Wardlaw-Hartridge
Curriculum Guide
Grades 9 – 12
2018-19

Mission Statement

The Wardlaw-Hartridge School prepares students to lead and succeed in a world of global interconnection. We provide an educational atmosphere characterized by academic challenge, support for individual excellence, diversity, and a familial sense of community.

Core Values

The core values of the Wardlaw-Hartridge school community are:

- Integrity – our bedrock value, *sine qua non*.

- Opportunity – Wardlaw-Hartridge develops academic and intellectual excellence in its students through programs that stretch their creative imaginations, develop their athletic and artistic skills, engage their sense of discovery, and develop a social conscience. In the process, students take on leadership roles and learn how to work effectively in teams.

- Support – Every member of the Wardlaw-Hartridge faculty believes in a personal approach to educating and developing the whole child. Wardlaw-Hartridge educators take the time, care, and interest in each student to call forth his or her best work.

- Diversity – The diversity of thought, background, and culture at Wardlaw-Hartridge distinguishes us among independent schools, strengthens the global orientation of our curriculum, and enriches the daily experience of every member of the school community, inside and outside the classroom.

- Community – When faculty members, students, parents, or graduates walk through the doors of Wardlaw-Hartridge, they have entered a home. Our community is distinguished by an ethos of care and mutual respect, and a strong partnership with families.

- Sustainability - Wardlaw-Hartridge prepares students to become citizens whose beliefs and actions will create a more humane and sustainable global society.

The Wardlaw-Hartridge Upper School Curriculum

Academic Overview

The Wardlaw-Hartridge Upper School provides the final stage in preparing students to succeed in demanding college programs. At the same time the Upper School goes beyond a narrow concept of "college preparation" and educates students in the broadest sense of that term. Its aim is that students will possess the qualities—intellectual, aesthetic, social, and moral—that are necessary for an individual to achieve his or her potential in today's global society.

The Upper School provides a wide selection of college preparatory courses, including honors and advanced placement courses. All classes are taught by knowledgeable and caring faculty and are designed to elicit the best work that students, with their varying abilities, can achieve. Encouraging students to wrestle with complexity, extend their understanding of nuance, and refine their sense of self is at the core of the Upper School's commitment to intellectual excellence.

The Upper School affirms not only intellectual excellence, but also excellence in the arts. The majority of its students are active participants in the fine and performing arts as members of the band, concert choir, drama productions, art classes, etc. Involvement in the arts provides the basis for life-long avenues of self-expression.

Wireless technology is an integral part of the Upper School curriculum. Students are required to own a personal laptop computer. That, along with other digital tools and a wireless network tremendously improves the quality of students' work. Using technology expands the opportunity for students to ask probing questions, research those questions, and present the results. Throughout its curriculum, Wardlaw-Hartridge endeavors to instill in each of its students the discipline and standards to be ethical and productive members of the digital world in which they are participants.

The Upper School curriculum offers a variety of required and elective subjects leading to the Wardlaw-Hartridge diploma. The academic program for grades nine through twelve requires all students to accumulate at least 16 credits each year. This selection of courses must focus primarily on fulfilling the requirements in English, mathematics, science, history, world languages, the arts, physical education, and health.

A full course load is usually six classes. Students are permitted to request more than six courses. Approval depends upon the student's current and prior academic performance, the rules governing honors and advanced placement courses, and the ability to schedule the requests. Students will be informed by mid-June of the faculty decision about their requests.

In all that it does, the Upper School seeks to promote the moral growth of its students by maintaining an environment in which the qualities of kindness, civility, integrity, and respect not only are encouraged, but also are put into practice each day.

Required Credits for Graduation

To graduate from the Wardlaw-Hartridge Upper School, a student must accumulate a minimum of 64 credits, at least 16 credits each academic year. The sixty-four credits must include four years of English, three years of mathematics, three years of science, three years of history, three consecutive years of world language, one year of the arts, one trimester of financial literacy, two years of health, and four years of physical education. Additional credits to reach or go beyond the required 64 may be selected from any of the remaining course offerings.

In addition, at least four of the six courses each year must be major courses. Major courses are all courses that fulfill the English, Mathematics, Science, History, and World Language Department requirements as well as Advanced Art, AP Studio Art, Introduction to Computer Science, AP Computer Science, and AP Music Theory.

SUBJECT	**CREDIT**	
Mathematics	9.0	(Algebra I, Geometry, and Algebra II)
Science	9.0	(Biology, Chemistry, and Physics)
Humanities		
English	12.0	(3 credits each year)
History	9.0	(Global Humanities, Modern World History, and US History)
Electives*	2.0	(2 trimesters or 1 year-long course)
World Lang **	9.0	(3 consecutive Upper School years)
The Arts	1.5-3.0	(1 full year in the arts)
Health	1.5	(9th and 10th grade)
Physical Education	4.0	(1 credit each year)
Electives	6.0-9.0	
Sr. Intern/Thesis	1.0	(or Research Seminar: Capstone, 3.0 credits)
Financial Literacy	0.5	
Min. Total Required	64	(16 per year)

* **Some competitive colleges recommend four years of History**

** **Competitive colleges recommend four years of the same language.**

Additional Requirements

Peer Leadership

The Peer Leadership Program at the Wardlaw-Hartridge School has a long-standing tradition of helping freshmen become integrated into their new environment in the Upper School community, while simultaneously developing and testing the leadership skills of the selected senior peer leaders. Peer leaders are chosen based upon their demonstrated ability to lead a group and their commitment to respect, confidentiality, and trust. Together with their advisors, the senior peer leaders practice communication skills, develop a greater appreciation for individual differences, and learn problem-solving skills that they can apply to other life situations. This process begins with a three day retreat in August, and continues in weekly meetings throughout the school year. Freshmen meet once in a rotation in small groups, with their two assigned senior peer leaders. They examine such topics as peer pressure,

relationships, academic concerns and other common issues facing Wardlaw-Hartridge students. The program provides the freshmen groups with the tools necessary to build essential relationships and to make critical decisions. It aids in breaking down barriers and increasing communication and understanding across social groups. In essence, Peer Leadership facilitates the building of the caring, safe learning community of the Upper School, creating a healthy social climate for students to discuss issues pertinent to their lives.

Senior Thesis/Senior Internship/ Research Seminar: Capstone

As the final step in preparing its students to be successful in college, as well as to be active and informed citizens in the world beyond college, the Wardlaw-Hartridge Upper School requires each of its seniors to complete either a Senior Thesis, a Senior Internship, or a Senior Capstone project.

Senior Thesis:

The thesis must identify a critical issue or controversy in our society and present the conclusions in an informed, effective way. In doing so, students will wrestle with ambiguity, understanding that conflict and competing priorities often are not easily resolved. They will learn how to access information and identify its veracity and any possible bias. They will hone presentation skills, both orally and in writing. To complete the senior thesis requirement, the senior must do one of the following:
1) identify a challenge or problem that our society faces, research it thoroughly, and propose and be prepared to defend a solution that takes into account all facets of the problem **OR**
2) identify a controversial issue that creates divisions within our society, research the opposing viewpoints thoroughly, and suggest and be prepared to defend a solution that considers carefully the concerns of all sides.

The Senior Thesis must be based on detailed and thorough research and must include an element of fieldwork, e.g. interviews with experts in the field, surveys of the people affected, etc. Once a student has completed his or her Senior Thesis, the student must present his or her findings to at least one expert in the field and, if possible, get feedback from the expert. The student must then present his or her findings both orally and in writing to a panel of Upper School faculty. The Senior Thesis counts as one credit toward graduation.

Senior Internship:

The Senior Internship represents an example of how the school curriculum moves out of the school structure, how skills learned in classes are used in the outside world, and how a student begins to make future academic and career choices. The internship provides students with professional work experience, develops mentoring relationships between adults and students, exposes students to the various resources in our community, and prepares students for future academic and professional careers.

Senior Internships usually fall into one of four categories, although projects outside this list, or a combination of them, will be considered. The categories are vocational, service, fine arts, and environmental. Once the student has completed a minimum of 50 hours of internship work, the student must then present his or her experiences both orally and in writing to a panel of Upper School faculty.

The Senior Internship may not take place under the supervision of a relative.

The Senior Internship counts as one credit toward graduation.

Research Seminar: Capstone

The interdisciplinary Capstone course provides senior students with the resources, framework, and instruction necessary to demonstrate long-term, integrated academic achievement. This research seminar is designed for the student who elects to study a topic of choice for a full year. Students are given a wide latitude when determining topic choices. Sample topics include the following: The Bass Player in Modern Music; Yoga as Therapy; Creating a Vegan Cookbook; Traumatic Brain Injury; Writing a Graphic Novel; Islam and Islamophobia in the United States; Creating a Web-based Sports Memorabilia Business; Video Game Art; Victorian Interior Design; Human Trafficking in Southeast Asia; and Game Shows in American Culture. The rigorous nature of the course waives the senior student's requirement for an internship or thesis, and the course itself garners the weight (in calculation of the student's grade point average) of an Advanced Placement course.

Led by a Capstone teacher who will oversee student work and monitor progress, students hone and broaden their academic research, scholarly writing, and presentation skills. Students conduct scholarly research to produce a unique and comprehensive final product, possibly an exhibit or project, *in addition to a thesis*. The length of the thesis will vary, depending upon the scope of the independent study and final product produced. Papers range twenty or more pages in length. Using a wide variety of techniques, students will present their original work and findings to members of the academic community as their final assessment for the course. The final thesis will be published as part of the collection located in The Sonawalla Center for Global Learning (CGL).

Pre-requisite: Prior to the start of the course, students will be required to submit a program proposal to the Capstone committee. The proposal details research objectives, project methodology and breadth, and measurable outcomes.

This course is a requirement for the Global Scholars Program.

Senior Speeches

Every senior is required to plan and deliver a three to five minute speech on a topic of importance to the student. Working with a faculty advisor, each student receives individual assistance with topic selection and organization of material, as well as coaching in the delivery of the speech. These speeches are given during Morning Meeting throughout the year on dates selected in advance by the students. Family and friends are welcome to come and hear these speeches.

Policies & Procedures

Course Changes

During the first rotation of each course, students may request to add or drop a course by filling out the appropriate form available in the Registrar's office. A student may add or drop a course only by obtaining the required signatures of consent on the form. In the case of seniors, the College Counseling office must also approve the change.

Any course that is dropped after the add/drop period will remain on the student's' transcripts with an indication that the student withdrew from the course. Partial credit **may be** given for a course that is dropped prior to the completion of the course; approval dependent on the Head of Upper School.

In the exceptional case that a senior is granted permission to drop a course, College Counseling office will guide the student in writing to all colleges to which the student has applied or been admitted and explain the reason for the course change.

Credits from Other Institutions

Credit for courses from other accredited institutions in courses comparable to our own are accepted toward the subject credit requirements for graduation. Transcripts of these credits must be placed on file at our school for reference and use on college applications. Grades from other institutions are not factored into a student's GPA.

If a student wishes to advance to successive levels of a subject by taking summer courses or college courses during the school year, the student must get prior approval from the subject Department Chair and may be required to show competence in the subject.

Grade Point Average

A student's GPA is based on the grades obtained in his or her major academic courses. Grades are assigned numerically as percentages, not by letters. For reference, letter grade equivalences are as follows:

97 to 100 = A+	77 to 79 = C+
93 to 96 = A	73 to 76 = C
90 to 92 = A-	70 to 72 = C-
87 to 89 = B+	67 to 69 = D+
83 to 86 = B	63 to 66 = D
80 to 82 = B-	60 to 62 = D-
	Below 60 = F

A student's GPA is calculated by first adjusting the numeric grade. If the course is an honors course or an AP course, the numerical grade is multiplied by a weighting factor when the overall GPA is calculated. The grade point average also takes into account the credit value of each course.

Advanced Placement Courses

Students who meet the necessary course requirements (please see the individual AP courses for these requirements) and receive a Departmental recommendation may enroll in Advanced Placement courses. The two exceptions are AP Human Geography and AP Psychology where only a Departmental recommendation is required.

The following criteria are used to facilitate this placement:

A student taking one or more Advanced Placement courses may enroll in only five major courses. Students wishing to enroll in additional courses must do so with administrative approval (Head of the Upper School, Department Chairperson, US Advisor and a Member of the College Counseling team). Requests must be submitted in writing to the Head of the Upper School and will be considered by the entire US Faculty.

Students may take <u>up to three Advanced Placement courses</u> within the 16 credits required per year without administrative approval. Students wishing to enroll in additional courses (both AP and non-AP) must do so in writing and receive administrative approval (Head of Upper School Department Chairperson, US Advisor and a Member of the College Counseling team). Requests must be submitted in writing to the Head of the Upper School and will be considered by the entire US Faculty.

Each student is afforded <u>ONE</u> opportunity each academic year to register for an AP course when they have <u>not met the final grade requirement in the pre-requisite course</u>. Students wishing to enroll in the AP course must first receive Departmental and US Advisor approval. Upon receiving these approvals, a request must be submitted in writing to the Head of Upper School and will be considered by the entire US Faculty.

Students interested in taking AP Human Geography or AP Psychology must get approval from the Humanities Department. After receiving approval, students must inform their US advisor.

All students taking Advanced Placement courses are required to take the Advanced Placement examination in those courses. Students are assessed a fee in October to cover the cost of the AP test. Families eligible for a Fee Waiver may apply through the College Counseling Office.

Pre-requisites and Co-requisites

Pre-requisites and co-requisites are listed under each course. Please note pre- and co-requisites for each course. In general, the following rules will apply:

1) In order for a student to move from an **honors section** to an **Advanced Placement section**, the student must achieve a final grade of 87 or above the previous year and obtain departmental approval.

2) In order to **remain** in an honors or Advanced Placement section the following year, the student must achieve and maintain a final grade of 87 or above.

