosity about the world. Our inquiry- based approach is founded upon engagement in the process of

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scientific investigation. We prioritize solving problems, thinking critically, using evidence to support claims, and applying findings to practical and real world situations. Students appreciate the beauty and wonder of science and how it relates to their everyday lives. Cross-cutting concepts unify the study of science through their common applications across fields. By the twelfth grade, active learning involves students practicing the skills needed to pursue careers of their choice including but not limited to careers in science, engineering, and technology. **Since math knowledge and skills play such a significant role in most science courses, students' science placement will be based on their math level.**

Science Graduation Requirements and Recommendations

Required Credits: 3	Highly Recommended Credits: 4
<p>Requires <u>two</u> of the following classes: Biology, Chemistry, Physics</p> <p>Combinations include:</p> <ul style="list-style-type: none"> ● Biology + Chemistry ● Biology + Physics ● Chemistry + Physics 	<ul style="list-style-type: none"> ● Biology or Honors Biology ● Chemistry or Honors Chemistry ● Physics or AP Physics I ● Elective(s) = 1 credit

Recommendations and Alternative Options

To maximize choice, student may elect to take courses other than what they have been recommended to take. Students are eligible for the alternative courses listed on the following page because they will have fulfilled the prerequisites. (See next page.)

Science Course Options Based on Math Placement

Math Course Recommendation	Recommended Course (in bold) / Options listed below
Algebra I	Earth Science
Geometry	Biology Online Biology (Dept approval required) Honors Biology (Dept approval required) Earth Science (9th graders only)
Honors Geometry	Honors Biology (Dept approval required) Biology Earth Science (9th graders only)
Algebra II	Chemistry Honors Chemistry (Dept approval required) Biology Earth Science (9th graders only)

Honors Algebra II	Honors Chemistry (Dept approval required) Chemistry Honors Biology (Dept approval required) Biology Earth Science (9th graders only)
Precalculus, Statistics or Advanced Algebra and Trig.	Physics (Dept. approval required for Statistics and AAT students) AP Physics I (Dept. approval required) Astronomy Chemistry Biology Earth Science (9th graders only)
Honors Functions	AP Physics I (Dept. approval required) Astronomy Honors Chemistry Chemistry Honors Biology Biology Earth Science (9th graders only)
Calculus (any level)	AP Physics C Mechanics (Dept. approval required)

<p>After completing TWO Lab Science Courses, students can take the following:</p> <ul style="list-style-type: none"> ● Kinesiology and Rehabilitation ● Food Science ● Anatomy and Physiology ● Environmental Science I (1/3 credit) ● Marine Biology (1/3) ● Epidemiology (1/3) ● Honors Molecular Biology (one lab course MUST be Biology) Departmental Approval Required
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<p>After Completing Honors Bio: AP Bio (Department Approval Required) After Completing Honors Chem: AP Chem (Department Approval Required)</p>

Earth Science

Prerequisite: Open to freshmen only. Concurrent enrollment in Algebra I or higher.

Earth Science is a laboratory science. In Earth Science students will interpret and understand their world by investigating the interactions between the four major Earth's spheres: the geosphere, atmosphere, hydrosphere and biosphere. These investigations will be used to explain Earth's formation, processes, history, landscapes, how and why Earth changes over time. The course will also explore how current actions of man interact and affect Earth's spheres leading to local and global changes. Topics to be addressed include, but are not limited to, the scientific method, mapping Earth's surface, minerals, rocks, plate tectonics, earthquakes, volcanoes, geologic time, meteorology. 30 minutes of nightly homework includes lecture and discussion

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preparation, research, lab pre- and post- work, practice problems, project work and development, and assessment preparation. Credit 1.

Biology

Prerequisite: Concurrent enrollment in Geometry or higher.

Biology is a laboratory science. Students will make observations, pose questions and design investigations. Collaboration, scientific inquiry, laboratory explorations and discovery are central to this course. Activities include designing controlled experiments and laboratory investigations to examine how living things function and interact with their environment. Course topics include evolution, cell biology, biochemistry, genomics, biotechnology, biodiversity, ecology and how these topics inform advances in medicine and the sustainability of our planet. 30-45 minutes of nightly homework includes laboratory and discussion preparation, research, presentation, practice problems and assessment preparation. Credit: 1

ONLINE Biology [Not offered 2019-20 School Year]

Prerequisites: Concurrent enrollment in Geometry or higher and departmental approval. May be taught by an adjunct teacher.

This is a laboratory science. Students will examine how living things function and interact with their environment. Collaboration, scientific inquiry, laboratory explorations and discovery are central to this course. Activities include designing controlled experiments and laboratory investigations. Technology integration includes generating video microscopy, webquests and online collaborations. Course topics include evolution, cell biology, biochemistry, genomics, biotechnology, biodiversity, ecology and how these topics inform advances in medicine and the sustainability of our planet. This course is open to students with strong aptitudes in science. Students should be prepared to spend 6-8 hours working online each week. Credit: 1

Honors Biology

Prerequisites: Concurrent enrollment in Honors Geometry or higher and departmental approval.

Honors biology is a lab science course. In this course, we emphasize independent work with a focus on developing laboratory skills. Assignments and activities include more open-ended inquiry requiring the ability to independently research information to support observations. Students are expected to engage with challenging supplemental sources,

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as well as demonstrate strong reading comprehension and fluency in fundamental math skills. This course is a fast paced, technical and rigorous study of life science. Specific laboratory techniques will be introduced to prepare students for advanced work in the life sciences. Topics include ecology, biochemistry, cell biology, energy transfer, evolution, gene regulation, molecular genetics and heredity. 30-45 minutes of nightly homework includes laboratory and discussion preparation, research, presentation, practice problems and assessment preparation. This is a laboratory science. Credit: 1

Chemistry

Prerequisite: Concurrent enrollment in Algebra II or higher.

Chemistry is a laboratory science. Chemistry explains the subatomic world of chemical properties and behaviors. An introduction to environmental chemistry will provide students opportunities to practice using an industry standard lab notebook and designing experiments to solve real world chemical problems. Students will explore topics in periodic trends, bonding, stoichiometry, solutions, acids and bases as well as nuclear chemistry. Students will utilize a wide range of learning experiences including investigation, experimentation, simulation, model building and calculations to earn a deep understanding of chemistry as well as develop laboratory skills including identifying unknowns. 30 - 40 minutes of nightly homework includes discussion and laboratory preparation, research, practice problems and assessment preparation. Credit: 1

Honors Chemistry

Prerequisites: Concurrent enrollment in Algebra II or higher and departmental approval.

Honors Chemistry is a lab science course that prepares students for college level chemistry, AP chemistry, and to be knowledgeable citizens who can interpret how chemistry affects our lives, our community, and our world. Topics covered in this course include matter, atomic theory, chemical formulas and reactions, bonding, moles, stoichiometry, solution chemistry, gas laws, acid-base and a mini-unit on thermodynamics, equilibrium and kinetics. Lab work is a central aspect of this course. 30 - 40 minutes of nightly homework includes discussion and laboratory preparation,

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research, practice problems and assessment preparation. This is a laboratory science.
Credit: 1

Physics

Prerequisites: Concurrent enrollment in Precalculus or higher OR concurrent enrollment in Statistics or Advanced Algebra & Trig AND departmental approval.

Physics is year-long, laboratory science.algebra-based study of physics principles that covers a broad range of topics. Students will cultivate their understanding of physics and general science practices while studying kinematics, Newton’s laws, circular motion and gravitation, simple harmonic motion, impulse and momentum, work and energy, rotational motion, electrostatics, DC circuits, and mechanical waves and sound. 40 minutes of nightly homework includes discussion, laboratory preparation, research, practice problems, and assessment preparation. Credit: 1

Astronomy

Prerequisite: Completion of Algebra II. [Not offered 2019-20 School Year]

This lab science course will serve as an introductory course to the field of astronomy. Students will learn the current state of knowledge regarding the major bodies in our solar system, as well as stars, galaxies, and the origin and evolution of the universe. This includes significant geologic and atmospheric processes at work in the solar system, basic orbital mechanics, a history of the exploration of these bodies, and the surfaces, interiors, origins, and related processes for those bodies. Techniques for observing and analyzing both the night sky and deep space will be introduced, discussed, and applied both in hands-on and virtual situations. This is a laboratory science. Credit: 1

Food Science

Prerequisite: Completion of two lab sciences. Open to Juniors and Seniors.