3) In order for a student to move from a **non-honors** section to an **honors or Advanced Placement** section, the student must achieve a final grade of 93 the previous year and obtain departmental approval. Some departments may require taking the Honors level exam for placement into the AP course.

4) In World Language level I through IV, in order for a student to continue from non-honor to non-honor, the student must achieve and maintain a final grade of 70 the previous year.

5) In elective, but sequential, World Language courses (after Level IV), in order for a student to continue from non-honor to non-honor, the student must achieve and maintain a final grade of 85 the previous year.

6) In elective, but sequential, non-honor Math courses (after Algebra II), the student must achieve and maintain a final grade of 85 the previous year or have Department Chair approval to continue.

Independent Study

Independent study is available to students who want to pursue an area of special interest not provided by a particular course or to students who are prevented from enrolling in a course because of a scheduling conflict. A request for an independent study should reflect a student's genuine interest and commitment to the subject. A student requesting an independent study must submit, in writing, a proposal prior to the beginning of the school year. The proposal will require signatures from the student's US advisor, the teacher of the proposed independent study, the Department chairperson, and the Head of Upper School. The above faculty will take into consideration the student's anticipated course load and his or her strengths as a student. Independent work is not recommended for a student already planning to take five or more academic courses. Also, an independent study is not permitted for science courses that have labs as a major component. All grades for independent study are given regular weight in the computation of the student's grade point average.

Additional Programs

The Global Scholars Program

The Wardlaw-Hartridge Global Scholars Program (GSP) is designed for students who are interested in learning about current international challenges while demonstrating positive dispositions toward global stewardship. Students enroll in this program at the end of the ninth grade. Students who elect this program of study will earn an endorsement on their Wardlaw-Hartridge diploma after completing requirements within each of the following **seven** strands:

World Language Competency: World language competency will be demonstrated by being enrolled in the same world language for all four years a student is in Upper School. The student must earn a cumulative language GPA of at least 87% by the conclusion of senior year. An international student, from a country where English is not the official language, may use the study of English to fulfill this requirement.

Specialized Global Course Work: A Wardlaw-Hartridge Global Scholar must also earn a career cumulative GPA of 90% in program specific courses that total at least seven credits. Two of these courses are required. These required courses are: Global Citizenship (1 credit) and Introduction to World Religions (1 credit).

GSP electives earning at least 5 additional credits must also be selected. These credits must be earned in at least two different departments. Although the courses offered each year may change slightly, all GSP courses are indicated in the Curriculum Guide with the symbol: @

All GSP students must maintain a cumulative overall GPA of 87%.

Cross-cultural Experience: Students will engage in a cross-cultural experience as approved by the Director of Global Scholars and reflected in their e-portfolio.

Service Learning: Students will participate in a service learning experience. The purpose of service learning is to support or enhance the work of local or international agencies to effect positive change.

Research Seminar: Capstone: Global Scholars will conduct scholarly research with a global theme and present a unique and comprehensive final product, possibly an exhibit or project, in addition to a thesis.

Community Service: Global Scholars will provide unpaid service that benefits our local communities specifically by doing work as volunteers for government or non-profit organizations. Qualifying service activities will be reviewed and approved by the Director of Global Scholars.

Each year, students are required to meet an established minimum numbers of hours, with at least 75% of the hours being in one area of interest.

Requirements by Grade Level:
10th Grade - 20 hours
11th and 12 Grade - 30 hours each year

Students must complete the required service document to account for the hours served. The document must be signed by the supervisor of the service activities.

**Service hours may begin starting with the summer prior to the new school year.

E-Portfolio: The E-Portfolio is where the Global Scholar will synthesize and reflect on their coursework, community action, service-learning, and cross-cultural experience. Global Scholars will also infuse their E-Portfolio with their interpretation and reflections on current events and personal growth. Students will meet with a faculty advisor three times each year to help guide them through the E-Portfolio process.

Each year, student progress in GSP will be evaluated by the Director of Global Scholars.

International Student Support

The goal of the International Student Support program at Wardlaw-Hartridge is to provide each international student with personalized guidance to help the student develop essential study strategies. These strategies will help him or her navigate through the rigorous academic curriculum and also prepare students for further study at American colleges and universities.

All newly accepted International Students must attend a six week summer program at Wardlaw-Hartridge immediately prior to fall matriculation.

The academic curriculum for international students is rigorous, with minimal modifications to the school's academic requirements. Advisors work closely with each student to achieve an individualized course of study. Academic support is also provided through an ELL study hall proctor, peer tutoring, and appointments with content area teachers as needed. Advanced math is available for those students who meet the requirements. Beginning in their second year at Wardlaw-Hartridge, qualified ELL students, with teacher recommendations, may qualify for placement into a world language in addition to English. Concert choir is required and participation in extracurricular activities, including athletics, is expected.

Athletics

At Wardlaw-Hartridge, we consider athletics an extension of the classroom and believe it is integral to the educational experience of our students. We strive to provide an environment that promotes achievement, fair play, integrity, sportsmanship, and overall health and fitness.

Students may choose from the following sports: in the fall – boys' soccer, girls' soccer, girls' tennis, girls' volleyball or coed cross country; in the winter – boys' basketball, girls' basketball, coed cheerleading, coed swimming, or coed winter track and field; in the spring – boys' baseball, boys' tennis, boys' lacrosse, girls' softball, girls' lacrosse, coed golf, or coed spring track and field.

Library & Information Center

The Sonawalla Center for Global Learning (CGL) is physically and academically at the center of the Wardlaw-Hartridge School. The CGL operates to inspire all students to explore new ideas, utilizing an array of online resources which give the students access to scholarly periodicals, newspapers, books, and databases which are all accessible 24/7. There is also a core collection of print materials housed in the CGL with larger subject specific collections located in each discipline's department.

Space in the Global Learning Center is available for the students to do collaborative work but also includes quiet study rooms for individual work. Smart board, Smart TV and Skyping capabilities are available in the larger conference/classroom space.

Research and investigative skills are strengthened as the student progresses through the Upper School. The use of information gleaned from a variety of the Center's resources is stressed for students to complete assignments designed to meet specific curricular needs.

Summer School

Students may choose to take courses during the summer months. Summer study opportunities are available at Wardlaw-Hartridge and exist at many other institutions. These programs are offered for both enrichment and acceleration. It is the obligation of the student to have his or her summer transcript sent to the Wardlaw-Hartridge Upper School Office in order to have a complete transcript on file for college applications.

Prior to the first Monday in June, a student who is interested in taking courses in the summer for the purpose of advancement, whether at Wardlaw-Hartridge or elsewhere, must complete a form that requires permission from the department chairperson and the Head of the Upper School. An example would be a student who has completed Geometry and wishes to take Algebra II (or vice-versa) in summer school in order to enroll in Pre-Calculus in the fall.

College Advising

The College Counseling class is a year-long Pass/Fail class which begins in the second trimester of junior year, and ends at the end of the first trimester of senior year.

The Wardlaw-Hartridge mission of preparing students "to lead and succeed in a world of global interconnection" is certainly true in the college counseling program, as students begin to gaze beyond the

Wardlaw-Hartridge campus and enter into a time of exciting transition. Students, with the collaboration and support of their parents and college counselor, embark on a yearlong journey of self-discovery as they engage in honest self-assessment, thoughtful research, and increasingly independent decisions. We encourage students to find their voices while they explore, probe, and challenge their own assumptions about themselves and the colleges they are considering. To find comfortable and appropriate matches between students and post-secondary institutions, we attempt to foster among the students, parents, and the college counselor open lines of communication, honest feedback, and a spirit of cooperation. We try to nourish an environment in which all may practice patience, sustain their sense of humor, and maintain an open mind as we navigate together the challenges and the exciting possibilities in the college selection process.

We adhere to the belief that students are ultimately the driving force behind the process. We encourage students to take ownership of their destiny and responsibility for their actions; we support them in embracing this opportunity to test their values, explore their personal preferences, and make complex, long-term decisions for themselves. Application deadlines, testing dates, essays, recommendation requests, and interviews all require equal and full attention from the students. We hope that the students emerge from this critical stage in their adolescent development and their first step toward adulthood with a clearer sense of their independence.

The college office operates within the context of truth and reality, placing the dignity and worth of each student as a primary focus. Through active listening, an accurate assessment of students' abilities and talents, and a willingness to understand students' personal and cultural sensitivities, we strive to build a healthy and open relationship with students and their parents. We value students for the whole spectrum of their humanity and promise. We are confident that their preparation, organizational skills, maturity, intelligence, and thoughtfulness will ensure satisfaction with their college selection.

Important Dates in the College Admissions Process

Registration deadlines for the SAT Reasoning Test, SAT Subject Tests and ACT Tests are approximately five weeks ahead of the test dates. Registration bulletins are available in the college counseling area. You may also register on-line at www.collegeboard.com, www.act.org and www.toefl.org. Most colleges and universities, as well as the NCAA Clearinghouse, accept the SAT or the ACT test as a college entrance examination.

The SAT is an aptitude test, testing reasoning and verbal abilities; it measures a student's critical thinking skills and is composed of Critical Reading, Mathematics and Writing sections. Beginning with the March 2009 test administration, the College Board began to offer Score Choice, allowing students to select scores from a particular test date to be sent to colleges. Keep in mind, however, that there are a number of colleges requesting that all scores be sent.

The ACT is an achievement test, measuring what a student has learned in school. The ACT (plus Writing) includes a set of four multiple-choice tests which cover English, Mathematics, Reading, and Science, as well as a Writing section. ACT does not combine scores from different test dates in their reports; it is ACT's policy to report scores only for entire test dates.

The TOEFL® Test (Test of English as a Foreign Language) should be taken by all international students. Visit their website at www.ets.org/toefl for test dates and a convenient center. The TOEFL test measures a student's ability to communicate in English at colleges and universities. The paper-based format is being phased out and is currently offered only in areas where testing via the Internet is not available. It is recommended that students take the TOEFLiBT® test, administered via the Internet.

Fall 2018-2019	
Aug. 25	**SAT Reasoning Test & SAT Subject Tests**
Sept. 8	**ACT Test**
Oct. 1	**Deadline for Early Decision notification to the College Counseling Office**
Oct. 6	**SAT Reasoning Test & SAT Subject Tests**
Oct. 10	**PSAT**
Oct. 27	**ACT Test**
Nov. 3	**SAT Reasoning Test & SAT Subject Tests**
Dec. 1	**Deadline for filing all transcript request forms to the College Counseling Office**
Dec. 1	**SAT Reasoning Test & SAT Subject Tests**
Dec. 8	**ACT Test**
Spring 2018-2019	
Feb. 9	**ACT Test**
March 9	**SAT Reasoning Test & SAT Subject Tests**
April 13	**ACT Test**
May 4	**SAT Reasoning Test**
May 6-17	**AP Exams**
June 1	**SAT Reasoning Test & SAT Subject Tests**
June 8	**ACT Test**
July 13	**ACT Test**

Courses by Grade Level 2018-19

The following list of courses by grade level indicates the typical range of courses available to that grade. Students may request courses at other grade levels as long as the pre-requisites and co-requisites are met.

* = New Courses 2018-19
@ = Global Scholar Credit

Grade 9			**Grade 10**		
Subject	**Courses**	**Credit**	**Subject**	**Courses**	**Credit**
English	English I	3.0	English	English II	3.0
Mathematics	Algebra I	3.0		English II H	3.0
	Geometry	3.0	Mathematics	Geometry	3.0
	Geometry H	3.0		Geometry H	3.0
Science	Biology	3.0		Algebra II	3.0
	Biology H	3.0		Algebra II H	3.0
History	Global Humanities	3.0	Science	Chemistry	3.0
World Lang	Latin I	3.0		Chemistry H	3.0
	Latin II	3.0	History	Modern World History	3.0
	Latin II H	3.0	World Lang	Latin II	3.0
	Spanish I	3.0		Latin II H	3.0
	Spanish II	3.0		Latin III	3.0
	Spanish II H	3.0		Latin III H	3.0
	Mandarin Chinese I	3.0		Spanish II	3.0
	Mandarin Chinese II	3.0		Spanish II H	3.0
Required	Peer Leadership	0.0		Spanish III	3.0
	Health and Wellness	0.5		Spanish III H	3.0
	Physical Ed	1.0		Mandarin Chinese II	3.0
				Mandarin Chinese III	3.0
Electives	(See Elective Sections)		Required	Health Education	1.0
				Physical Ed	1.0

			Electives	(See Elective Sections)	

Grade 11			**Grade 12**		
Subject	**Courses**	**Credit**	**Subject**	**Courses**	**Credit**
English	English III	3.0	English	@AP Eng Literature & Comp	3.0
	English III H	3.0*		@African American Lit	1.0*
	@AP Eng Lang & Comp	3.0		@Hip Hop Lit	1.0
Mathematics	Algebra II	3.0		@Wit, Humor & Satire	1.0*
	Algebra II H	3.0		@Emotions & Notions	1.0
	Pre-Calculus	3.0		@ Religion, Lit & Culture	1.0*
	Pre-Calculus H	3.0		TBD	1.0*
Science	Physics	3.0		TBD	1.0*
	Physics H	3.0		TBD	1.0*
	AP Biology	3.0	Mathematics	Pre-Calculus	3.0
	AP Chemistry	3.0		Pre-Calculus H	3.0
History	US History	3.0		Calculus	3.0
	AP US History	3.0		AP Calculus AB	3.0
World Lang	Latin III	3.0		AP Calculus BC	3.0
	Latin III H	3.0	Science	AP Biology	3.0
	Latin IV	3.0		AP Chemistry	3.0
	Latin IV H	3.0		AP Physics (Mech)	3.0
	Spanish III	3.0	World Lang	Latin IV	3.0
	Spanish III H	3.0		Latin IV H	3.0
	Spanish IV	3.0		AP Latin	3.0
	Spanish IV H	3.0		Mandarin Chinese IV	3.0
	Mandarin Chinese III	3.0		Mandarin Chinese IV H	3.0
	Mandarin Chinese IV	3.0		Mandarin Chinese V	3.0
	Mandarin Chinese IV H	3.0		AP Mandarin Chinese	3.0