Food science is a laboratory science. Where does your dinner really come from? We eat food every day, but we don’t often think about its origins. This yearlong course will explore the topic of food from all angles: molecular, agricultural, and ethical. We will learn about how food is grown or raised, its nutrition, the chemical reactions involved in its cooking, and how it is distributed around the world. Through inquiry-based labs, you will learn about the science of taste and flavor, design and prepare your own meal, and create a food product for the future. By the end of the course, students will understand

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where their food comes from, how it gets to their dinner plate, and what happens when they digest it. This is a laboratory science. Approximately 30 minutes of nightly homework includes readings, research, presentations, and essay writing. Credit: 1

Epidemiology BL

Prerequisites: Completion of Biology and one other lab science.

This lab-science course uses the scientific method to investigate, analyze and prevent or control a health problem in a given population. Students will gather data and apply statistical concepts to evaluate interventions to control and prevent public health issues such as chronic diseases, environmental problems, behavioral problems, injuries and infectious disease. Students will experience an interdisciplinary course that combines biology, technology, sociology, psychology, medicine, and statistics concepts. 30 minutes of nightly homework includes reading articles and answering analysis questions, participating in online discussions, watching interactive tutorials and completing worksheets. Credit: 1/3

Environmental Science

Prerequisite: Completion of two lab sciences.

This lab science course introduces students to general concepts in environmental science and will explore a number of environmental issues facing our world today. The course content will focus on current issues facing us today and ask the students to propose viable solutions. Students will conduct various tests using the tanks in the Aquatics Lab, as well as on the Potomac River to apply their knowledge and support their conclusions. 30 minutes of nightly homework includes readings, research, presentation, and essay writing. Credit: 1/3

Environmental Science II [Not offered 2019-20 School Year]

Prerequisite: Completion of two lab sciences.

This course will allow students to critically evaluate the relationship that exists between humans and nature. We will discuss whether or not we can ethically defend our actions and the impact they might have on the environment. as well as the inherent value and status of the environment. Students will have an opportunity to grapple with real life issues and to propose viable solutions. Students will reflect on their personal choices and the actions of those around them with respect to the environment. 30 minutes of nightly homework includes readings, research, presentation, and essay writing. This is

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not a laboratory science.Credit: 1/3

Marine Biology

Prerequisite: Completion of two lab sciences.

Marine Science is a lab science. It is a trimester, survey course focused on the study of the ocean, marine life and ecosystems, including the significance to and impacts of humans on marine environments. Labs, including dissections, and field investigations will familiarize students with specific marine ecosystems and organisms. Students will study and maintain an aquatic ecosystem using the tanks in our Aquatic Lab Topics include marine science, Pelagic zone, polar seas, coral reefs, rocky coasts, sandy beaches, and estuaries.

Credit: 1/3

Anatomy and Physiology

Prerequisite: Completion of two lab sciences.

This is a lab science that provides an overview of cellular structure and cell types found in the human body. The major systems—skeletal, muscular, nervous, endocrine, cardiovascular, immune, digestive, respiratory, urinary, and reproductive—will be covered, with an emphasis on how all of the systems work together to maintain homeostasis. Throughout the course, students will apply their knowledge of human anatomy to the field of sports medicine. Students will participate in dissections, build a simulation of the human body using 'Anatomy in Clay' and will participate in web discussions with professionals in the medical field. Approximately 30 minutes of nightly homework includes laboratory and discussion preparation, research, presentation, coloring pages and assessment preparation. Credit: 1

Kinesiology and Rehabilitation BL

Prerequisite: Completion of two lab sciences.

Kinesiology and Rehabilitation is a laboratory science. (Updated Sports Medicine Course.) It is strongly recommended that students have also taken or is concurrently taking Anatomy and Physiology Human Physiology .This course is designed especially for students who are interested in pursuing future study and careers in fields such as medicine, physical therapy, athletic training, nursing, physician assistants, and

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occupational therapy. It introduces the profession of athletic training and the basic principles of preventative care commonly used in the profession. Topics will include athletic training facility organization and procedures. Areas to be studied include basic anatomical terms, the role of the sports medicine team, sports psychology, injury physiology, mechanisms of athletic injuries, signs and symptoms of injury, rehabilitation techniques, blood-borne pathogens, and emergency procedures. Because hands-on training is important in this field, students must observe an Certified Athletic Trainer providing care for athletes at practices and games for up to 10 hours per trimester. Other coursework combines practical training, analysis of research journal articles in the field of athletic training, research presentations, lab assignments, and written exams. At least one day per week is online. Credit: 1

Honors Molecular Biology

Prerequisites: Completion of Biology and one other lab science, and departmental approval.

Molecular biology is a lab science course that utilizes a hands-on approach to learning modern molecular biology, molecular biology techniques and DNA analysis software. Students will focus on fundamental, common aspects of life on earth with an emphasis on DNA replication. Students will learn how to mine genome databases for information, use software to analyze downloaded genetic data and to plan experiments. Laboratory experiments will be a primary focus and a course lab book will be required to be kept in a manner similar to typical research laboratories. Students will learn a wide variety of microbiological and molecular biological techniques including cloning and expressing a gene in bacteria. is the primary focus of trimester two. Protein expression in bacteria, protein purification, western blotting and SDS-PAGE analysis of proteins will be the primary focus of trimester three. Laboratory practicals are the final exam assessments fall and spring trimesters. Credit: 1

Advanced Placement Biology

Prerequisites: Completion of Honors Biology and a summer assignment, and departmental approval.

This is a lab science course. It is a fast-paced, rigorous and advanced study of biology that is equivalent to a yearlong, 8-credit, college-level course. Students must have prior biology understanding and lab skills developed in Honors Biology. Concepts covered include: evolution, energy transfer, information transfer, gene regulation, cell

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communication and the interactions of biological systems. The College Board AP Biology curriculum emphasizes scientific practices via inquiry labs. About 5-6 hours of homework per week includes laboratory and lecture preparation, research, presentation, practice problems and assessment preparation. Credit: 1

Advanced Placement Chemistry

Prerequisites: Completion of Honors Chemistry or Chemistry; departmental approval, concurrent enrollment in Precalculus, and completion of a summer assignment.

This lab science course is geared toward students with a strong interest in pursuing chemistry, physics, biology, medicine or chemical engineering in college. The focus of this course is on chemical principles and relationships with a strong emphasis on laboratory investigation. Topics include the structure of matter, bonding, states of matter, physical chemistry, equilibrium, kinetics, quantitative chemistry, and chemical reactions. The topics are covered deeply and very quantitatively. Students are required to keep a comprehensive lab notebook. Taking the AP Chemistry Exam is expected. Approximately 6-7 hrs per week should be spent working outside of class, which includes laboratory and discussion preparation, research, presentation, practice problems and assessment preparation. Credit: 1

Advanced Placement Physics 1

Prerequisites: Concurrent enrollment in or completion of Precalculus or higher math course and departmental approval.

AP Physics 1 is an algebra-based, introductory college-level physics course. Students cultivate their understanding of Physics through inquiry-based laboratory investigations as they explore these topics: kinematics; dynamics; circular motion and gravitation; energy; momentum; simple harmonic motion; torque and rotational motion; electric charge and electric force; DC circuits; and mechanical waves and sound. The course is comparable to an honors physics course and prepares students for the College Board AP Physics 1 exam as well as future physics studies. 45 minutes of homework per night includes laboratory preparation and analysis, practice problems, and assessment preparation. Credit: 1

Advanced Placement Physics C: Mechanics

Prerequisites: Completion of one year of Physics or Honors Physics, concurrent enrollment in or completion of a Calculus course, and

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departmental approval.

AP Physics is a laboratory science calculus-based course geared towards students with a strong interest in pursuing physics-related science at the college level. Students will experience the academic rigor that is required to succeed in science and engineering fields. AP Physics C: Mechanics relies upon prior physics understanding and uses calculus-based models to analyze physical phenomena, which includes: kinematics, Newton's Laws, work, energy and power, linear momentum and collisions, circular motion and rotation, harmonic motion, and gravitation. The course prepares students for the College Board AP Physics C Mechanics exam and includes 60 minutes of homework: laboratory and discussion preparation, presentation, practice problems and assessment preparation. Credit:1

SOCIAL STUDIES

The Bullis Social Studies program provides students with opportunities to develop in-depth understandings of their communities and the world, past and present, in order to become responsible and empathetic global citizens.

Social Studies Advanced Placement Requirements

Advanced Placement courses are designed to prepare high school students for the rigor of study at the college level. These courses require students to have strong work ethics, time management skills and understanding of key content and concepts. **Placement in these courses require a fall and winter trimester average of an 88 and departmental approval. Students presently in an Honors or AP social studies course must maintain an average of 83 (unweighted) in order to remain in an AP level class.** New and transfer students must sit for the Social Studies Placement Exam. We do not accept writing samples that are not produced during an on-campus test session.

Human Geography

Prerequisite: Open to freshmen

Human Geography is the study of the diverse experiences that have shaped human understanding, use and alteration of the Earth and its resources. Students explore the

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major themes of Human Geography including basic concepts, population, migration, culture, political, economic development and industrialization and rural and urban land use. Students apply these themes to evaluate how human systems impact their surrounding environments and vice versa. Students learn to evaluate data, analyze and make comparisons to key concepts throughout the course. Incorporating project-based learning, students use the methods and tools of geographers to examine human social organization and its environmental consequences. Approximately 30 minutes of homework/night. Credit: 1

Global History

Prerequisite: Open to sophomores

Global History is the study of the human experience from 8000 BCE to the present. The course is organized around essential questions pertaining to interactions between humans and the environment, humans and other humans, and humans and the world of ideas. The course encourages students to analyze similarities and differences among civilizations, which have taken place over time. A great emphasis is placed on learning history through primary and secondary sources and includes the writing of an in-depth research paper. All skills and concepts learned are intended to provide foundational knowledge for future global studies and college-level coursework. Approximately 30 minutes of homework/night. Credit: 1

Advanced Placement World History

Prerequisites: Open to sophomores, juniors and seniors. Departmental approval required.

This course requires students to master major developments that illustrate or link six thematic areas with major civilizations in Africa, the Americas, Asia and Europe. Students focus on six overarching themes: interactions between humans and the environment; development and interaction of cultures; state-building, expansion and conflict; creation, expansion and interaction of economic systems; and development and transformation of social structures. The course emphasizes relevant factual knowledge deployed in conjunction with leading interpretive issues and types of historical evidence throughout the past ten thousand years of the global experience. A great emphasis is placed on learning history through primary and secondary sources and includes the writing of an in-depth research paper. Approximately 45-60 minutes of homework/night. Credit: 1

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Thematic United States History

Prerequisite: Open to juniors

This course identifies, investigates and analyzes the people, forces and events that have shaped the history of the United States while stressing the development of democratic ideals and the creation of a participatory government. The course mixes a traditional chronological study with a contemporary thematic approach centered on several timeless essential questions, which provide focus points for class discussions and research assignments. Thus, students discover relevancy of the history behind the many challenging issues the country faces today. Individual research, primary document readings, and group projects augment in-class activity as students develop an understanding of United States History. Students engage in historical research as they create original projects focusing on the yearly theme of National History Day. Approximately 45 minutes of homework/night. Credit: 1

Advanced Placement United States History

Prerequisites: Open to juniors. Departmental approval required.

The Advanced Placement United States History course focuses on teaching American history content by developing historical thinking skills such as analyzing historical evidence and sources, making historical connections, chronological reasoning, and historical argumentation. The course is organized around seven themes: American and National Identity, Politics and Power, Work, Exchange and Technology, Culture and Society, Migration and Settlement, Geography and the Environment and America and the World. Students engage in historical research as they create original projects focusing on the yearly theme of National History Day. It is required that all students sit for the AP examination in the spring. Approximately 45-60 minutes of homework/night. Credit: 1

Advanced American Humanities Seminar - AP US History and AP Language and Composition

Prerequisites: Open to juniors. Departmental approval required.

This interdisciplinary course combines Advanced Placement Language and Composition Literature and AP United States History. The course fulfills both the junior English and Social Studies requirements, and will prepare students for both the Advanced Placement Exam in United States History. In a team-taught double period, students examine the social, economic, political, and cultural heritage of the United States through a combination of primary documents, interpretive secondary sources,

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and representative works of American literature, art and music. Close, critical analysis, responsible oral discourse, and expository writing are emphasized. Though the topics in this course are by design “American,” students train to become “Global” thinkers. Students may expect a range of 60-90 minutes of homework for this double block course. Prerequisite: English department and Social Studies department approval
Credit: 2 (1 English and 1 Social Studies)

Advanced Placement Comparative Government and Politics

Prerequisites: Open to juniors and seniors. Departmental approval required.

This two-trimester course introduces students to fundamental concepts used by political scientists to study the processes and outcomes of politics in six countries: Iran, Mexico, Nigeria, China, Russia, and Great Britain. Students compare the history, sources of power, political institutions, citizen participation, economic and political changes and problems within each country and the global community. Students will also partake in an in-depth study of supranational organizations such as the United Nations, the IMF and the World Bank. Students will be prepared to take the AP Comparative Government exam. Approximately 45-60 minutes of homework/night. Credit: 1

Advanced Placement Psychology

Prerequisites: Open to juniors and seniors. Departmental approval required.

This year-long course in psychology is the systematic and scientific examination of the behavioral and mental processes of human beings and other animals. It allows students to explore the theories, principles and focus of each of the major subfields of psychology. During their course of study, students identify, investigate and apply the methods psychologists use to explore the processes involved in normal and abnormal thinking and behavior. Students will be prepared to take the AP Psychology exam. Approximately 45-60 minutes of homework/night. Credit: 1

Online Advanced Placement Psychology

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Prerequisites: Open to juniors and seniors. Departmental approval required. May be taught by an adjunct teacher.

This year-long course in psychology is the systematic and scientific examination of the behavioral and mental processes of human beings and other animals. It allows students to explore the theories, principles and focus of each of the major subfields of psychology. During their course of study, students identify, investigate and apply the methods psychologists use to explore the processes involved in normal and abnormal thinking and behavior. Students will be prepared to take the AP Psychology exam. Students should plan to spend 6-8 hours working online each week. Approximately 45-60 minutes of homework/night. Credit: 1

Online AP World History

Prerequisites: Open to juniors and seniors. Departmental approval required. May be taught by an adjunct teacher.

This yearlong course is the fully online version of AP World History--a course that introduces students to a people-centered approach to the world. Stepping beyond the bounds of a narrow worldview, the intent of this course is to provide a global perspective that fosters empathy and understanding of diverse cultural traditions. Focusing on drawing a global portrait of the human past, students gain an awareness of how these historical backgrounds are at work in the present. Individual research, projects, films, readings, and interactivity augment text. The course is organized around six chronological and intellectual units. The course will prepare students to take the AP World History exam. Students should plan to spend 6-8 hours working online each week. Approximately 45-60 minutes of homework/night. Credit: 1

Online AP Human Geography

Prerequisites: Open to juniors and seniors. Departmental approval required. May be taught by an adjunct teacher.

This fully online, yearlong course is presented at the college level and is designed to successfully prepare the student to take the Advanced Placement examination. A broad survey of human interactions across our planet, AP Human Geography is an intensive, three term, college-level, "systematic study of patterns and processes that have shaped human understanding, use and alteration of Earth's surface." Throughout this course, students will "employ special concepts and landscape analysis to examine human social organization and its environmental consequences. They also learn about the methods and tools geographers use in their science and practice." (CollegeBoard AP, *HUMAN*

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GEOGRAPHY Course Description, May 2006, May 2007) The major topics and units of study include: Geography: Its Nature and Perspectives; Population; Cultural Patterns and Processes; Political Organization of Space; Agricultural and Rural Land Use; Industrialization and Economic Development; and Cities and Urban Land Use. In addition, emphasis will be placed on current events, case studies, and applications from our local community, our state, and from around the world that illustrate the relevance of these topics to understanding the world in which we live and the ongoing processes of globalization. The course will prepare students to take the AP Human Geography exam. Students should plan to spend 6-8 hours working online each week. Approximately 45-60 minutes of homework/night. Credit: 1

American Government I

Prerequisite: Open to sophomores, juniors and seniors.

This fall trimester course focuses on the legislative branch of the federal government. Students will engage in a close reading of Article I of the Constitution and apply their understanding to Congress' role in the American government system. An emphasis on current events and legislation will encourage students to apply their understanding and interpretation of the Constitution. The trimester will culminate with an action research project in which students will research a legislative issue and propose policy to address that particular issue. Approximately 30 minutes of homework/night. Credit: 1/3

American Government II

Prerequisite: Open to sophomores, juniors and seniors.

This winter trimester course focuses on the executive branch of the federal government. Students will engage in a close reading and examination of Article II of the Constitution to help frame future study and then examine the interaction of checks and balances between the legislative and executive branches. Students will then study the role and responsibilities of the executive branch including those of the President, the Cabinet and federal agencies including the election process, funding and use of polling. A strong emphasis is placed on current events and will be used to inform class discussions. The trimester will culminate in a research project and key finding presentation on an issue related to the executive branch. Approximately 30 minutes of homework/night. Credit: 1/3

American Government III

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Prerequisite: Open to sophomores, juniors and seniors.