Required	Physical Ed	1.0		Spanish IV	3.0
	College Counseling 11	0.0		Spanish IV H	3.0
Electives	(See Elective Sections)			Spanish V	3.0
				AP Spanish Lang	3.0
			Required	Senior Thesis/Internship **OR**	1.0
				@Research Seminar Capstone	3.0
				Financial Literacy	0.5
				Physical Ed	1.0
				College Counseling 12	0.0
				Senior Speech	0.0
			Electives	(See Elective Sections)	

Electives Grades 9/10		
Subject	**Courses**	**Credit**
English	Journalism	1.0
	Modern Film/Screenplay	2.0
Computer	Yearbook 1	1.0
	Yearbook 2	1.0
	Robotics	1.0
	Adobe Photoshop	0.5
	Broadcast Engineering	0.5
	Broadcast Production	1.5
Science	Comparative Zoology	1.0
	@Epidemiology	1.0
	@Geological Disasters	1.0*
STEM	@Designs for Sci Thinking	1.0
	@Research in Molecular Sci	3.0*

	@Research in Genetics	3.0*
Humanities	@Biological Anthropology	1.0
	@AP Human Geography	3.0
GSP	@Intro to World Religion	1.0
World Lang	Chinese Literature	3.0*
The Arts	Sculpture I	3.0
	@Art I	3.0
	@Art II	3.0
	@Concert Band	1.5
	@Concert Choir	1.5
Driver Ed	Driver Education	0.0

Electives Grades 11/12		
Subject	**Courses**	**Credit**
English	Modern Film/Screenplay	2.0
Math	AP Statistics	3.0
	@Statistics	3.0
Computer	Intro to Computer Science	3.0
	AP Comp Science Principles	3.0
	AP Comp Science	3.0
	Yearbook 3	1.0
	Yearbook 4	1.0
	Adobe Photoshop	0.5
	Robotics	1.0
	Broadcast Engineering	0.5
	Broadcast Production	1.5
Science	Organic Chemistry	1.0
	Comparative Zoology	1.0

	@Epidemiology	1.0
	@Geological Disasters	1.0*
	@Anatomy and Physiology	3.0
STEM	@Engineering Your World	3.0
	@Designs for Sci Thinking	1.0
	@Research in Molecular Sci	3.0*
	@Research in Genetics	3.0*
History/Humanities	AP Psychology	3.0
	@AP Human Geography	3.0
	@AP Microeconomics	3.0
	@Biological Anthropology	1.0
	@How Evil Stays in Power	1.0*
	@History of Latin America	1.0*
	@LBGTQ Studies	1.0*
GSP	@Global Citizenship	1.0
World Lang	Chinese Literature	3.0*
The Arts	@Art III	3.0
	Sculpture II	3.0
	@Advanced Studio Art	3.0
	@AP Studio Art I	3.0
	@AP Studio Art II	3.0
	Fundamentals of Music	3.0
	@Concert Band	1.5
	@Concert Choir	1.5
Health	@Healthy Lifestyles	1.5
Senior Elect	Peer Leadership	0.0

Athletics	
Fall	Soccer (Boys)
	Soccer (Girls)
	Tennis (Girls)
	Volleyball (Girls)
	Cross Country (Coed)
Winter	Basketball (Boys)
	Basketball (Girls)
	Cheerleading (Coed)
	Swimming (Coed)
	Track & Field (Coed)
Spring	Baseball (Boys)
	Golf (Coed)
	Lacrosse (Boys)
	Lacrosse (Girls)
	Softball (Girls)
	Tennis (Boys)
	Track & Field (Coed)

English

Reading and writing skills are an integral part of all learning and communication and essential to success in all academic disciplines. Students are therefore required to take English all four years in the Upper School. In each grade students read works in all three genres (fiction, drama, and poetry) written by authors of diverse backgrounds. Every student participates in class discussions about the literature. Writing skills are practiced in short and longer essays. On an individual basis, each student may get specific instruction from their instructor or from another instructor in the English or History department, to further the composition of any essay or paper. To develop research skills, each year students compose research papers based on various sources with the length and sophistication of the papers increasing from the freshman to the senior year.

Basic concepts of literary analysis and genre are reinforced in grade nine, while grade ten focuses particularly on British literature. Grade eleven surveys American literature and grade twelve emphasizes global literature. At each grade level, students do formal exercises to expand their vocabularies.

All courses are subject to change depending on student enrollment and faculty availability.

English Courses, Grades 9-11

English I (3 credits)

Ninth grade marks a year of transition in which students are required to approach the study of literature with a greater degree of sophistication. New emphasis will be placed on analytical thinking, while the fundamental reading, writing, speaking, and listening skills are reinforced. Using ancient mythology as a foundation, students will examine the motifs of personal identity and perspective to gain a deeper understanding of how cultural meanings are reflected in literature. By drawing on their knowledge of these mythical elements, students will engage in a critical analysis of a variety of contemporary texts, examining how history and literature are interwoven.

Students will study a wide range of literature including, but not limited to novels, short stories, poetry, drama, and nonfiction. Independent reading projects will be assigned to supplement class assignments. Grammar, punctuation, vocabulary, composition, and usage will be taught within the context of, and applied to, the reading and writing assignments, sharpening each student's processing and revision skills. Students will write a research paper using appropriate documentation, according to MLA guidelines.

English II (3 credits)

The objective of sophomore English is to involve students in the exploration of World Literature, from a global perspective, through an integrated approach which links reading, writing, listening, and speaking. Students in English II will consider themes of diversity, identity, and acceptance of others through a study of classic, modern, and contemporary World Literature. The selections of literature will be predicated on specific global locations and lenses. In addition, the reading selections will incorporate a study of history to better supply a context for an appreciation and understanding of the literature, emphasizing a variety of prose and poetic genres. The course is designed to improve students' ability to read for a variety of purposes, plan and write for a wide range of audiences, apply standard English grammar and usage, speak effectively while simultaneously listening responsively, and develop and apply higher order (critical) thinking skills. In addition, the course will take a process approach to the teaching of writing. Students will

work to refine the writing skills developed in Freshman English. Assignments will focus on writing for a multitude of genres. Activities and assessments will afford students the opportunity to expand their vocabulary, refine their analyses of the literature and their understanding of various media, and improve their speaking, listening, and presentation skills. Students write critical and argumentative essays, engage in creative writing projects, and make technology-assisted oral presentations.

English II Honors (3 credits)
(Pre-requisite: 87 or above in English I H or 93 or above in English I and departmental approval)

English II Honors is an accelerated course that requires students to work as self-directed and reflective learners, both independently and in groups as leaders and collaborators. Students will explore how literature, from a variety of traditions, illuminates and gives meaning to the human experience. In reading a diverse group of texts, predicated upon specific global locations and lenses, students consider ways these texts present perspectives on place, culture, identity and belief. The reading selections will incorporate a study of history to better supply a context for an appreciation and understanding of the literature, emphasizing a variety of prose and poetic genres. While the course content will occasional overlap that of a non-honors course, the standards of the course, and the level of discussion, coupled with the more challenging and complete print and non-print texts of supplemental materials, will present greater challenges for the students. Through class discussions and writing assignments students will focus on the power of an effective argument, and through the year learn how to craft their own. Higher level thinking skills will be reflected in the quality of student performance in oral language, written language, and other media/technology related presentations. Students will further develop their understanding of mechanics and writing conventions, be able to write in a variety of genres, verbally participate, in both small and large groups on an almost daily basis, and are expected to extend classroom reading by self-selecting supplemental readings. Students write critical and argumentative essays, engage in creative writing projects, partake in oral debates, and make technology-assisted presentations. While the form of the standard essay is emphasized: introduction, body, conclusion; special attention is given to inventing original focused thesis statements, incorporating a multidimensional analysis, and utilizing authentic tone of voice.

English III (3 credits)

During junior year, students are challenged to study how various genres of writing and speaking, transformed over time, spreading across the continent, defining and redefining what it means to be American. The literature selected represents the diversity found in American culture, and includes a broad selection of genres, ranging from: poetry, short stories, fiction and non-fiction. The course highlights the historical as well as the scholarly themes through reading, writing, listening/viewing, and speaking. Analysis, interpretation and appreciation of many aspects of American literature is emphasized through student-centered examination of the following: What does it means to be ‘American’? What is the ‘American Dream’? Is the pursuit of the ‘American Dream’ attainable today? By the end of the course students will have developed the following skills: using adaptive language, establishing voice, maintaining style in writing, and speaking to effectively communicate ideas.

English III Honors (3 credits)
(Prerequisite: 87 in English II Honors or 93 in English II and department approval)

English III Honors is an accelerated course designed and devoted to an in-depth study of the American experience as captured in the seminal works of past and present American authors. The literature selected will be examined and analyzed through both chronological and thematic lenses and parallel to

U.S. History class. As such, assigned texts and readings represent the a spectrum of works in American writing, while incorporating authors of diverse backgrounds and a broad selection of genres, including but not limited to: poetry, short stories, fiction and non-fiction. The ultimate goal of this class is to expose students to various periods of American culture, history, and heritage, and the ideas and forces that shaped the times. Students' examination of American literature will focus on four essential questions: How do time and place affect our thinking? Is 'liberty and justice' attainable for all? What makes a good citizen? What makes something beautiful?

In addition, students will explore, through personal, persuasive, and argumentative writing: what does it mean to be 'American'? What is the 'American Dream'? Does everyone have the equal opportunity to pursue the 'American Dream' today? How do my cultural heritage and the heritage of my country contribute to who I am? By the end of this course students will have developed an intimate familiarity with the American literary scene while also acquiring a firm grasp of the ways in which ideas can be communicated.

AP English Language and Composition
(3 credits)
(Pre-requisite: 87 or above in English II H or 93 or above in English II and departmental approval)

Advanced Placement English Language and Composition is primarily a course in both effective writing and critical reading. As students analyze a variety of prose texts, they become increasingly aware of different writing styles. Understanding an author's purpose, audience expectations, and subjects as well as the generic conventions and the resources of language, all contribute to the effectiveness of students' writing.

This course emphasizes the study of a variety of texts and a variety of writing tasks. The course allows students to write in all modes of rhetoric-description, narration, exposition, and persuasion-and on a variety of subjects from personal experiences to public policies, from imaginative literature to popular culture. Because students must be effective writers who are prepared for university study, the course will emphasize expository, analytical, and persuasive writing, which forms the basis of academic and professional communication. In addition, it will include personal and reflective writing that fosters the development of writing facility in any context. Ideally, they should develop an awareness of the expressive potential of language along with an ability to utilize some degree of that potential. *

This course requires intensive summer preparation (reading, research, writing). Students in this course are required to sit for the AP exam in May.

*This course description is abstracted verbatim from the College Board website.

English Elective Courses, Grades 9-12

Modern Film & Screenwriting (2 credits)

Students will view modern films as well as analyze their respective screenplays. Connections will be made between the film and its sociopolitical and artistic contexts.

Daily classes will involve writing exercises and the development of material through workshop and individual conferences. The major goal of the writing component is for each student to complete as well as shoot a 10-page screenplay that is to be submitted to Wardlaw's Independent Film Festival.

English Courses, Grade 12 only

Twelfth grade English is required of all students. Students may select from AP English Literature and Composition **or** AP English Language and Composition (if there is room in the course after 11th grade sign up) **or** from a combination of three of the six one credit electives shown below, one each trimester.

AP English Literature and Composition (3 credits)
(Pre-requisite: 87 or above in AP Language and Composition or English III Honors with department approval, or 93 or above in English III with department approval).

Students who enroll in Advanced Placement English Literature and Composition will engage in careful reading and analysis of college-level works from a range of genres including: novels, short stories, poetry, and drama. In conjunction with the readings, students will also develop skills including sophisticated use of literary terminology. The focus of the course will be intensive and discussions of literature, as well as introductions to secondary critical essays, will be the basis for evaluation. Emphasis is placed on thoughtful and cogent readings using theoretical frameworks. The intention of this class is to provide students with an academic experience paralleling that of a college level literature course. As such, there will be a writing component that focuses on expository, analytical, and argumentative writing about literature through both oral discussion and written essay format. Finally, students write a research paper on a major author to prepare for the AP exam.

Students are expected to be active participants, reading, analyzing, interpreting, and contributing to their learning, in order to establish connections among their observations and the author's intentions, ultimately drawing logical inferences towards an interpretive conclusion. In order for students to be successful, their commitment must start with the summer reading assignment. The AP summer reading list contains two required texts: *The Awakening* by Kate Chopin and *Catch 22* by Joseph Heller. Both texts are to be read and annotated over the summer with the summer assignments submitted by August 15th. Students in this course are required to sit for the AP exam in May.

Senior English Electives – possible titles for 2018-19:

(Please note: electives are subject to change)

@Emotions and Notions: The challenges of being human (1 credit)

Drawing on the lives of characters found in short stories, poetry, drama, and songs from diverse cultures, and using a psychological and sociological literary criticism approach, students will explore the essential question: What does it mean to be human? In a seminar-type setting, students will investigate the motivations, beliefs, and behaviors exhibited by (or faced by) the literary characters we meet. Following our readings, we will work together to share personal impressions, understandings, and questions – always questions - in order to reach a collective appreciation of human behavior that will allow us to better understand ourselves and others.