This spring trimester course focuses on the role, responsibilities and limitations of the judicial branch of the federal government. Students will engage in a close reading of Article III of the Constitution and then study the role of the Supreme Court in the system of checks and balances. A close analysis of current and past key rulings by the Supreme Court will be required of students. In their culminating project, students will be expected to research and present their findings on the Constitutional legitimacy of a case of their choosing. Approximately 30 minutes of homework/night. Credit: 1/3

Holocaust and Genocide Studies

Prerequisite: Open to sophomores, juniors and seniors.

The Holocaust is arguably one of the most horrific periods in human history. In this seminar, students will explore the elements of human nature and human behavior to gain an understanding of such issues as prejudice, discrimination, and racism. After exploring examples of resistance, intervention and non-action in the Holocaust, students will assess the lessons learned and relate them to other genocidal atrocities committed in Armenia, Cambodia, Sudan and Bosnia. The goal is to prepare students to analyze contemporary political situations, think critically about ethical responsibility, and respond actively to injustice today. The course will be taught with a high degree of student participation and will include the use of film, literature, guest speakers and a visit to the Holocaust Museum. Approximately 30 minutes of homework/night. Credit: 1/3

African-American Studies

Prerequisite: Completion of or concurrent enrollment in a United States history course.

This course is a chronological survey of the history of Africans in the Americas, beginning with the ancient civilizations of Africa and ending with a primary focus on the United States. Topics will range from the European slave trade, the Black Power movement, the civil rights movements of the 1960s and current issues facing the black community. Students will analyze and interpret both primary and secondary reading material as well as other forms of media. Class activities include, but are not limited to collaborative group work, oral presentations, debates, lectures, and analysis of historical documents. Approximately 30 minutes of homework/night. Credit: 1

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STEM

Maker Lab

Students in this trimester course are trained to identify problems in the world around them and see themselves as sources for innovative solutions. They will learn the value of prototyping their ideas, engage in technological experimentation, and ultimately, fabricate solutions. Students will become familiar with many of the tools, low- and high-tech, common to a modern fabrication lab such as: 3-D printing, Arduino boards, laser cutters and simple hand tools such as hammers and saws. The projects will be driven by authentically constructed prompts that allow for individual student creativity and skill-sets. Students are encouraged to contribute their knowledge and ideas to their classmates through regular progress updates, inspiration-sharing, journals, and skill education. Credit: $\frac{1}{3}$

Making for Social Good

In this course students will make a valuable, positive and concrete contribution to a community by utilizing the design thinking process and making skills. Students will develop and implement empathy, a key element of the design thinking process, to address a need within a community (local, regional or global) rather than a personal need or desire. Students will use the tools of the BITlab to make a product or service that can positively affect the lives of others, will understand the impact they can have on the world, and learn the skills necessary to act upon that knowledge. Credit: $\frac{1}{3}$

Intermediate Making: Iteration and Design

Prerequisite: 1 Trimester of Maker Lab or Making for Social Good, or departmental approval

Truly great ideas do not arise completely from a flash of inspiration; an original inspiration must be pursued in a systematic and progressive way. In this course students will identify an idea or a project to pursue and, over a series of reviews (self/peer/teacher), they will improve, adjust or rethink it through a series of iterations. This process will involve self evaluation and reflection, development of deep skills and knowledge, and persistence and grit to achieve goals. Using the tools in the BITlab, students will develop a design for an object through successive stages to improve it with each step. Students may work with high or low tech tools, wood, metal, plastic, coding, microcontrollers and/or robotics to develop their project. Credit: $\frac{1}{3}$

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Research Design and Methods BL

Prerequisite: Open to juniors

This is an advanced course for junior students with the maturity, independence, and motivation necessary to conduct their own research. Students will analyze research from a number of STEM areas in order to understand the logic behind investigation design and the soundness of data. Students learn research methods and experimental design in preparation for their own research project senior year. Students will draw from prior STEM courses to find an area of interest for their senior-year capstone experience and write a literature review on a topic of interest to them. Throughout the term, students read from primary literature and participate in discussion groups on current issues in STEM-related fields. Students will develop and present a research capstone proposal to a panel for approval. Students should expect an average of 30 minutes of homework per night. Credit:1/3

Honors STEM Capstone BL

Prerequisites: Open to seniors. Completion of Research Design & Methods and STEM Coordinator approval.

As the culmination of their STEM experience, seniors will merge their skills, content understanding and interests in STEM-related areas to design and develop a unique, independent, year-long research project. Although topics will vary widely, this course will provide the necessary structure and guidance for their work. Each student will apply their acquired skills to see a project through from the beginning proposal to final presentation to a panel comprised of teachers, peers, administrators, and mentors from the field. Students will elicit the feedback of peers and adult mentors as they improve their methods of research and design, communicate with experts in their field, and write a professional journal article. Students should expect an average of 30 minutes of homework per night. Credit: 1

TECHNOLOGY & ENGINEERING

Sound Design and Programming

Sound Design is an interdisciplinary, project based course in which students will learn the fundamentals of music theory and computer programming. Students will create

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instruments using both found objects as well as through the technology of MaKey MaKey devices. In addition, students will diagram popular music and compose their own works using their newfound music theory awareness. Throughout the course students will be developing and connecting musical ideas to the fundamentals of programming. As a result of the course projects, students will simultaneously develop and strengthen their understanding of music and technology and will be prepared for more advanced study in both areas. Average of 15 min of homework a night. Credit: 1/3

Digital Media I

This trimester-long elective course provides a hands-on introduction to video storytelling. Students will examine the elements that make video stories compelling while learning to watch video content critically. They will conceptualize, pitch, plan, shoot, edit and distribute their own video content using a variety of professional tools, techniques and software. Students will create a how-to video and a mini documentary as well as a number of smaller projects throughout the trimester. The class will, at times, use the production studio in the Discovery Center. Credit: 1/3

Digital Media II: YouTube Channel for Change

Start a YouTube channel about a social issue and empower your audience to take action. Give a voice to a marginalized group, debunk stereotypes, promote responsible environmental stewardship—the options are limitless and the choice is yours. In this yearlong course, you will research your topic and learn to create impactful documentary-style and scripted videos. Midway through the year, you will take to either Twitter or Instagram to promote your content and explore the marketing potential of social media. Throughout the year, you will build skills in Adobe's professional software suite for creatives. You will use Premiere Pro and Audition extensively for video and audio editing, and you may also gain experience in Lightroom, Photoshop, Illustrator, and After Effects. Average of 20 minutes of homework per night. Credit: 1

Mobile App Development BL

Prerequisite: Completion of Algebra I

App Development introduces students to the fundamentals of building programs on phones and tablets. Students create mobile applications for phones and tablets using the block based programming language AppInventor. Students are introduced to foundational programming concepts while also creating their own programs and implementing them. Average of 15 min of homework a night. Credit: 1/3

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Game Design

Prerequisite: Open to sophomores, juniors and seniors.

Game Design is intended to introduce students to a basic overview of the key concepts needed to successfully design and develop a video game. In Game Design, students will use JavaScript to develop games which can be embedded into a web page or shared online easily. Students will be introduced to basic concepts of game development, programming, art, as components of taking an idea from inception to realization. Average of 25 min of homework a night. Credit: 1/3

Creative Coding

Prerequisites: Open to sophomores, juniors and seniors. Completion of Algebra II.

This trimester course is designed to acquaint students with fundamental concepts in computer programming. The course is built upon the use of coding to explore different areas of creative work. Students will use the Processing Language to create visually engaging or societally useful programs. Students will learn event driven programming, basic control structures and an introductory understanding of object oriented programming (OOP). This course functions both as an introduction for students interested in higher-level programming and for students who have taken an introductory course and want to continue to explore the basics of computer science. Average of 25 min of homework a night. Credit: 1/3

Cyber Security Foundations

Prerequisite: Open to sophomores, juniors and seniors.

The Cyber Security Foundations course will familiarize students with the seven layers of the OSI (Open Systems Interconnection) model and the protocols that facilitate host interaction. Students will be introduced to Firewall features and configurations as well as current Operating Systems (OS) and how to configure them to access networks. Students will learn to identify threats and vulnerabilities and the security tools used to mitigate them. Credits: 1/3

Engineering Applications for Theatre

Prerequisites: Open to sophomores, juniors and seniors. Prior experience

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with engineering, technical theater, robotics, or department approval.