@Wit, Humor, Satire: Irony, Location, Lens (1 credit)

This course introduces students to an important type of Western literature that is found in almost every genre from drama (Aristophanes, Moliere, Wilde and Shaw) to poetry (Horace, Juvenal, Pope, Byron, and Frost) to stories and novels (Aesop, Chaucer, Voltaire, Gogol, Benson, Waugh and Roth). These authors and many others –including major authors writing today—have developed comedy and satire into an effective literary tool for looking at and critiquing their society. This class will emphasize the differences between comedy and satire, their methods, and their purposes. The focus in this class is on the distinctive satirical 'brand' of humor, with a particular emphasis on the subjects of ethnicity, war, religion, and politics. Further emphasis is on the genres of humor, their history and derivation, methods, and purposes. By the end of the course, students should be able to:

- Articulate the difference between satire and parody
- Identify the major archetypes in American humor and satire
- Explain the comedic and satirical legacy of Mark Twain
- Trace the origins of the various styles of American humor and satire
- Define the contributions made to American satire and humor by women and various ethnic groups
- Name the outstanding contributors to the development of humor and satire
- Identify the role of accents and dialects in satire
- Identify current examples of satire in literature, film, television, and theatre
- Explain the importance of the First Amendment as it pertains to American humor and satire

@Hip Hop Lit: Politics, Poetics, & Power (1 credit)

Can Hip Hop be considered a form of literature? Yes. Hip Hop is the language of the youth; even those who might not identify with its culture have been affected by its influence. What started in the South Bronx during the 1970's has spread to every corner of the globe. New generations are constantly remixing, sampling and redefining this culture – which is more than simply rap music.

Hip Hop Lit is a social justice course that will use the genre of Hip Hop as a platform for examining social issues ranging from: sexism in the media, censorship, oppression, acculturation, and the effects of diaspora or cultural appropriation. The class is academic in its purest sense. "The real value [of Hip Hop in the English classroom] is in what Freire calls, "critical consciousness" – an awakening to the world around us" (Mooney)*. At the beginning of the course, students will learn about the sociocultural and historical roots of Hip Hop, examining poverty in the South Bronx, white flight, and the impact of urban development and gentrification. Students will examine an array of texts, including newspaper articles, scholarly journals, documentaries, and analyze lyrics from a variety of artists, highlighting the politics, poetics, and power of Hip Hop. Our primary text will be, *Book of Rhymes: The Poetics of Hip Hop*, by Adam Bradley.

Throughout the trimester students will be asked to participate in a Word-Up competition and an Open-Mic session. Students will continually be asked to share something they write – be it a poem, rap, or freestyle. As a class, we will explore the impact of slam poetry, finding value through interacting with people as writers, spokespersons, and social advocates. Students will write about what inspires them, finding their voice through the voices of those that have come before.

*Mooney, Brian. "Hip Hop Lit: A Learning Community." *Hip Hop Lit Reflections. Bemoons.wordpress.com*. 6 June 2013. Web. 1 May 2017.

@Classic Twentieth-Century African American Literature (1 credit)

This course examines classic and contemporary texts from the African American literary canon. A survey of the following literary movements and thematic concerns will be feature: The Harlem Renaissance, The Protest Novel, The Chicago Renaissance, The Black Arts Movement, Contemporary African American Women Authors – post 1970's, and Representations of Caribbean and Southern American Communities. This class will observe the literary conventions African American authors employ in their writing and interrogate their portrayal of race, gender, class, and identity. Students will analyze how vernacular theory can enable the interpretation of African American Literature. The primary texts will be: Claudia Rankine's *Citizen*, Alice Walker's *The Color Purple*, and James Baldwin's *If Beale Street Could Talk*.

@Seminar: Religion, Literature, and Culture (1 credit)

What is belief? Why do people believe what they believe? This elective will explore the intersection of religiosity, literature, and culture across place and time. Beginning with the ancient world, we will discuss and debate the many myths and practices that inform, and are informed by, spiritual belief and religious practice. Attention will be given to distinguishing ideology from practice and challenging assumptions we all hold about religious traditions. Sacred texts will be examined and students will have an opportunity to draw comparisons and contrasts amongst the major world religions. Contemporary fiction and film will form an integral component of our inquiry. Students will complete a series of short written reflections and a final seminar project.

Mathematics

The central goal of the Mathematics Department at Wardlaw-Hartridge is to provide our students with the proper environment in which to fully develop their abilities and talents. Students develop skills in critical, creative, and independent thinking and in computational competence. Additionally, they will also build their level of understanding for mathematical principles by investigating real-life applications, as well as by solving interactive and open-ended mathematical problems.

Students will graduate from Wardlaw-Hartridge with a deep appreciation for mathematics as a science, a language, and a tool that can be utilized to solve the problems of daily living. In addition, they will be fully prepared to handle mathematical principles in any four-year institution of higher learning. The mathematics department strongly recommends that students take four years of mathematics.

The program is designed to further enhance students' analytical skills, so that they can master the concepts and ideas presented in mathematics. Students will be expected to work independently and will be required to become proficient, not only in computer applications, but also in the use of a graphing calculator (TI-83, TI-84) or laptop when employing mathematical concepts to solve problems. Courses in advanced mathematics will be offered to students who have successfully completed the required courses. These students will be given the opportunity to take AP Calculus, AP Statistics, or Calculus in their senior year.

It is important for students to be adequately prepared in each level of mathematics in order to do well in subsequent courses. Consequently, a student who receives a final grade of 70, 71, or 72 in a mathematics course **may** be required to take a summer school course in order to strengthen his or her understanding prior to taking another mathematics course. Students who receive grades lower than 70 **must** attend summer school. Upon completion of summer work, the student will be required to take an exam to assess his or her progress.

A student who is interested in taking courses in the summer, whether at Wardlaw-Hartridge or elsewhere, for the purpose of advancing in mathematics, must complete a form, prior to the first Monday in June, that requires permission from the Math Department Chairperson and the Head of the Upper School. An example would be a student who has completed Geometry and wishes to take Algebra II (or vice-versa) in summer school in order to enroll in Pre-Calculus in the fall. A student may only advance in math one time.

To receive credit, a student taking a course in summer school for advancement must have earned a grade of 90 or above in his or her previous/current math course, and then he or she must earn a grade of 87 or higher in summer school.

If the student wants to take the summer course at an institution other Wardlaw-Hartridge, he or she must first get approval from the math department chair. The student will be asked to provide a syllabus, schedule and other related information about the summer course. In addition, the student will be required to take a proficiency test in the subject at Wardlaw-Hartridge prior to the beginning of the school year. If the student earns a grade of 80% or greater, the student will be permitted to advance to the next math level.

Students may not use summer school as a means to move from the non-honors to the honors track. An example would be a student in a non-honors course who did not earn the required grade to enroll in an

honors course. He or she may not enroll in summer school to raise the grade in the non-honors course in order to qualify for the honors course.

In order for new students to be properly placed in the appropriate math course, students must take a placement test approved by the Mathematics Department.

All courses are subject to change depending on student enrollment and faculty availability.

Algebra I (3 credits)

Students are introduced to different approaches to problem solving, the language of algebra, signed numbers, linear and absolute value equations, inequalities and related graphing. In addition, formulas and functions, systems of equations, exponents and radicals, and polynomials are covered in depth.

Geometry (3 credits)
(Pre-requisite: Algebra I)

This course provides students with a close study of the properties of points, lines, angles, plane figures and solids. Topics to be covered include congruence, constructions, parallelism, similarity, perpendicularity, areas, and volumes. In addition, coordinate geometry and right triangle trigonometry are introduced.

The Geometer Sketchpad is used to enrich the work of the course.

Geometry Honors (3 credits)
(Pre-requisite: 93 or above in Algebra I and departmental approval)

This course moves at a rapid pace and covers topics and concepts from Euclidean Geometry. These ideas and topics are combined with analytical geometry. Students are introduced to informal and formal proofs. Along with Algebra I skills, proofs are an essential part of the course. In addition, Geometer's Sketchpad is used to investigate and prove geometric topics.

Algebra II (3 credits)
(Pre-requisite: Algebra I & Geometry)

This course covers the study of functions-linear, quadratic, inverse, exponential, logarithmic, and trigonometric. These functions will be solved and graphed with and without the graphing calculator. The real number system will be extended to include rational exponents and complex numbers.

Algebra II Honors (3 credits)
(Pre-requisite: 87 or above in Geometry Honors or 93 or above in Geometry; and 93 or above in Algebra I and departmental approval)

This course is designed to strengthen the foundation of students who wish to take AP Calculus. The course will cover topics in greater depth and at a faster pace than in Algebra II, so more is expected of each student. This course covers the study of functions-linear, quadratic, inverse, exponential, logarithmic, and trigonometric. These functions will be solved and graphed with and without the graphing calculator. The real number system will be extended to include rational exponents and complex numbers.

Pre-Calculus (3 credits)
(Pre-requisites: 85 or above in Algebra II or 85 or above in Math Analysis with department approval)

Pre-Calculus lays the groundwork for further study of mathematics at the college level. Polynomial, rational, exponential, logarithmic, and trigonometric functions and their properties and applications will be studied. Sequences, series, limits, and an introduction to calculus will be covered. A TI83 or TI84 calculator is required at this level for its aid in visualization and calculation. Students gain skill in analyzing functions and drawing connections between symbolic, graphic, and numerical representations. This course is primarily designed as a final preparation for the study of calculus.

Pre-Calculus Honors (3 credits)
(Pre-requisite: 87 or above in Algebra II H, or 93 or above in Algebra II with department approval)

Students use skills acquired in Geometry and Algebra II to continue to explore functions. The foundation is further strengthened for students who wish to continue in mathematics and the sciences. This course promotes cooperative learning and communication through the use of technology - the TI83 or TI84 calculator or computer. Students further develop their complete understanding of topics such as exponential, logarithmic, logistic functions, and analytic geometry in three dimensions.

Calculus (3 credits)
(Pre-requisite: 80 or above in Pre-Calculus or Pre-Calculus H)

The course begins with a review of the elementary functions and an introduction to limits. The course continues with finding derivatives of functions and their applications. Techniques of integration are covered. Problem solving includes related rates, maximum and minimum problems, the area between curves, and volumes of solids of revolution.

AP Calculus AB (3 credits)
(Pre-requisite: 87 or above in Pre-Calculus Honors **or** 93 or above in either Calculus or Pre-Calculus and permission of the department)

The material covered in this course follows very closely the recommendations of the College Entrance Examination Board (CEEB). This course is the equivalent of a semester of college freshman calculus. Topics that are studied include: Limits, derivatives and their applications, and integrals and their applications. Students are prepared for and expected to sit for the Advanced Placement Examination in May.

AP Calculus BC (3 credits)
(Pre-requisite: 87 or above in AP Calculus AB and departmental approval)

The material covered in this course follows very closely the recommendations of the College Entrance Examination Board (CEEB). This course is the equivalent of a full year of college freshman calculus. Topics that are studied include: A review of AP Calculus AB topics, convergence of series, Taylor and Maclaurin series, area of polar graphs, arc length, and improper integrals. Students are prepared for and expected to sit for the Advanced Placement Examination in May.

Statistics (3 credits)
(Pre-Requisite: 85 or higher in Algebra II; 80 or higher in Algebra II H; 70 or higher in Pre-Calculus or Pre-Calculus Honors)

Statistics is a general survey course exploring the science of statistical reasoning. Students will understand why and when to use different statistical tools and how to translate observations and questions about the world into numerical terms. Key aspects of the course will include how to use statistics to form an argument, how to evaluate the arguments of others, and how to understand statistics in reports written by other people. Reasoning is emphasized over computation and practical applications will be used to demonstrate statistical reasoning in everyday life and in non-mathematical disciplines.

AP Statistics (3 credits)
(Pre-requisite: 87 or above in Statistics; 87 or above in Pre-Calculus Honors; or 93 or above in Pre-Calculus; **and** permission of the department)

AP Statistics is the equivalent of a first level one-semester college course in statistics. Statistics is the science of gathering and summarizing data (descriptive statistics) and the science of making predictions and decisions based on that data (inferential statistics). The course will cover both the theory of statistical decision making and the practical application of statistical reasoning. Students will learn how to incorporate statistics into convincing written arguments and how to evaluate the statistics and arguments presented by others. Examples will be drawn from the fields of medicine, psychology, sociology, engineering, politics, sports, and many others.

This course closely follows the recommendations of the College Board and includes topics such as linear regression and correlation, sampling and experimentation, probability, and distributions (normal, binomial, and geometric). The course also includes inferential statistics such as confidence intervals and hypothesis testing for proportions and means, chi-squared tests, and analysis of variance. The students will be prepared for and expected to take the Advanced Placement exam in May.

Financial Literacy (0.5 credits)

This course provides students the opportunity to learn and to practice essential skills in personal finance. The key concepts of banking, financing, and investing will be covered, particularly as it pertains to young adults. Taxes will be discussed. Students will be exposed to the real-world consequences of mastering - or failing to master - their finances. The mathematical skills needed to successfully navigate the financial world will be addressed. This course is a requirement of graduation, typically taken senior year.

Computer Science & Technology

Computer technology plays an integral and expanding role in all levels of the curriculum at Wardlaw-Hartridge, PK to 12. In the Upper School, all students and faculty have a laptop computer, making technology an immediate part of Upper School life. Computers are both an end in themselves in the school curriculum (knowing how to use the applications necessary for academic functioning: keyboarding, word processing, spreadsheet, desktop publishing, multimedia presentation, Internet research, and email communications) and a necessary means to an end in the preparation, calculation, and submission of traditional school assignments. The Computer Science Department provides course instruction to students and training to faculty.

Students rising from our Middle School have a firm foundation in the technology applications stated above. A unit is included at the beginning of our freshman year courses to make sure that all ninth graders are comfortable using their new laptops, including accessing our networked printers and emailing their instructors. Time is also spent reviewing our school wide Acceptable Usage Policy.

All courses are subject to change depending on student enrollment and faculty availability.

Introduction to Computer Science (3 credits)
(Pre-requisite: 87 or above in Algebra II)

An interactive, online introductory course for students brand new to programming that teaches the foundations of computer science using the Python language. It will teach students how to think computationally and solve complex problems, skills that are important for every student. Topics include: What is Computer Science, Big Data, Algorithms, Cyber Security, Game Development and Graphics. This course can be the pre-requisite course for students interested in the course AP Computer Science Principles.

AP Computer Science Principles (3 credits)
(Pre-requisite: 87 or above in Algebra II or 87 or above in Introduction to Computer Science and departmental approval)

In this online course students will explore the central ideas of computing and computer science. The course focuses on seven big ideas: Creativity, Abstraction, Data and Information, Algorithms, Programming, The Internet, and Global Impact. Students will be expected to connect computing to other disciplines, create computational artifacts and communicate their purpose, use abstraction and analysis to develop models for solving complex problems, and work effectively in teams. Additionally, students will be introduced to the fundamental concepts of programming that can be applied across a variety of projects and languages, the Internet and how computation is driving innovation and its global impact. This course may be used as the pre-requisite course for AP Computer Science.

AP Computer Science (3 credits)
(Pre-requisite: 87 or above in Introduction to Computer Science or permission of the department)

This online course will prepare students for the AP exam given in May. The syllabus will focus on the basic building blocks of computer science and programming tools. Topics include control structures, primitive and class data types such as arrays, ArrayList and Strings, methods, and recursions. Students will learn how to manipulate data to create more sophisticated programs, with topics including class design, algorithm development and user-defined data types. There is also a required lab component consisting of a minimum of 20 hours on hands-on lab experience.

Elective Courses in the Computer Department

Yearbook 1: Introduction to Yearbook (1 credit)

Capturing memories, as yearbooks are wont to do, Yearbook 1 is an introductory course to yearbook development. The focus of the class will include all the basics involved in yearbook production, from initial brainstorming ideas to publication. Topics will include the function of a yearbook, organizing the content and thematic development. Students will be graded based on two criteria – productivity in class and satisfactory completion of their page assignments by stated deadlines.

Yearbook 2: Design and Production (1 credit)
(Pre-requisite: Successful completion of Yearbook 1)

Yearbook Production is a practical lab class where students produce the school yearbook. Students will learn journalist writing, design, advertising, and desktop publishing. Topics of production will include: interviewing techniques, photography layout, writing copy, the business of sales, editing, proofreading, and ethical concerns. Those enrolled in the course will make content, coverage, and design decisions.

Yearbook 3: Editing (1 credit)
(Pre-requisite: Successful completion of Yearbook 2)

This class is for third year Yearbook students who successfully completed Yearbook 1 and 2. Third year staff members continue to develop all the skills and knowledge they acquired in Yearbook 1 and 2 with a particular emphasis on planning a ladder, page assignments, proof-editing and page submission. In addition to regular page assignments, Yearbook 3 students are also eligible to serve in a leadership position, either as an editor, editor-in-chief, business manager, or in some other capacity beyond Yearbook 1. A third year staff member who becomes editor-in-chief is in charge of all aspects of yearbook production from the development of the theme and cover, to the final distribution. It is crucial that this person has strong leadership skills including being well-organized, a strong communicator, an expert editor, and a fanatic when it comes to meeting deadlines. (Editors may be expected to attend a summer Yearbook work session to develop the theme of the book before school starts in the fall).

Yearbook 4: Final Layout (1 credit)
(Pre-requisite: Successful completion of Yearbook 3)

Fourth year Yearbook is available to seniors who have completed and fully participated the prior three years of Yearbook. Yearbook 4 students are expected to serve as editor-in-chief. These students are expected to work well in a group in a leadership capacity, as well as be in charge of all aspects of yearbook production from the development of the theme, colors and cover design, to the final distribution. It is crucial that this person has strong leadership skills including being well-organized, a strong communicator, an expert editor, and a fanatic when it comes to meeting deadlines.

Adobe Photoshop (0.5 credit)

With Photoshop anything is possible! The first trimester of this course will show the student how to use Adobe Photoshop to perform many different image-processing techniques. Through in-class projects, the student will learn how to master the wide range of tools that Adobe Photoshop has to offer, such as use of layers, layer effects, filters, painting and blending, and color modification. The student will learn to manipulate photos for everything from application in films, poster creation, Internet, or home use.

Broadcast Engineering (0.5 credit)

Using the TV studio and Media Lab, students will learn all aspects of creating a TV broadcast including the TriCaster 410 system, cameras, sound board, lighting, LiveSet editor, and teleprompter. Green screen technology will be used to film both field and studio news reports, as well as scenes for student films. Topics covered will include importing and exporting media, writing for TV News, setting up and producing live broadcasts, titles and graphics, and post production.

Broadcast Production (1.5 credits)
(Pre-requisite: Successful completion of Broadcast Engineering or Journalism)

Applying skills learned in Journalism and Broadcast Engineering, Students will be tasked, as a group, with production of a bi-weekly Wardlaw-Hartridge news show. Students will write, film, edit, and publish the show using the

technology in the Media Lab and other school resources. This will be a student driven program, expanding upon experience with the TriCaster 410 system, pre- and post-production strategies, as well as broadcast journalism, and promotion of the show.

Robotics (1 credit)
(Pre-requisite: Successful completion or concurrent enrollment in Geometry)

In this course, students will develop programming skills in the C computer language as they write code and build robots to perform autonomous tasks of increasing complexity. Students will use digital and analog sensors such as push button sensors, infrared reflective sensors and cameras.

Science

The study of science deals with natural systems, with observations and methods of inquiry using the scientific method, and with specific content areas such as biology, chemistry, and physics. The quest of science is to find increasingly accurate explanatory models of how the universe functions. Students learn about these current models and some of the questions that remain unanswered. Within this context, the science curriculum utilizes and reinforces mathematical skills learned in mathematics courses as well as computer technology for data collection and analysis. The science courses all involve research and laboratory work using appropriate technology, and students are encouraged to question and to use the principles of science, technology, engineering and mathematics to further their learning.

Students are required to complete three years of science for a minimum of nine credits. With a view to their future as adults living in an increasingly science and technology oriented society, they are strongly encouraged to complete a fourth year of science. Students take Biology in ninth grade (3.0 credits), Chemistry in tenth grade (3.0 credits), and Physics in either eleventh or twelfth grade (3.0 credits).

Ninth and tenth grade students are introduced to the principles of science, technology, engineering, and mathematics (STEM) through their individual science courses. In addition, every ninth and tenth grade student completes a science fair project that requires identifying a question or problem, researching, and applying the principles of STEM. These are faculty-mentored, long-term projects that students have approximately four months to complete. They are encouraged to work in small teams, problem solve using backwards design and/or systems design approaches, design experiments, engineer working models, identify questions their work leaves unresolved, and proffer logical next steps.

Science department electives include AP courses in biology, chemistry and physics, as well as a wide variety of topics that include subjects as diverse as anatomy and physiology, astronomy, and organic chemistry.

All courses are subject to change depending on student enrollment and faculty availability.

Biology (3 credits)

In this course we will be studying living organisms at the cellular and molecular level and work our way through to the classification, diversity and function of organisms. The curriculum topics are used to promote a deep understanding of the diversity, complexity and interconnections between life on earth. Scientific technique and laboratory skills will be enhanced through regular lab activities and write-ups. Students will learn in a hands-on environment where critical thinking and inquiry based learning will be encouraged. The following lists the topics that we will cover and the likely order in which they will be addressed. (We will not be spending equal amounts of time on each of these topics.)

Scientific technique:
- Scientific method/variables/designing experiments
- Laboratory skills

The Molecules of Cells:
- Organic molecules: synthesis, structure and function
- Carbohydrates, lipids, proteins, nucleic acids
- Energy of Life

A Tour of the Cell:

- Eukaryotic vs. prokaryotic cells
- Organelles: structure and function

The Working cell:

- Membrane Structure and Function
- How enzymes Function

How Cells Harvest Chemical Energy:

- Aerobic Cell Respiration
- Anaerobic Cell Respiration (fermentation)
- Photosynthesis

Cell Growth and Division:

- Cell Cycle and regulation
- Mitosis, Meiosis, Cancer

Introduction to genetics:

- Allele vs. gene
- Dominant vs. recessive
- Monohybrid cross
- Dihybrid cross
- Non-Mendelian genetics
- Chromosomal basis of inheritance
- Karyotyping
- Sex-linked Inheritance

DNA and RNA:

- DNA/RNA structure and function
- DNA synthesis
- Transcription
- Translation
- Mutations

Diversity of life and classification:

- Darwin Theory of Evolution
- Natural selection
- Survival of the fittest
- Classifications

Plants:

- Classification and plant types
- Plant structure, function and life cycle
- Plant communication

Human Organ-systems:

- Digestive System
- Human Respiratory system
- Neuromuscular system

Biology Honors (3 credits)
(Pre-requisite: An average of 93 or above in eighth grade science and Algebra I, and departmental approval)

This biology honors course will cover the same basic topics as the general biology course, but the topics will be covered in more depth and will require a faster pace of learning. This class will also do a STEM related project each trimester. Lab work is an essential part of this course.

Chemistry (3 credits)

This is a comprehensive course involving the following topics: matter and change, measurement, atomic structure, chemical reactions and stoichiometry, behavior of gases, solids, liquids and solutions, acid-base, equilibrium and electrochemistry. Lab exercises and lab reports are an integral part of the course.

Chemistry Honors (3 credits)
(Pre-requisite: An average of 87 or above in Biology Honors or an average of 93 or above in Biology and departmental approval. Co-requisite: Geometry H or Algebra II/Algebra II Honors.)

This course is designed for students who have shown a proficiency in studying science and who have exhibited interest in and enthusiasm for science. This course is intended to help students realize the important role that chemistry will play in their personal and professional lives. It will help students use principles of chemistry to think more intelligently about current issues they will encounter involving science and technology. Hopefully students will develop a lifelong awareness of the potential and the limitations of science and technology. Topics to be studied include chemistry laboratory skills, the classification and structure of matter, ratio and proportion of chemical reactions, acid-base chemistry, kinetics, thermodynamics, electrochemistry, organic chemistry, and biochemistry. Critical thinking (the ability to carry out systematic thought processes in making decisions and solving problems), inquiry (solving problems through scientific investigation) and science ethics are stressed in this class.

Physics (3 credits)
(Pre-requisite: Successful completion of Algebra I and Geometry)

This is a general course in physics that involves elementary algebra, graphing, basic geometry and the use of trigonometric functions. It follows the year long courses in biology and chemistry. Topics may include mechanics, waves, optics, electricity and magnetism, atomic and nuclear structures, and heat and thermodynamics. Laboratory sessions will accompany the theory.

Physics Honors (3 credits)
(Pre-requisite: An average of 87 or above in Chemistry Honors or an average of 93 or above in Chemistry and departmental approval. Co-requisite: Algebra II/Algebra II Honors.)

In Physics Honors, we will study motion, projectiles, circular motion, Newton's Laws, momentum and its conservation, energy and its conservation, gravity, waves, sound, optics, electricity and magnetism and atomic and nuclear structure. There will be extensive lab work done in the class. Students will keep a lab journal.

AP Biology (3 credits)
(Pre-requisites: A 90 or above in Biology Honors or a 95 or above in Biology, Chemistry or Chemistry Honors, and departmental approval)

This course is offered to juniors and seniors. It is designed to prepare students for the AP Biology Exam, but more importantly, to prepare them for college-level biology courses. Topics follow the AP syllabus and include molecular biology, cells, genetics, evolution, morphology, and physiology. Laboratory work includes required labs in the AP syllabus and the use of computers. The course involves large volumes of reading including summer reading. Students in this course are required to sit for the AP exam in May.

AP Chemistry (3 credits)

(Pre-requisite: Chemistry Honors with an average of 87 or above or Chemistry with a 93 or above and departmental approval)

This rigorous course of study prepares students for the AP Chemistry Examination by exploring in greater depth topics covered in a previous year-long chemistry course. Critical thinking and deductive reasoning skills, as well as mathematical proficiency, are vital to course success. The course covers all topics on the AP syllabus and assessments mirror the form and content of the AP exam. Extensive lab work is required and labs serve as an integral part of the topics covered during the course. Students develop the ability to work independently in the lab by designing and conducting several project-length experiments. Students in this course are required to sit for the AP exam in May.

AP Physics C (Mechanics) (3 credits)
(Pre-requisite: An 87 or above in Physics Honors or a 93 or above in Physics; **and** a minimum of 87 in Pre-Calculus and departmental approval. Students who have completed an appropriate math course satisfactorily in the summer, may be considered for entry by the department. *Co-requisite*: Calculus).

This course is intended primarily for seniors who have completed the pre-calculus course in their junior year and are doing calculus concurrently with AP Physics. The AP syllabus in Mechanics is prescribed by the College Board and involves both statics and dynamics equivalent to what is done in the initial stages at the undergraduate level. Vectors are used widely in this course. Lectures, demonstrations, experimentation, interactive discussions, problem solving, and tests constitute the major components of the course. Students in this course are required to sit for the AP exam in May.

AP Physics C (Electricity and Magnetism) (3 credits)
(Pre-requisite: AP Physics C (Mechanics) with an 87 or above **or** Physics with a 93 or above, **or** Physics H with an average of 87 or above; **and** a minimum of 87 in Calculus and departmental approval. Students who have completed an appropriate math course satisfactorily in the summer, may be considered for entry by the department)

***This course will not be offered 2018-19**

The AP syllabus in Electricity and Magnetism is a calculus based course covering: electrostatics, DC Circuits, AC circuits, magnetic fields, magnetic induction and electromagnetic waves. Students will use integral and differential calculus to develop concepts and solve problems. It is highly suggested that students have already taken a year of calculus. Students in this course are expected to sit for the AP exam in May.