In this course, students will use Design Thinking to create complex scenic elements for theatrical productions. Using previous experience in engineering, robotics, technical theatre or coding, students will apply the Engineering Design Process to design and build theatrical props or scenery that include mechanisms, robotics, or other advanced techniques. Students will have the opportunity to design and build advanced structures and systems based off of a script that could be used in a Bullis production. Students will demonstrate project management skills to realize their designs within a given timeline and budget. Students will gain knowledge and skills on advanced equipment such as the ShopBot, 3-D Printer, and Laser Cutter. Students should expect to spend an average of 1-1.5 hours per week outside of class on research, critiques and writing. Credit $\frac{1}{3}$

Engineering Graphics with CAD

Prerequisite: Open to sophomores, juniors and seniors.

This course teaches students the essential skills for communicating technical designs using basic drafting techniques using computer-aided design (CAD) software commonly used in industry. Students will learn to read and interpret technical drawings and develop visualization skills by sketching geometric forms, pictorial views, and multi-view orthographic projections. Students will apply these techniques using CAD software to create 3-dimensional part models, assemblies, and drawings. This course is well suited to students considering a career in engineering or research, and for those students who wish to become more effective in visually communicating technical information in any profession. The final project is an original design of a functional object complete with all drawings necessary for its construction. Credit: $\frac{1}{3}$

Robotics I

Prerequisite: Open to sophomores, juniors and seniors.

Students enrolled in this course will learn the fundamentals of building and programming robots through a hands-on, project-oriented curriculum. They will explore simple programming language and structure. Students will complete a series of projects to explore using sensors as inputs and motors and servos as outputs. These projects are ordered so that each builds upon the last, and they will range from simple tasks to complex obstacle courses or games for robots to compete with each other. Credit: $\frac{1}{3}$

Robotics II

Prerequisites: Open to sophomores, juniors and seniors. Completion of Robotics I.

This course will build on the skills and knowledge that students gained in Robotics I and is designed to guide and direct students through increasingly complex challenges. Students will design and build appendages and manipulators to accomplish a variety of robotic tasks. Students will learn and apply the engineering design process to solve problems. This course culminates in a project that demonstrates both hardware design and software skills. Credit: 1/3

Introduction to Engineering

Prerequisites: Open to sophomores, juniors and seniors. Completion of Algebra II.

Introduction to Engineering is a year-long survey course that exposes students to some of the major concepts they will encounter in a post-secondary course of study in engineering. Through activities, problems, and projects, students explore a broad range of engineering topics, including mechanisms, energy and power, the strength of structures and materials, and automation. Students will develop skills in problem-solving, research, and design while learning strategies for design process documentation, collaboration, and presentation. Credit: 1

Honors Material Science & Engineering

Prerequisites: Open to juniors and seniors. Completion of Algebra II.

This course is intended to introduce students to the laboratory and classroom experience that they would encounter in the field of material science and engineering (MSE). This course encompasses the broad disciplines of physics, chemistry, biology and engineering. Engineering materials are continuously being developed, selected and used in all facets of industries, from consumer products to space exploration. Purposefully designed materials provide the means for modern products and tools to be built. Humanity has had a firm grasp of engineering materials and how to manipulate performance for centuries. However, until recently, we have not had the tools to fully understand the underlying mechanisms to such enhancements and provide optimized material solutions. Scientists and engineers develop and use basic principles to design new materials for different and ever-demanding applications. Materials design and behavior assessment is a function of mathematics, experimentation and a firm

understanding of metallurgy and material science principles. Credit: 1

Advanced Placement Computer Science Principles

Prerequisites: Open to juniors and seniors. Completion of Creative Coding or departmental recommendation.

AP Computer Science Principles is intended to introduce students to the fundamentals of programming. Students will be introduced to the fundamental concepts of computer science and their impact. This is a project-based course in which students will demonstrate their knowledge by completing unit projects. As part of this course, students will have the opportunity to take the AP Computer Science Principles Exam in May, as well as two AP in class project assessments throughout the year totaling 20 hours. Credit: 1

Advanced Placement Computer Science A

Prerequisites: Open to juniors and seniors. Completion of Creative Coding or departmental approval.

This intensive, year-long course focuses on advanced programming concepts and techniques. Students will develop imagination, abstract thinking, and logic in addition to learning about object-oriented program design, program implementation, program analysis, standard data structures and algorithms. The course is designed for students who have significant interest in computer programming; the most successful students will be those who have previous coding experience or have completed one of the trimester technology courses. Students begin the course writing small programs using primitive data types, the String class and the array data structure. The purpose of these programs is to teach students how to use conditional statements, iteration, relational and logical operators. By means of numerous programming exercises, labs, and projects, students further learn about abstract data types, interfaces, polymorphism, inheritance, searching, sorting and recursion. The course culminates with a detailed review of a large-scale program. Credit: 1

VISUAL & PERFORMING ARTS

The Bullis Visual and Performing Arts department fosters an appreciation, understanding and application of the arts grades 3-12. Students explore the value of

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convention and innovation by engaging in challenging and dynamic artistic experiences. Students develop independent thinking and personal voice through the acquisition of core skills, collaboration, problem solving, and risk taking.

Honors Visual and Performing Arts Capstone

Prerequisites: Completion of 4 credits in the arts/approved electives and departmental approval.

Students' participation in the Visual and Performing Arts Signature Program Capstone will culminate with the presentation/performance of year-long, independent projects which are student- designed, developed, and implemented. Although topics will vary widely, this course will provide the necessary structure and guidance for the creation of a body of individual work and the possibility of an original, collaborative interdisciplinary project. Each student will employ acquired academic and artistic skills to see these respective projects through from the beginning, proposal stage to a final, public presentation/performance and a defense delivered to a panel comprised of teachers, administrators, and mentors from their chosen field(s). Throughout, students will elicit the regular feedback and critique of a group of peers and adult mentors, will communicate with professionals in their field, and will regularly document the creative process. Credit: 1digital media

VISUAL ARTS

Studio Art

Prerequisite: Teacher recommendation or departmental approval.

Studio Art students will explore a variety of exciting opportunities and materials to inform the art making process. Students will investigate personal interests while developing skills in the areas of drawing, painting, printmaking, ceramics, sculpture, and digital media. They will learn to think conceptually and realize their potential as creative and critical thinkers. Course content includes art production, art appreciation, and studies in art history and visual culture. Homework typically consists of 30 minutes per week. Credit:1

Advanced Studio Art

Prerequisite: Completion of Studio Art or departmental approval

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In Advanced Studio Art, students will continue to develop their skills in drawing, painting, sculpture, digital media and a variety of other approaches. Through various prompts, students will make artistic choices that enable them to develop skill mastery and create work that speaks to the artist's individual point of view. Regular group critiques will help students improve their work as well as their artistic vocabulary, communication and visual analysis skills. On average, students are expected to spend 30 minutes of homework each week. Credit: 1

Advanced Studio Art II

Prerequisite: Completion of Advanced Studio Art or departmental approval

In Advanced Studio Art II, students will engage in artmaking through the use of a variety of techniques and materials, and open and guided prompts. Students will participate in discussions about art history, modern and contemporary influences, in addition to frequent constructive peer critiques. Emphasis will be placed on the creation of a body of work that conveys a sense of exploration, investigation, growth and discovery. Students will develop a strong personal voice and a portfolio of work suitable for college submission and/or the breadth portion of the AP Studio Art portfolio. Homework typically consists of 60 minutes per week. Credit: 1

Advanced Placement Studio Art

Prerequisites: Open to seniors. Completion of Advanced Studio Art II or departmental approval.

In this studio course, advanced students develop technical proficiency, awareness of artistic sensitivity and sensibility and an understanding of the process of making art. Based on the interaction of the elements and principles of design, students will create a range of artworks. Through various studio projects, students develop their own voices, utilizing skills attained in earlier art courses. Drawing from observation will be practiced on a regular basis. Emphasis will be on the creation of a body of work that conveys the student's investigation, growth and discovery. Projects will utilize a variety of techniques and materials in the areas of drawing, painting, collage, digital imaging and mixed media. Students will work to develop and submit a portfolio based on the requirements of the College Board. Homework typically consists of 3 hours per week. Credit: 1

Sculpture

Through an exposure to a broad range of historical traditions and ideas, this class focuses on conceptual, personal and visual expression through three-dimensional media. Students explore the aesthetics and underlying meaning of three-dimensional form through the study of relief sculpture and sculpture in the round. Students will be using carving, casting, modeling and found object construction methods with a variety of media including, but not limited to, clay, plaster, wire, cardboard, and found objects. Homework typically consists of 30 minutes per week. Credit: 1/3

Drawing

Drawing is the foundation for all artistic expression. This course emphasizes the fundamental drawing techniques and skills needed for further work in various media. In it, students develop a visual vocabulary that they will utilize in exploration of literal, visual and expressive qualities of drawings. Students learn about line, proportion, perspective and chiaroscuro, as well as about the variety of materials and techniques used in drawing. Homework typically consists of 60 minutes per week. Credit: 1/3

Painting

This course is designed to introduce students to painting through the use of a variety of materials and techniques. Students learn about tone, color intensity and basic color theory, with examples from the history of art. Mediums investigated include acrylic and watercolor, as well as surface preparation. Students learn and discuss the principles of design and find practical uses for them in their work. Homework typically consists of 60 minutes per week. Credit: 1/3

Drawing and Painting II

Prerequisites: Open to sophomores, juniors and seniors. Completion of Drawing I or Painting I.

In this studio course, intermediate students will focus entirely on two-dimensional media, strengthening their fundamental drawing and painting skills. Students will analyze artwork through many periods of art history, discuss the subject, evaluate process and investigate personal connections. The course offers students the opportunity to create more complex compositions that connect content with meaning. Regularly scheduled constructive peer critiques will be critical for the development of artistic language and clear visual communication. On average, students are expected

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to spend 60 minutes of homework each week. Credit: 1/3

Ceramics I

Prerequisite: Open to sophomores, juniors and seniors

Ceramics is an introductory course where students will work with clay in all its forms and experiment with both functional and decorative designs. Students will have the opportunity to learn and practice clay hand building techniques: pinch, coil building and slab construction. Each unit will support the previous through the development of more sophisticated and complex designs and sculptures. Also integral to the course is the understanding of the importance of wedging clay, proper storage of ceramics and the process of building, firing and painting. In addition to hand building, students will spend time throwing on a pottery wheel: centering, opening and pulling walls to form symmetrical and balanced three-dimensional objects. On average, students are expected to spend 30 minutes of homework each week. Credit: 1/3

Ceramics II

Prerequisite: Ceramics I

Ceramics II is an advanced level course for students who have already completed Ceramics I. Building upon prior knowledge, students will work with clay in a more sophisticated and complex manner. The initial six weeks of the course will be dedicated to handbuilding and throwing medium/large pieces on the pottery wheel. The remainder of the trimester will be focused on in-depth explorations of various glazing techniques and firing methods. The design and function of each piece will be determined by the student and his/her artistic aesthetic. On average, students are expected to spend 30 minutes of homework each week. Credit: 1/3

Darkroom Photography I

Prerequisite: Open to sophomores, juniors and seniors

In this course, students will explore the traditional art of film photography. This course is project-based and primarily focuses on learning core technical skills through hands-on application. Students learn the technical aspects of photography, including the different parts of the 35mm SLR camera, how to properly expose and develop film, create quality black and white prints, and make contact sheets and black and white enlargements. Students have extensive opportunity to work with basic darkroom processes and techniques. Once students gain an understanding of these processes, emphasis shifts from photographic craft to the artful capture and strong composition of a

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variety of subject matter. Students are expected to spend 1-2 hours per week shooting film outside of class. *Materials and film camera required. Credit: 1/3

Darkroom Photography II

Prerequisites: Open to sophomores, juniors and seniors. Completion of Darkroom Photography I.

In this course, students come prepared with their technical knowledge from Photography I and are able to transition directly into the darkroom. Photography II focuses on application and exploration, allowing for a truly unique studio experience. Units are directed by prompts that the photographer must react to in his/her own personal voice, focusing on aesthetics, composition, and concepts. Students will learn advanced shooting and processing techniques, such as an in-depth look at lighting and lenses. Students are encouraged to experiment with processes and will have opportunities to sample unconventional chemistry. Students are expected to spend two hours per week shooting film outside of class. *Materials and 35mm SLR camera required (Open to juniors and seniors) Credit: 1/3

Graphic Design and Advertising I

Prerequisite: Open to sophomores, juniors and seniors

This course offers students the opportunity to master the basics of Adobe Photoshop, Illustrator, and InDesign. We explore color theory, composition, appropriation, negative and positive space, pattern and other major aspects of design. Students will investigate themes and approaches to advertising and graphic design in a real-world context. This course requires students to understand and incorporate both the basics of design, trade skills, and conceptual approaches. Credit: 1/3

Graphic Design and Advertising II (with Adobe Exam)

Prerequisites: Open to sophomores, juniors and seniors. Completion of Graphic Design and Advertising I.

This course builds on the skills developed in GDA I. Students will continue to explore photo manipulation, product design and packaging, as well as principles of layout. Students have the option to sit for the Adobe Certification Exam in Photoshop, Illustrator, or InDesign. Credit: 1/3

Art History: Renaissance to Modernism [Not offered 2019-20 school year]

The Renaissance to Modernism course will provide an understanding and appreciation of architecture, sculpture, painting and other art forms from the 14th century to 19th. Students will explore the Italian Renaissance, Renaissance in the North, Mannerism, the Baroque style, Neoclassicism, Romanticism and Realism. Students will discover how convention and innovation define progress. Issues such as politics, religion, patronage, gender, function, and ethnicity will be discussed. Students will develop their ability to attribute, analyze and understand works of art through visual and contextual investigation. On average, students are expected to spend 30 minutes of homework each night. Credit: 1/3

Art History: Modernism and After

Prerequisite: Open to juniors and seniors

This course will investigate the foundation of Modernism, what it is and how it changed art and society. Students will study Impressionism, Fauvism, Cubism, Surrealism, Dadaism, Non-Western Art, Painterly Abstraction, Post-Painterly Abstraction, Minimalism, Post-Modernism, Conceptual Art, Performance Art, Video Art, and Contemporary Art. Issues such as politics, religion, patronage, gender, function, and ethnicity will be discussed. Students will develop their ability to attribute, analyze and understand works of art through visual and contextual investigation. On average, students are expected to spend 30 minutes of homework each night Credit: 1/3

Advanced Placement Art History [Not offered 2019-20 School Year]

Prerequisite: Open to sophomores, juniors and seniors

AP Art History is designed to provide an understanding and enjoyment of architecture, sculpture, painting and other art forms within historical and cultural contexts. Students examine major forms of artistic expression from the past and present and from a variety of cultures. They learn to look at works of art critically, with intelligence and sensitivity, and to articulate what they see or experience. The course includes visits to various local museums and galleries. No prior exposure to art history is required. This course prepares successful students to take the College Board Advanced Placement exam in art history. Credit: 1

PERFORMING ARTS

DANCE

Introduction to Dance

This trimester course is designed for students who have had little or no dance background. Students will explore and practice the principles of dance technique while working towards developing awareness, freedom and control in the use of the body as an instrument of expression. Students will learn basic technical skills and creative aspects relative to a variety of dance styles. Students will focus on building the skills of coordination, balance, body alignment, flexibility, strength, endurance, musical awareness, phrasing, precision and rhythmic accuracy. Students should expect to spend 30-45 minutes per week outside of class on dance writing and review of technique and class concepts. Credit: ½

Dance II

Prerequisites: Audition and departmental approval

This yearlong course is designed for the advanced beginning level dancer with a strong interest in the art of dance. Working from knowledge acquired at the introductory/beginner level, students will continue to explore and practice the principles of dance technique while developing greater awareness, freedom and control in the use of the body as an instrument of expression. In addition to building the skills of coordination, balance, body alignment, flexibility, strength, endurance, musical awareness, phrasing, precision and rhythmic accuracy, students will also learn advanced beginner technique and vocabulary in the areas of jazz, modern, and Hip Hop dance. This course is designed for students who have completed Intro to Dance or have mastered basic dance technique in ballet, jazz, modern, and Hip Hop. Students should expect to spend 45 minutes-1 hour per week outside of class on dance writing and review of technique and class concepts. Credit: 1

Dance Ensemble

Prerequisites: Audition and departmental approval

This course is designed for the intermediate level dancer with a strong interest in the art of dance. Intermediate students will learn technique and vocabulary in the areas of jazz,

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modern, and Hip Hop dance. Technical expertise and artistic expression are enhanced through reflective practice, study and evaluation of one's own work. Emphasis will be placed on increasing strength, balance, flexibility, rhythmic training/musicality, quick-slow movement dynamics and the head-tailbone connection. Students will also focus on mastery of turns, leaps, jumps, falls and recovery, partnering, and floor work. In addition, students will also gain valuable experience in structuring movement from simple phrases to complex organizational units and exploring the visual components of dance production. Dance Ensemble students will perform primarily on campus. Students should expect to spend 1-1.5 hours per week outside of class on dance writing and review of technique, choreography, composition and class concepts. This class can be repeated for up to 4 credits. Credit: 1