Elective Courses in the Science Department

@Human Anatomy and Physiology (3 credits)
(Pre-Requisite: Biology or Biology Honors, available to grades 10, 11, 12)

This year long course will focus on the 11 body systems and how they function in the human body. The course will include a bio-mechanical lab component in which students will be given the opportunity to explore why a system must have a particular structure in order to serve its function through building. This course will be very beneficial to those students looking to have a career in the medical field in the future.

@Introduction to Epidemiology (1 credit)

(Pre-Requisite: Biology or Biology Honors, available to grades 10, 11, 12)

This one trimester course will focus on health and disease on a global scale. Students will be assessed on their participation in daily discussion, their expression of ideas in a journal or notebook, and their completion of various group and individual projects. Students will learn how diseases are spread, how they can be prevented emergence of infectious disease, and biological warfare. This course is considered a global course and can be counted towards an elective in the Global Scholars Program.

Comparative Zoology (1 credit)
(Co-requisite: Biology. Available to grades 9, 10, 11 and 12)

How do scientists sort through the animal world? What makes a grasshopper different than a crayfish? What makes a bony fish different than a shark? In this course we will get “hands-on” with real animals up close, with dissections of preserved specimens. We will compare the respiratory, digestive, circulatory, excretory, nervous and reproductive systems of mollusks, worms, arthropods and fish to understand the diversity of life.

Organic Chemistry (1 credit)
(Available to grades 11 and 12)
(Pre-requisite: 80 or above in AP Chemistry and departmental approval)

This course will cover aspects of introductory organic chemistry in a brief survey. Organic chemistry is the study of carbon, the foundation of all life. The course is intended for students interested in fields ranging from chemistry or biology to engineering and medical professions.

@Geological Disasters (1 credit)
(Available to grades 9 - 12)

This course will cover aspects of introductory geology as it applies to natural disasters in a brief survey. The impact of these disasters throughout the geological evolution on the planet is significant. The course is intended for students interested in fields ranging from geology or environmental sciences to physics and engineering.

Elective Courses in Science, Technology, Engineering, and Mathematics (STEM)

Wardlaw-Hartridge students will one day become leaders in a high-tech global economy. Providing them with opportunities to integrate the sciences, mathematics and technology in creative problem solving will give them significant practice in STEM skill building and communication. In addition, learning to apply an engineering model to their inquiries will prepare students for using critical thinking and creativity in their approach to challenges in college and beyond. Each STEM elective sets the stage for students to identify an unanswered question. As they work toward answering that question, they will be encouraged to use an integrated problem-solving approach. They will research a topic, consult with team members, identify a problem they want to solve, design tests, determine whether they need to build models or simulations, and when prepared, they will present their work for peer review.

@Honors Research in Molecular Science and Technology (3 credits)
(Prerequisite: 93 or above in Biology, or 87 or above in Biology Honors and departmental approval)

Students in this course will be part of the Waksman Student Scholars Program (WSSP) of Rutgers University. During this course students will have the opportunity to perform their own research project by partnering with investigators at the Waksman Institute and making discoveries that were previously unknown.

Students will use molecular biology laboratory protocols (DNA purification, PCR, restriction digests, and agarose gel electrophoresis) to isolate and analyze DNA samples. These DNA samples will be sequenced and students will determine if the sequences are similar to genes in other organisms using bioinformatic programs and accessing databases that are used daily by practicing research scientists. Students' analyses may be published on GenBank, the international repository of all known DNA sequences. Each published sequence will bear the student's name.

Each student will be given class time to work on their research project, but are also expected to come additional hours to finish and/or tend to their project as needed. Students are also expected to attend conferences and present a poster on their work to the Waksman scientific community.

Students will be graded on their effort, participation, subject knowledge and a research paper and presentation to the Wardlaw Hartridge Science Department on their results at the conclusion of the course.

@Honors Research in Genetics (3 credits)
(Prerequisite: 93 or above in Biology, or 87 or above in Biology Honors and departmental approval)

During this course students will have the opportunity to perform their own research project and make discoveries that were previously unknown. Students will learn and use some of the latest molecular and genetic techniques used in the best research labs in the world.

Each student will be given on a research topic and will partner with an active investigator at a university, college, research institute or company. The student is expected to focus on this topic individually and independently. Each student will be given class time to work on their research project, but are also expected to come additional hours to finish and/or tend to their project as needed.

Students will be graded on their effort, participation, subject knowledge and a research paper and presentation on their results to the Wardlaw Hartridge Science Department at the conclusion of the course. Students may continue their research project the following year/s if they choose.

@Engineering Your World (3 credits)
(Pre-requisite or Co-requisite: Physics or Physics Honors. Available to grades 11 and 12.)

Students in this year-long course will develop engineering habits of mind as they discover engineering's role in shaping and improving the world. There are a total of eight units that vary between explorations and design challenges as well as an introductory unit detailing engineering principles and norms. Explorations include ***Designing for Customers, Understanding Data: Designing Coffee, and Programming: Electronic Music.*** More in-depth design challenges include ***Discovering Design: Pinhole Camera, Designing with Data: Safer Buildings, Reverse Engineering: Product Redesign, and Systems Engineering: Aerial Imaging***. Another main component of this course is outside research projects where students discover different careers in engineering associated with the current unit. This course is being taught in conjunction with the University of Texas' Cockrell School of Engineering and is intended for students who are interested in the field of engineering.

@Designs for Scientific Thinking (1.0 credit)
Available to grades 9-12.

In this STEM course students will determine how creativity, critical thought and logic skills can be used to solve problems in engineering, medicine, electronics and business.

Students will be taught how to become innovative thinkers and uncover creative opportunities that may not be obvious. Students learn in a hands-on environment where creative thinking, trial and error and inquiry based learning is encouraged without stress (this is a pass/fail course).

Projects include creating prosthetic hands and legs, building bridges and towers, designing new coatings for pills, creating mini robots and creating specialized electronic equipment. Marketing the newly created items will also be included.

The following lists some of the general areas that we will cover. We will not be spending equal amounts of time on each of these topics.

Design thinking:

- Logic based design
- Design process and solutions

The Values of Science:

- Freedom of inquiry
- Tolerance of different opinions
- Honesty
- Ethics in Science

Logic and Creativity--STEM Topics and Exercises:

- Biology and Medicine
- Biotechnology and Forensics
- Engineering
- Electronics

Experimental Design:

- Concept
- Examples
- Designing the experiment
- Design Pro
- Presentation and Selling Your Design

History

The lessons to be learned in the rich narrative of history enhance the understanding of modern political, economic, social, religious, and artistic cultures. To aid students in understanding this connection between the past and the present, the Upper School history curriculum is designed to build sequentially upon earlier course work in our Lower and Middle Schools. Each year, increasingly sophisticated and demanding expectations encourage students to rise toward college level achievement and skills. Reading, writing, research, and critical thinking skills must grow steadily through the four-year sequence of Global Humanities, Modern World History, United States History (or AP US History), and finally the diverse electives offered senior year. Students are required to earn nine credits in history. These must be in Global Humanities, Modern World History (transfer students may substitute World History), and U.S. History. In addition, students may further their historical inquiry via several elective courses offered by the department.

It is important for students to be adequately prepared in each level of history in order to do well in subsequent courses. Consequently, a student who receives a final grade less than 70 in a history course may be required to do summer work in order to strengthen his or her understanding prior to advancing to the next history course in the curriculum.

Students **may NOT** use summer work as a means to move from the non-AP track to the AP level. An example would be a student who did not manage in a non-AP course to earn the required grade to enroll in an AP course. He or she **may NOT** then enroll in summer school to raise the grade in the non-AP course in order to qualify for entrance.

All courses are subject to change depending on student enrollment and faculty availability.

Global Humanities (3 credits)

Global Humanities is an exploration of human experience. The course is guided by one overarching essential question, “What does it mean to be human?” That question will be investigated through select cultural records, art, music, and ideas drawn from dawn of civilization to the 21st Century, deepened by acquaintance with literature from around the world, and facilitated by various supplementary essential questions. Those include: How does where we are impact who we are? In what ways do human beings live? How, why, and in what distinct ways do human beings record and value their experiences? But also: How do we know what we know? What is the difference between: knowing and believing; truth and falsehood; beauty and ugliness; justice and tyranny; wisdom and ignorance; faith and reason; history and fiction; what is right and what is good. Central to our work is skill development: historical & literary skills and those implicit to sound scholarship, constructive learning, and cogent writing. Additionally, constructive conversation skills and mindfulness strategies enhance our social learning environment to assure mutual understanding and respect. Encouraging critical and imaginative thinking, the course is not a memory exercise; it is a thoughtful exploration of questions and ideas, sources and how they are read, collaboration and personal discovery. Throughout the course, efforts are made to link the past with the present, to connect different peoples, cultures and events with those in our world at present, and to facilitate consideration of how each learner’s life often echoes that of the human community, past and present. Multidisciplinary and multicultural in character, the course is an opportunity to explore humanity in all its wondrous variety.

Modern World History (3 credits)

Modern World History explores the history of the world from a global perspective. Examining different peoples, cultures and societies from the 15th century to contemporary times in a balanced way, the course is not a survey of the West and the Rest. Rather, as a global history, it considers different incidents and patterns of human interaction within and across historical contexts. Though honoring the stories at the heart of history, Modern World History provides acquaintance with those narratives, but does so within the context of a world characterized by mutual awareness, interconnection, and common challenges. Emphasis is placed on the three Cs of world history: change, comparison and connection. Building on foundations established in the previous year of study, historical skill development is furthered, with particular emphasis placed on the critical engagement of primary source materials, text and visual, written and graphic. Analysis, synthesis, and the ability to generate a path of inquiry and to pursue it, effective reading and cogent writing, collaboration and presentation skills are also encouraged. In addition to daily reading assignments and in-class critical thinking activities, students investigate historical questions, write papers, and design and create projects that demonstrate of their understanding of broad concepts like empire, economic globalization, revolution and social change in an increasingly interconnected world.

U.S. History (3 credits)

This course surveys American history from the founding of the nation to the present, with particular emphasis on the relationship between social, economic, and political developments. Students keep reading and lecture notes. Also note-taking skills are taught and polished. Tests, quizzes, and essays are written, requiring thought as well as mastery of the material drawn from lectures and reading. In-class extemporaneous projects and written research papers are required throughout the year.

AP U.S. History (3 credits)
(Pre-requisite: 93 or above in Modern World History 10 and departmental approval)

Advanced Placement United States History will be taught mainly from a chronological perspective (1491 – present), and as indicated in the nine time periods (units) designated by The College Board for the course. Simultaneously, it will incorporate the four AP History Reasoning Skills (Contextualization, Comparison, Causation, and Continuity & Change Over Time) and the seven AP Thematic Learning Objectives (American National Identity; Politics & Power; Work, Exchange & Technology; Culture & Society; Migration & Settlement; Geography & Environment; and America in the World).

Instruction will occur, among other ways, via lectures, slideshow presentations, videos, small & large group discussions, student presentations, and the practice of AP-style assessments.

Most assessments will directly reflect the structure of the AP examination (multiple-choice, short-answer questions, document-based essay questions, and thematic or topical-based essay questions), or they will consist of scaffolding exercises that comprise exam-style objective and subjective questions.

Students are required to take the Advanced Placement US History examination at the end of the course in May.

AP U.S. Government & Politics (3 credits)
(Pre-requisite: 93 or above in U.S. History, 87 or above in AP US History, and departmental approval)

Advanced Placement United States Government and Politics starts with the students' prior knowledge of American history. Then, the course materials and activities encourage the students to develop a deeper

understanding of American statesmanship, beginning with the nation's foundational documents, reviewing landmark court cases, comprehending the media through the ages, and analyzing the ways in which politics and policies have affected culture and society.

Instruction will occur, among other ways, via lectures, slideshow presentations, videos, small & large group discussions, student presentations, and the practice of AP-style assessments.

Most assessments will directly reflect the structure of the AP examination (multiple-choice questions and free-response essay questions), or they will consist of scaffolding exercises that comprise exam-style objective and subjective questions.

Students in this course are required to sit for the AP exam in May.

Elective Courses in the History Department, GLOBAL SCHOLAR

@Introduction to World Religion (1 credit)

This course examines the major religious and faith systems of the Asian content. We will focus on traditions with continued significant spiritual, philosophical, sociological, and political influence. Since no belief system exists in a vacuum, we will explore the historical, political, and social climates surrounding these faiths, and monitor how they have grown and changed over time. We will pay equal attention to the philosophical and theological foundations of each faith practice, examining both philosophers and religious leaders.

@Global Citizenship (1 credit)

Responsibility. To what extent are we responsible for our world and to one another? To what extent are we obligated to take an interest in the lives of other people, both those we know and those who are strangers, in our neighborhoods and on our planet? Exploring the complexities of these relationships is the foundation of the course. Deepening consciousness of the cultural nuances implicit to relationships with other people, known and unfamiliar, must be recognized and understood before caring gestures and acts of goodwill may be shared effectively. Thus, leadership is a relationship, not merely a role. Its responsibilities demand the highest self-knowledge and integrity, an open heart and steady resolve, patience and a strong sense of purpose, humility and a willingness to take risks. Central to developing an understanding of global leadership skills and obligations are questions like: What does it mean to give and to receive? To what extent can values be understood and shared across cultures? What do we think about when we think about differences? How do those differences impact our speech and our actions? What do we owe strangers because we are part of humanity, and why? Conducted as a seminar, the course uses personal experience as the basis for exploring who we are as we engage the world and its peoples. Students perform practical learning activities, reflect on those experiences, and engage in collaborative problem-solving exercises and simulations in an effort to understand and to appreciate the challenges inherent to understanding global problems and engaging them responsibly.