Advanced Dance Ensemble

Prerequisites: Audition and departmental approval

This yearlong course is designed for the advanced level dancer with a strong interest in the art of dance. Advanced dance students will continue to develop a broad movement vocabulary while learning choreography in jazz, contemporary, modern and Hip-Hop dance. Emphasis will be placed on mastery of turns, leaps, jumps, falls and recovery, partnering, and floor work. In addition, students will also gain valuable experience in structuring movement from simple phrases to complex organizational units and exploring the visual components of dance production. Advanced students will also perform off campus. Students should expect to spend 1.5- 2 hours per week outside of class on dance writing and review of technique, choreography, composition and class concepts. This class can be repeated for up to 4 credits. Credit: 1

Dance Choreography and Composition [Not offered 2019-20 school year]

Prerequisite: Completion of one year of Dance Ensemble or Advanced Dance Ensemble

This trimester course provides exploration of topics within the dance genre, including but not limited to improvisation, choreography & composition, dance production and audition preparation. Students will explore different methodologies for creating choreography and structuring their work to effectively communicate artistic style and vision. Students will learn to generate and manipulate movement through exercises and improvisation. Emphasis will be placed on critique and assessment of their own work and the work of others. Students will also learn basic concepts of dance production that will enhance the presentation of their work. Students wishing to prepare solos for

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college and/or summer intensive auditions will find this class helpful. Students should expect to spend 1.5- 2 hours per week outside of class on dance writing and review of technique, choreography, composition and class concepts. Credit: 1/3

MUSIC

Concert Band/Jazz Ensemble

Prerequisites: Audition and departmental approval

Upper School Concert Band class helps students progress toward the attainment of intermediate to advanced woodwind, brass and percussion objectives through an emphasis on large ensemble playing. Upper School Jazz Ensemble enhances student growth toward the attainment of intermediate to advanced woodwind, brass and percussion objectives through the musical study of Jazz. Each of these ensembles meets two days per week in the same class block. Instrumentation of the groups will be at the discretion of the instructors. Students are expected to buy or rent their own instrument and private lessons are required for all students in these courses.

Percussion students will need to purchase a stick bag containing several kinds of sticks, mallets, etc. and the appropriate equipment for use at home. Attendance at evening concerts, occasional extra-instruction time sectionals, several evening rehearsals and a minimum of weekly individual practice averaging 1.5 hours is expected in this yearlong course. Credit: 1

Concert Band/Jazz Workshop

Prerequisites: Audition and departmental approval

Upper School Concert Band class helps students progress toward the attainment of intermediate to advanced woodwind, brass and percussion objectives through an emphasis on large ensemble playing. Upper School Jazz Workshop enhances student growth toward the attainment of advanced woodwind, brass and percussion objectives through the musical study of Jazz. The Workshop group is intended to provide the very advanced student with additional playing and performance opportunities, as well as the development of small ensemble and improvisational skills. Each of these ensembles meets two days per week in the same class block. Instrumentation of the groups will be at the discretion of the instructors. Students are expected to buy or rent their own instrument and private lessons are required for all students in these courses.

Percussion students will need to purchase a stick bag containing several kinds of sticks, mallets, etc. and the appropriate equipment for use at home. Attendance at evening concerts, occasional extra-instruction time sectionals, several evening rehearsals and a

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minimum of weekly individual practice averaging 1.5 hours is expected in these yearlong courses. Credit: 1

Percussion Ensemble [Not offered 2019-20 school year]

The Percussion Ensemble is designed to teach the fundamentals of percussion technique to beginning and intermediate students through the study of the standard percussion repertoire. Members of the class also will function together as an independent ensemble that will present their own repertoire on and off campus in concerts and events. Students may participate in the Percussion Ensemble for multiple years; some also may be invited to participate in Concert Band, Jazz Ensemble or Jazz Workshop. Percussion students will need to purchase a stick bag containing several kinds of sticks, mallets and accessories. They will also be expected to have a drum pad and either a bell kit or piano for use at home. Attendance at evening concerts, occasional extra-instruction time sectionals, several evening rehearsals and weekly individual practice averaging 1.5 hours is expected in this yearlong course. Credit: 1

String Ensemble

Prerequisites: Audition and departmental approval

The String Ensemble is designed to assist students in the development of advanced string objectives. Students perform a variety of works written for smaller ensembles with the goal of developing greater independence, facility and group skills. Participants will need to purchase or rent an instrument and private lessons will be required for all students enrolled in this class. Attendance at evening concerts, occasional extra-instruction time sectionals, several evening rehearsals and a minimum of weekly individual practice averaging 1.5 hours is expected in this yearlong course. Instrumentation of the group will be at the discretion of the instructor. Credit: 1

Concert Choir

Prerequisites: Audition and departmental approval

Concert Choir is a mixed-voice vocal ensemble chosen through audition. The ensemble serves to expand the musical knowledge of students while enriching cross-curricular study. Using standard choral literature from across the musical eras, ethnic music and contemporary compositions, Concert Choir explores performance practice as well as literary devices, cultural and historic settings, scientific and mathematical implications, and team building. The ensemble performs both on and off campus. Students will be

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expected to complete outside preparation and individual practice averaging about an hour per week. Credit: 1

Chamber Singers [Not offered 2019-2020 school year]

Prerequisites: Audition, one year of participation in an Upper School choral ensemble, and departmental approval

Chamber Singers is a highly select, mixed ensemble of 12-16 voices that are chosen through a rigorous audition process. This ensemble explores the chamber music from the Renaissance era through the vocal jazz idiom of the current age. Throughout this yearlong course, attention is paid to historical context, artistry, language, performance practice and the theoretical foundations of a given piece. Performing both on and off campus, the group serves as ambassadors for Bullis School. Private lessons are encouraged for all students enrolled in this class. Students will be expected to complete outside preparation and individual practice averaging 1-1.5 hours per week. Credit: 1

Music Theory

Prerequisites: Open to sophomores, juniors and seniors. Departmental approval.

Music Theory is a course which explores the foundation and constructs of music and musicianship established in Western European traditions. Students enrolled in the course utilize online texts and peer teaching to hone their basic skills and develop their knowledge and understanding of core concepts and topics such as notation, ear training, chord analysis, part writing, and composition. In addition to instructor guidance, electronic resources allow the opportunity for students to work at their own pace, provide enrichment in areas of strength, and support in areas of weakness. Students should expect to spend 1-1.5 hours per week on study and practice outside of class. Prerequisite: minimum two years of formal music study and permission of the instructor. Credit: 1

Sound Design and Programming

Sound Design is an interdisciplinary, project based course in which students will learn the fundamentals of music theory and computer programming. Students will create instruments using both found objects as well as through the technology of MaKey MaKey devices. In addition, students will diagram popular music and compose their own works using their newfound music theory awareness. Throughout the course students will be developing and connecting musical ideas to the fundamentals of programming.

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As a result of the course projects, students will simultaneously develop and strengthen their understanding of music and technology and will be prepared for more advanced study in both areas. Students should expect an average of 1.5 hours of work per week outside of class on reflections and projects. Credit: $\frac{1}{3}$

Audio Engineering

Prerequisite: Open to sophomores, juniors and seniors

In this media age, people are both creating and consuming media on a daily basis. Tools for media production have become readily accessible, by phone, PC, iPod, etc. Though convenient, such tools do not necessarily create a high level product. This trimester course provides students with the tools to process and analyze auditory data and to make rational decisions in editing, collecting and sharing data aurally. Throughout the trimester, students will explore live and studio sound set-up, acoustics and sound for film. They will work with a variety of standard audio equipment, as well as collaborate with peers and artists within the Bullis community. The students will learn recording in the classroom and may assist the community with live recording for events such as the Jazz Café, senior portfolios, recitals and student work. This course will emphasize critical thinking and collaborative effort, while insisting on excellence in creativity. Students should expect to spend an average of two hours per week on outside review of terms and vocabulary, concepts, and project research. Credit: $\frac{1}{3}$

Computer Music I

Prerequisite: Open to sophomores, juniors and seniors

Computer Music I is designed to develop the individual student's knowledge of and expand his/her appreciation for Computer Music. At the conclusion of the course, students will be equipped to create original compositions with the knowledge of a variety of necessary skills. In the first half of the trimester, students focus on developing skills and utilizing them to create original compositions: pitch, time and volume manipulation, automation, panning, mixing, stacking and FX. In the second half of the trimester, students focus on using Midi to create original beats. They will also learn the art of editing and develop proficiency in remixing popular music. Students will be familiar with universal shortcuts for sound software and also prepared for Computer Music II. Credit: $\frac{1}{3}$

Computer Music II

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Prerequisites: Open to sophomores, juniors and seniors. Completion of Computer Music I.