Elective Courses in the Humanities/History Departments

AP Psychology (3 credits)
(Pre-requisite: departmental approval)
(Available for grades 11 & 12)

This course introduces students to the study of human behavior and mental processes. The main topics covered are the history of and approaches to the field of psychology, including research methods, biological bases of behavior, sensation and perception, consciousness, learning, cognition, motivation and emotion, development, personality, testing and individual differences, physiological disorders, abnormal behavior and treatments, and social psychology. In addition to preparing students to take the AP Psychology exam, the course will enable students to explore how psychologists think. Students will be exposed to the critical thinking and compassion that the field of psychology brings to the human condition.

This course requires intensive summer preparation (reading, research, writing). Students in this course are required to sit for the AP exam in May.

@AP Human Geography (3 credits)
(Pre-requisite: departmental approval)
(Available for grades 10 – 12)

Advanced Placement Human Geography invites students to thematically explore the world's varied physical regions and their geographical subtexts that include, among other components, economic geography, cultural geography, political geography, and urban geography. The course draws from the students' prior knowledge of history and culture, and challenges them to a greater understanding of how people have interacted, and continue to do so, with each other, their natural environment, and their technological innovations.

Instruction will occur, among other ways, via lectures, slideshow presentations, videos, small & large group discussions, student presentations, and the practice of AP-style assessments.

Most assessments will directly reflect the structure of the AP examination (multiple-choice and essay questions), or they will consist of scaffolding exercises that comprise exam-style objective and subjective questions.

Students in this course are required to sit for the AP exam in May.

@AP Microeconomics (3 credits)
(Pre-requisite: Departmental approval. In addition, the student must have successfully completed Algebra II.)
(Available for grades 11 & 12)

Economics is the study of how individuals, businesses and governments make decisions in the face of uncertainty and scarcity. During our study of microeconomics, we will examine the behavior of individuals and businesses within the larger economic landscape. Our emphasis will be on consumer choice, the nature and function of the product/factor markets, market failure, and how governments intervene in the market. This course requires intensive summer preparation (reading, research, writing). Students in this course are required to sit for the AP exam in May.

@AP Macroeconomics (3 credits)
(Pre-requisite: Departmental approval. In addition, the student must have successfully completed Algebra II.)
(Available for grades 11 & 12)

***This course will not be offered 2018-19**

Economics is the study of how individuals, businesses and governments make decisions in the face of uncertainty and scarcity. During our study of macroeconomics, we will focus our attention on the entire economic system and the interactions between economies. In particular, we will examine national income and price determination, measurements of economic performance, government responses to changes in the business cycle, policies for economic growth, and international trade and finance. Students will be required to take the AP Macroeconomics exam in May.

@How Evil Stays in Power (1 credit)
(Available for grades 11 & 12)

How do dictators and murderous regimes stay in power? Why don't citizens fight back or overthrow oppressive governments right away? Why wouldn't the animals in *Animal Farm* overthrow Napoleon as soon as he started acting as a corrupt human?

This class turns to novels, short stories, and philosophy to study how corrupt governments stay in power. We will start with the ideas of two philosophers who were imprisoned by oppressive governments: Antonio Gramsci, a political prisoner during WWII-era Italy, and Hannah Arendt, a WWII concentration camp survivor. We will use their ideas to make sense of how the oppressive regimes in Orwell's *1984* and Huxley's *A Brave New World* maintain control over their citizens despite the harms they cause. Students will have the opportunity to then investigate an historical or contemporary example of their choice.

This course is taught as a student-driven seminar. This means students' thoughts on the events in the stories we read shape what is discussed in class. By the end of this course, students will be able to identify and better understand the strategies governments can use to ensure citizens accept, submit to, and/or tolerate terrible situations.

@History of Latin America: 1492 to the Present (1 credit)
(Available for grades 11 & 12)

History of Latin America: 1491 to the Present is a trimester elective that surveys the political, economic, and socio-cultural histories of the region from the time just prior to the encounter between Native Americans, Europeans, and Africans to current international relations amongst Latin American nations and their relations with the rest of the world. The course follows the major developments in the colonies as they move into statehood, the conflicts of diverse nationalism, and the struggles to compete in a competitive, global world. Students in this seminar-style course will be expected to discuss their reactions to the readings and to articulate their thoughts in writing on a regular basis, as well explore regional growth through geography and its natural resources, art and literature, and current events.

@LGBTQ Studies: Working Towards Inclusive Schools (1 credit)
(Available for grades 11 & 12)

This class uses YA novels, graphic novels, and research to explore the impact gender, sex, and orientation have on our daily lives in schools. We will study how these issues impact all students, in addition to the experiences of many LGBTQ students. This is a course for everybody – including anyone who'd like to be better friends and allies for those who identify as LGBTQ!

The course is taught in three acts. First, we learn about the spectrum of gendered identities and sexualities. Second, we examine how gendered and sexuality identities are policed in schools (e.g. experiences with discrimination). Third, we learn about the history of activism, supports, and resources created to challenge the discrimination covered in act two.

This is a progressive seminar class. As such, students come together in class to have critical conversations about issues related to the issues and events they find interesting in class readings.

@Biological Anthropology (1 credit)
(Pre-requisite for Grade 10: 93 or above in Biology Honors. No pre-requisite for Grades 11 & 12)

This course is designed to foster an understanding of human evolution and introduce the field and methods of biological anthropology. In this course, students will study basic evolutionary theory, with an emphasis on the process of human evolution, humankind's place in the primate order, and the impact of our evolutionary history on human biology, behavior and culture.

World Language

Wardlaw-Hartridge offers students the opportunity to study Mandarin Chinese, Latin or Spanish. Students are required to complete three consecutive years of at least one world language while in Upper School. These core languages can culminate in either level V or the Advanced Placement language courses. Students may elect to begin level I in a different language in addition to their graduation requirement language.

The department emphasizes the appreciation of the cultures represented by all the countries where the target languages are spoken. In addition, the exchange/travel programs with Spain and China provide our students with authentic language and cultural enrichment and foster long-lasting relationships among the student participants and their families, as well as between our school and the host school.

All new students to Wardlaw-Hartridge are required to take a placement test to determine the most appropriate level of study for their abilities at the time the placement test is taken. Students will be placed by the World Language Department Chair, in conjunction with the target language classroom teacher recommendation.

It is important for students to be adequately prepared in each level of a foreign language in order to do well in subsequent courses. Consequently, a student who receives a final grade lower than a **70** in a world language course **must** take the course again the following year to show mastery of that particular level. In such a case, the student, parent(s)/guardian(s), and advisor are encouraged to have a conversation with the classroom teacher and the World Language Department Chair to develop a plan of action for student success.

Any student wishing to complete summer work in their target language, regardless of motivation, needs program approval from their language teacher and the World Language Department Chair. For example, a student supplementing their previous coursework (as stated above) needs to determine an action plan with their teacher and the Department Chair. Similarly, a motivated student wishing to advance their language study over the course of the summer to accelerate their placement needs to speak to their classroom teacher and the Department Chair well before the summer begins. It is unusual for a language student to accelerate an entire year's worth of material in a summer, and it is therefore difficult for a student to advance over a level of study. However, if through discussions with the classroom language teacher and the Department Chair, it is determined that an immersion program (either abroad or domestic) is approved and the right course of action, it is possible for a student to advance. Upon completion of the approved immersion course, the student will need to take a placement exam (written and oral components) to place into the appropriate level of study. Please note that merely completing an immersion course over the summer does not guarantee advancement to the next level of study in the Upper School language program; the student will need to prove that their language abilities have advanced enough to join the course.

Students completing three consecutive years of Spanish or Mandarin Chinese will be able to:

- Converse clearly
- Narrate and describe in detail
- Understand connected discourse
- Use reading strategies to comprehend authentic print media
- Apply cultural knowledge to social interaction
- Discuss the significance of the geography, history and political contributions of the target culture(s).

Students completing three consecutive years of Latin will be able to:

- Read, understand, and interpret Latin prose and poetry
- Speak and write knowledgeably about Greco-Roman culture
- Make cross-cultural comparisons and contrasts with Greco-Roman culture across the curriculum
- Cultivate critical perspective on the ramifications of the Greco-Roman legacy in contemporary society

All courses are subject to change depending on student enrollment and faculty availability.

Mandarin Chinese I (3 credits)

This course is intended to introduce students to age appropriate basic Chinese language and cultural content. Students learn to identify and produce Pinyin and four tones of Chinese pronunciation. They master some common Chinese characters, words, and sentences related to daily life and school life. Topics include greetings, family and friends, date and time, hobbies, shopping, weather, etc. Through a variety of meaningful and authentic activities, the course trains students in four communicative skills. In addition to traditional textbooks, a variety of tools are used to make learning an interesting and productive experience. Such tools include the Smart Board, computer, Internet, Skype, CDs, videos, posters, etc.

Mandarin Chinese II (3 credits)
(Pre-requisite: 70 or above in Chinese I and department recommendation)

This course continues to build students' communicative skills and develop their cultural understanding and insights. Instructional materials and activities are carefully selected to enable students to communicate in a practical and authentic language environment. Considerable speaking practice and basic reading and writing exercises help students to master grammar and to expand vocabulary. Students create short videos about themselves, family and friends, daily routines, and school life. In addition to traditional textbooks, a variety of tools are used to make learning a meaningful and productive experience. Such tools include the Smart Board, computer, Internet, Skype, CDs, videos, posters, etc.

Mandarin Chinese III (3 credits)
(Pre-requisite: 70 or above in Chinese II and department recommendation)

At this level, students expand their vocabulary, study more advanced patterns, and develop greater communication competency in listening, speaking, reading and writing. Meaningful and authentic tasks are given to facilitate communication about their daily lives, school activities, friends and family, and their roles in both a community and global context. Students participate in various research and presentation projects, listen to guest speakers, and exchange activities with students in China via e-mail and Skype. Through these valuable experiences, students' knowledge of contemporary and traditional Chinese culture is further enhanced. Online resources are constantly adapted for understanding and researching Chinese current affairs, culture, society, education, etc.

Mandarin Chinese III H (3 credits)
(Pre-requisite: 87 or above in Chinese II Honors or 93 or above in Chinese II and departmental recommendation)

In Chinese III Honors, students mainly continue the development of reading and writing skills via reading of essays and short stories. Class time is used for group discussions, text structure analysis, teacher and

student presentations, etc. The goals are to prepare students to be more proficient and independent language learners.

Mandarin Chinese IV (3 credits)
(Pre-requisite: 70 or above in Chinese III and departmental recommendation)

Chinese IV is a course for students who have a genuine interest in continuing to learn the Chinese language and culture and who are willing and able to challenge themselves to a higher level of learning. Through viewing and listening to authentic media, students will gain knowledge of current affairs and modern China's society and schools, as well as appreciate China's rich culture. Frequent compositions, presentations, projects and participation in activities with our partner school in China will further refine students' communication skills and enable them to use the language to solve real-life problems.

Mandarin Chinese IV H (3 credits)
(Pre-requisite: 87 or above in Chinese III Honors or 93 or above in Chinese III and departmental recommendation)

The Chinese IV Honors course is a precursor to the Advanced Placement Chinese Language course. In this course, students learn to read contemporary short stories, analyze grammatical structures, and conduct real life conversations. In addition, students will explore, research, and present about Chinese society and culture in a more in-depth and extensive way, with a focus on cultural perspective. Pre-AP content will be introduced and practiced.

Mandarin Chinese V (3 credits)
(Pre-requisite: 85 or above in Chinese IV and department recommendation)

The course further develops students' awareness and appreciation of cultural products, practices and perspectives. Students will use authentic Chinese materials and sources to develop their language skills in multiple modes of communication, including listening, speaking, viewing, reading, and writing.

Mandarin Chinese V H (3 credits)
(Pre-requisite: 87 and above in Chinese IV Honors or 93 or above in Chinese IV and department recommendation)

The course further develops students' awareness and appreciation of cultural products, practices and perspectives. Students will use authentic Chinese materials and sources to develop their language skills in multiple modes of communication, including listening, speaking, viewing, reading, and writing. In addition, students will be using many materials from the AP course to expand their learning and enhance their proficiency.

AP Mandarin Chinese (3 credits)
(Pre-requisite: 87 or above in Chinese IV Honors and department recommendation)

The AP Chinese Language and Culture course engages students in an exploration of significant events and people of Chinese history, as well as contemporary Chinese society and culture. Students learn to communicate more effectively in real-life situations using authentic materials such as newspaper and magazine articles and websites. To best facilitate the study of language and culture, the course is taught almost exclusively in Chinese. Students completing this course are expected to take the AP Chinese Language and Culture Exam in May.

Chinese Literature (3 credits)

**This course is designed for students who have successfully met the requirements of middle school Chinese courses from schools in China.

The course aims to introduce students to major ancient, modern and contemporary poetry and essays in Chinese Literature. In addition, topics will include introducing and developing student's basic translation skills between Chinese and English. Students will meet twice a week for classroom discussion, and use other times for independent reading and conducting one-on-one conferences with the teacher.

Latin I (3 credits)

In Latin I, students learn the fundamentals of Latin required to read at the basic level. These include: translating according to case instead of word order (the fundamental difference between English and Latin Grammar), acquiring a knowledge of and manipulating the case endings of nouns, the most basic adjectives, and the tenses of the present system – the present, imperfect, and future. We will also cover a variety of topics involving the Romans themselves, the world they lived in, and their legacy to the present. In particular, year one will focus on the early stories of Roman mythology and history, from the Kingdom to the early Republic.