Computer Music II is designed to develop the individual student's knowledge of and expand his/her appreciation for Computer Music at an advanced level. At the conclusion of the course, students will be equipped to create original compositions with the mastery of a variety of necessary skills used universally in the Computer Music field. Students will use a direct, hands-on-approach, exploring MIDI and BeatPads; along with all applicable tools relating to FX, compression and EQ. Students will be familiar with universal shortcuts for FL Studio 11 sound software and also prepared for use of other similar software types. Credit: 1/3

THEATRE

Engineering Applications for Theatre

Prerequisites: Open to sophomores, juniors and seniors. Some experience in robotics, coding, engineering or technical theatre is required.

In this course, students will use Design Thinking to create complex scenic elements for theatrical productions. Using previous experience in engineering, robotics, technical theatre or coding, students will apply the Engineering Design Process to design and build theatrical props or scenery that include mechanisms, robotics, or other advanced techniques. Students will have the opportunity to design and build advanced structures and systems based off of a script that could be used in a Bullis production. Students will demonstrate project management skills to realize their designs within a given timeline and budget. Students will gain knowledge and skills on advanced equipment such as the ShopBot, 3-D Printer, and Laser Cutter. Students should expect to spend an average of 1-1.5 hours per week outside of class on research, critiques and writing. Credit 1/3

Introduction to Theatrical Production

This exciting and challenging course gives students a behind the scenes look at what it takes to bring theatrical entertainment into being with an unique "behind-the-scenes" perspective. Introduction to Theatrical Production takes theatrical productions from the page to the stage as we will touch on a range of topics: script analysis, scenic, lighting and sound design, stagecraft, electrical theory, engineering and physics, color theory, psychology, history and many more. Beyond just theatrical production, this course will demonstrate how a broad range of academic disciplines have practical application

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within the modern world. Students should expect to spend 45 minutes-1 hour per week outside of class on reading and research. Credit: 1/3

Theatrical Production and Design II

Prerequisites: Completion of Introduction to Theatrical Production, member of after-school tech crew, and/or departmental approval.

In this yearlong course, students will delve more deeply into the varied elements of theatrical design and production. Touching on cross curricular disciplines of history, script analysis, engineering, physics, architecture, scenic, lighting, and sound design, students will discover, refine, and produce a unique vision of standard dramatic works. While taking dramatic works from the page to the stage, students will gain experience in scenic construction, scenic painting, lighting design, electrical concepts and theory, computer aided drafting and model making. Designers will also collaborate with peers in order to create a unified vision of a pre-selected script. Students should expect to spend 1.5- 2 hours per week outside of class on research, critiques and writing. Credit: 1

Advanced Theatrical Design and Production

Prerequisites: Completion of Theatrical Production and Design II and/or departmental approval.

This yearlong course continues the work introduced in Advanced Stagecraft Techniques with additional focus on design theory and practicality. Topics include set, light and sound design and technical direction of all elements. Students develop and present projects consisting of complete designs and working drawings of scenery and lighting from selected works of theater. The emphasis is on the implementation of concepts and ideas in physical production. Students build a finished portfolio and resume including picture designs and other production elements. Students should expect to spend 1-1.5 hours per week outside of class on research, critiques and writing. Credit: 1

Introduction to Acting

The primary goal of this trimester course is to introduce students to the art of acting. More specifically, it allows students to recognize their own personal responses to the environment, specific emotions or a given situation, and utilize these reactions in creating individual and unique characters. Acting is a matter of choices, and students learn to make creative,actable and quality choices based on increased self-awareness and universal understanding. This class focuses on developing both vocal and physical

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awareness through sensory and emotional responses. Using improvisation, monologues, scene work and script analysis, students focus on developing and communicating an understanding of their own experiences and empathy for both peers and people in worlds beyond their own. Students should expect to spend 1.5- 2 hours per week outside of class on reading, character analysis, research and line memorization. Credit: $\frac{1}{3}$

Acting Methods

Prerequisites: Audition and/or departmental approval.

This intermediate, yearlong class will cultivate and reinforce basic acting techniques. Students will explore a variety of acting styles and techniques in character development and distill a personal system that enables them to create and communicate unique characters. Specific topics covered include: selecting and developing suitable material for auditions; preparing and analyzing a monologue or scene; using observations and personal experiences to create believable characters; searching for the truth in an action, a situation or a character; creating a score to activate the physical life of a character; creating an environment out of empty space; writing a resume; guideposts to creating an organized and functional approach to acting. Students should expect to spend an average of an hour per week on outside work, including scene studies, monologues, line memorization and background research. Successful projects will depend on regular time spent working independently across the term. Credit: 1

Theater Workshop

Prerequisites: Audition and/or departmental approval.

This advanced-level class will cultivate and reinforce acting techniques and allow for further application of skills developed in earlier theatre classes. Specific goals include: the study and understanding of Theatre Arts, and its impact on our culture and history; increasing the theatrical performance opportunities for those students who show both interest and aptitude; exploring all realms of theatrical production, including directing, producing, stage managing, and technical elements. Theatre Workshop will participate in staged productions and advanced students will also participate in local theatre competitions. Students should expect to spend an average of an hour per week on outside work, including scene studies, monologues, line memorization and background research. Successful projects will depend on regular time spent working independently across the term. Credit: 1

Standardized Testing Preparation

ACT/SAT Prep - In partnership with Applerouth, a standardized test prep company, juniors have a convenient way to prepare for the ACT and/or SAT tests. Students will attend two test prep sessions per week during their second-trimester study hall. Lack of enrollment will prevent the course from running. There is an additional charge of \$650 to enroll and it will be paid directly to Applerouth. Paying in installments is an option. Students cannot select an additional study hall when taking this class. This is a NON-CREDIT course.

Online Summer Courses

(Classes without sufficient enrollment will be canceled.)

Writing for High School and Beyond: Grammar, Mechanics, and Analytic Writing

Trimester course – June 17 – July 26 (6 weeks)

This six-week, fully online course serves rising 10th, 11th and 12th grade students looking to tune-up grammar, mechanic, usage and analytic writing skills. Through individualized instruction, native and non-native English students will advance their grammar proficiency, which will also prepare students for the English portion of the ACT and the writing portion of the SAT. Using individualized interests, students will also be taken through the process of analytic writing featured in humanities courses such as understanding the prompt, thesis writing, evidence integration, and the introduction and conclusion. Students will also learn 21st century writing tech tools, and they will come away knowing their strengths and areas of improvement. On average, students can expect 12-14 hours of work per week. Credit: 1/3 (Consult Sarah Via with inquiries.)

ONLINE Public Health and Personal Wellness

Trimester course – June 17 – July 26 (6 weeks)

This six-week course covers the same amount of material and requires the same expectations as the Public Health and Personal Wellness course; however, it is completed entirely online. This course is open to sophomores, juniors and seniors who prefer to fulfill this graduation requirement outside of the regular school year. On average, students can expect 12-14 hours of work per week. Credit: 1/3 (Consult

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Maureen Martin with inquiries.)

ONLINE Personal Finance

Trimester course – June 17 – July 26 (6 weeks)

This six-week, fully online course will teach students how to make practical financial decisions throughout their lives. Students will learn real financial life skills that they will be using throughout their lives, starting with the development of financial goals, including saving for college and retirement and money management. Students will learn to how to budget, balance their checkbook, complete tax forms, save, invest, and use credit. They will also learn the fundamentals of purchasing a home or a car including types of insurance plans. This course will provide students with a solid foundation for making sound financial decisions throughout their lives. Students should expect to spend 12-14 hours working online each week. (Consult Maria Antokas with inquiries.)
Credit: 1/3

ONLINE Geometry

Full year course – June 17 – August 9 (8 weeks)

This eight-week, fully online course presents an integration of plane, solid and coordinate geometry, using both inductive and deductive modes of reasoning. Geometer's Sketchpad is used as a tool for investigation and proof. Topics include interrelation of points, lines and planes, parallel lines, congruent triangles, quadrilaterals, polygons, similar triangles, circles, right triangle trigonometry, area and volume. Students should expect to spend 20-24 hours working online each week.
Credit: 1 (Consult Dr. Robert Nichols with inquiries.)

Questions about online classes should be directed to: Maureen Martin, Online Learning Coordinator (maureen_martin@bullis.org)