Latin II (3 credits)
(Pre-requisite: 70 or above in Latin I and department recommendation)

Latin II focuses on a variety of grammatical forms, building on last year's foundation. These include degree of adjectives, adverbs, infinitives, relative clauses, participles, and prepositional phrases. Students will also learn the tenses of the perfect system, the passive voice, uses of the passive participle, the remaining declensions (4th and 5th), and the prolific system of Latin demonstratives and pronouns. In terms of Roman culture, this year will continue with mythology and history, examining the Greek legacy to the Romans, and some of the Romans' early neighbors.

Latin II Honors (3 credits)
(Pre-requisite: 93 or above in Latin I and department recommendation)

Latin II Honors covers the same material in Latin II, but at a faster pace, and with a greater responsibility on the student in terms of attention to detail and the amount of translation required.

Latin III (3 credits)
(Pre-requisite: 70 or above in Latin II and department recommendation)

Latin III focuses on a variety of grammatical constructions, finishing the core Latin grammar and giving students the capacity to read authentic texts. These include the ubiquitous subjunctive clauses with "ut" and "cum," deponent verbs, gerunds, gerundives, ablative absolutes, indirect discourse, relative clauses of purpose and characteristic, indirect questions, and the remaining participles. After this grammatical instruction, students will begin to read texts by Romans authors. Culturally, students will focus on the collapse of the Roman Republic into the Empire, and all the political, social, and military consequences therein.

Latin III Honors (3 credits)
(Pre-requisite: 93 or above in Latin II and department recommendation)

Latin III Honors covers the same material in Latin III, but with a greater responsibility on the student in terms of attention to detail and the amount of translation required. Additionally, Latin III honors translations will consist of more difficult prose and poetry.

Latin IV (3 credits)
(Pre-requisite: 70 or above in Latin III and department recommendation)

In Latin IV, students will read the early sections of Caesar's *De Bello Gallico,* and Vergil's *Aeneid,* and develop the fundamental literacy skills needed to analyze these complicated and historic texts. In this year, students will learn to analyze the rhetorical style of Caesar, with his long, complex constructions, and subtle political discourse. For Vergil, students will begin the complicated task of translating poetry, which in many ways is almost a language style unto itself, and also learn to analyze poetic devices and figures in Latin poetry. Culturally, students will continue to examine the Roman revolution, but in the context of the authors directly and the issues they discuss – namely, the political chaos in the time of Caesar, and the reforms of Augustus.

Latin IV Honors (3 credits)
(Pre-requisite: 87 or above in Latin III Honors or 93 or above in Latin III and department recommendation)

Latin IV Honors covers the same material in Latin IV, but with a greater responsibility on the student in terms of attention to detail and the amount of translation required. Additionally, Latin IV honors students will be tasked with scanning Latin meter, a difficult and mechanical operation required of the AP exam.

AP Latin (3 credits)
(Pre-requisite: 87 or above in Latin IV H, 93 or above in Latin IV and department recommendation)

Having developed both the linguistic and literary skills necessary to handle difficult texts in both prose and poetry, students will complete the required AP Latin readings of Caesar and Vergil. In this, the students are expected to apply their skill-set of translation, analysis, and cultural knowledge to fully appreciate and discuss these important literary and historic texts. Additionally, an emphasis will be given on cite translation – both in terms of exposure to texts, and the skillset needed to handle a never-before-seen Latin text. Also, scansion of Latin meter will continue to be developed, and students will be responsible for vowel quantity of common words and endings. At the end of the course, students should be ready to enter the AP exam with confidence.

Spanish I (3 credits)

This course is intended to introduce the student to the Spanish language by incorporating the instruction of grammar and vocabulary with basic speaking, reading, writing, and listening skills. This course also develops student insight into the culture of the Spanish speaking world. Activities include acting out scenarios, greeting others, talking about preferences and events in the present and near future, and describing people and school-related objects. Students also learn about cultural differences relating to meals, school schedules, and ways in which Spanish-speaking people address each other. In addition, lessons cover the use of basic regular and irregular verbs in the present tense, sentence structure, and adjectives and their agreement. The use of technology is integrated as a tool for teaching and learning. This includes the use of the Smart Board, computer, Internet, films, and music to increase understanding, reinforce newly acquired skills, and to engage the students in authentic situations related to the topics of study.

Spanish II (3 credits)

(Pre-requisite: 70 or above in Spanish I and department recommendation)

This Spanish course is designed to help students make the transition from Middle School language classes into the Upper School World Language Program. The focus of instruction is the continued development of students' proficiency in the language, with emphasis on communicative competence. Speaking, listening, writing, and reading skills are assessed in a variety of ways. The use of technology is integrated as a tool for teaching and learning. This includes the use of Smart Board, computer, Internet, films, and music to increase understanding, improve acquired skills, and to engage the students in authentic situations related to the topics of study.

Spanish II Honors (3 credits)
(Pre-requisite: 93 or above in Spanish I and department recommendation)

Spanish II Honors is the bridge joining basic knowledge of the Spanish language to a more advanced level of learning. Students will now start preparing for the possibility of an extended sequence of language study, culminating in Advanced Placement Spanish. The students use technology and experience literature, culture, history, and geography to establish a solid foundation. Emphasis is placed on the communication of ideas and information in Spanish with fluency and accuracy.

Spanish III (3 credits)
(Pre-requisite: 70 or above in Spanish II and department recommendation)

This course is the continuation of Spanish II. It consists of a study of the grammar and vocabulary of the Spanish language on an advanced level. The study of all the simple tenses is completed. Students develop greater listening comprehension and speaking ability through the use of daily communicative activities. In addition, the use of technology is integrated as a tool for teaching and learning. Students use technology in their study of the culture, history, and geography of Spanish-speaking countries. Students also focus on strengthening their vocabulary through reading excerpts from classical and contemporary Spanish literature.

Spanish III Honors (3 credits)
(Pre-requisite: 87 or above in Spanish II Honors or 93 or above in Spanish II and department recommendation)

This course is the continuation of Spanish II Honors. Students continue to develop skills in listening, speaking, reading, and writing. Students' accuracy in expression will be expanded with the study of advanced grammar and vocabulary essential for discussion of topics beyond basic needs. Vocabulary acquisition will be expanded through the reading of short stories. Various opportunities are afforded the students to express themselves, both orally and in writing. The use of technology is integrated as a tool for teaching and learning. This includes the use of the Smart Board, computer, radio, and TV to increase understanding, reinforce newly acquired skills, and to engage the students in authentic situations related to the topics of study.

Spanish IV (3 credits)
(Pre-requisite: 70 or above in Spanish III and department recommendation)

The course provides an option for those students who are interested in continuing in the study of the Spanish language and culture, but who are not necessarily interested in the Pre-AP and Advanced Placement course of study. In addition to fine-tuning grammar skills, the students will reinforce and further their knowledge through their continued development of communication skills in Spanish. Via the viewing of authentic media, the reading of short literary works, and the use of technology to support and enrich their learning, the students will be engaged in the exploration of current events and universal

issues and themes in order to analyze them from the perspective of both the U.S. and Spanish-speaking cultures.

Spanish IV Honors (3 credits)
(Pre-requisite: 87 or above in Spanish III Honors or 93 or above in Spanish III and department recommendation)

This course is designed as a survey course to increase reading comprehension, writing, and conversational fluency at an advanced, more native-like level. This course offers a greater quantity of vocabulary, idiomatic expressions, and advanced grammar. Spanish IV Honors provides a more in-depth study of literature, culture, history, and political movements throughout the Spanish-speaking world. The intensive review of grammar, ample writing assignments, and variety of literature equip students to communicate more effectively in the Spanish language. The use of technology is integrated as a tool for teaching and learning. This includes the use of the Smart Board, computer, Internet, films, and music to reinforce acquired skills and to engage the students in authentic situations related to the topics of study.

Spanish V (3 credits)
(Pre-requisite: 85 or above in Spanish IV and department recommendation)

Spanish V, an alternative to AP Spanish, is a continuation of Spanish IV. Films, music, web-sites, and literary works from the Spanish- speaking world are used to promote discussion of relevant historical, cultural, and current event issues. Units of study continue to be content-based, including related vocabulary, composition and conversation, and they focus on the further development of the students' language skills.

AP Spanish Language (3 credits)
(Pre-requisite: 87 or above in Spanish IV Honors or 93 or above in Spanish IV and department recommendation)

The course is structured to meet the standards of the Advanced Placement Spanish Language Examination as set forth by the College Board. Criteria for selecting students include student interest and motivation, demonstrated ability in previous Spanish courses, and teacher recommendations. This course requires that students read literary and journalistic prose and poetry, understand lectures and conversational Spanish, participate in class discussions and conversations, and write essays in Spanish. Students completing this course are expected to take the Spanish AP Language College Board Examination in May.

Fine and Performing Arts

Art and music are universal languages that have always played a key role in the story of our civilization. The Arts transcend boundaries of nation, age, race, and religion to speak their own language. The beautification of our world has gone on throughout history as people strive to produce, record, and order the physical elements of their environment. The Arts not only impact academic achievement, they also shape the way our students understand the world around them. Our Fine and Performing Arts curricula convey our commitment to educating the whole student and reflect our philosophy that, as subjects, art and music are not an extra, but rather an integral part of a student's education and life. To enrich our curricula, off campus field trips are offered.

Some of the courses do have pre-requisites or co-requisites. Please refer to the write up of each course for these requirements.

All courses are subject to change depending on student enrollment and faculty availability.

Fine Arts

Sculpture I (3 credits)

This course explores diverse styles and materials of three-dimensional form. Students are exposed to the additive and subtractive techniques of construction and carving using clay, wire, paper, wood, and mixed media. While emphasis is on hands-on activity, related topics such as the work of various sculptors and historical and contemporary issues in sculpture are also included.

Sculpture II (3 credits)
(Pre-requisite: Sculpture I with an A- average and Art I)

This course is for those students who show a strong aptitude and curiosity about sculpture. Building on the basic construction skills acquired in Sculpture I, this course provides an opportunity for students to further develop three-dimensional skills with the introduction of new mediums which present more challenging problems. Sculpture II students are also offered the option of developing a proposal, along with the guidance of the department, for the alternative of creating a series of theme-based projects to be produced over the course of the program.

Art I (3 credits)

The basic principles of design, color, and composition, with an emphasis on the use of space, are studied through a wide range of art experiences, including drawing, painting, sculpture, printing, ceramics, and art history. Art I studentsalso learn Chancery Cursive Calligraphy and work on an epoxy-resin jewelry project. Students are required to use their laptops for their monthly art criticism exercises and when referencing imagery for projects.

Art II (3 credits)
(Pre-requisite: Art I)

Students are provided the opportunity to improve their drawing skills through a series of projects using a variety of mediums, techniques, and methods. Color theory is also studied and explored through the use of different media. Students are required to use their laptops for their monthly art criticism exercises. Students are expected to research quotes and historic illuminations on their computers.

Art III (3 credits)
(Pre-requisite: Art II)

Art III builds upon Art I and II and provides a continuing exploration of the design, painting, sculpture, drawing, and printmaking processes. Students are required to use their laptops for their monthly art criticism exercises and when referencing imagery for projects.

Advanced Studio Art (3 credits)
(Pre-requisite: Three Years of Upper School Art Courses and permission of the department)

This course is for those students who show an exceptionally strong artistic ability or interest in the art field. It provides an opportunity for students to develop their artistic skills independently of the group, with the guidance of the instructor. Advanced art students, as well as seniors, have the opportunity to explore basketry and the creation of silver jewelry. Advanced Studio Art students are required to take Art Appreciation. Students are required to use their laptops for their monthly art criticism exercises and when referencing imagery for projects.

AP Studio Art I (3 credits)
& AP Studio Art II (3 credits)

(Students are required to take two years of AP Studio Art in order to prepare the portfolio they will need.)
(Pre-requisite: Students must have a GPA of 85 or a B average in all subjects and permission of the department)

Instead of taking a written examination, Studio Art candidates are required to produce a 2-D design portfolio for evaluation, prepared and submitted according to the specifications detailed on the Studio Art Poster. Each portfolio contains three sections: Quality (for which actual art work is submitted); Concentration (an in-depth, individual project); and Breadth (demonstration of a wide range of experience). Work for the Concentration and Breadth sections is submitted in slide form. The student needs to produce a total of forty finished pieces of artwork. This course requires a two-year commitment on the part of the student. Students are required to use their laptops for their monthly art criticism exercises and to investigate imagery, political references, and artist's works in preparation for the Concentration section of the AP Art exam.

Performing Arts

Concert Band (1.5 credits)
(Pre-requisite: Previous band instrumental experience and director approval)

Any student in grades 9-12 with previous band instrumental experience may become a member of Concert Band. Emphasis is placed on learning and performing a repertoire representing a wide range of musical styles. The concert band meets four days in the ten day rotation to prepare for the winter and

spring concerts. Small ensembles are arranged as the students' schedules permit. Students enrolled in Concert Band are eligible to audition for Jazz Band. Students interested in more individualized instrumental instruction are encouraged to take private instrumental lessons.

Concert Choir (1.5 credits)
(Pre-requisite: None)

Any student in grades 9-12 may become a member of Concert Choir. Students will study and perform music from various styles of music, including choral repertoire in the classics, spirituals, musical theater, and contemporary genres. Each student is encouraged to perform to the best of his or her ability by learning basic vocal technique, learning to sing with appropriate stylistic expression, and learning how to read musical notation and symbols. Concert Choir meets four days in the ten day rotation to prepare for the winter and spring concerts. Students enrolled in Concert Choir are eligible to audition for MadJazz. Students interested in more individualized vocal instruction are encouraged to take private voice lessons.

Fundamentals of Music (3 credits)
(Pre-requisite: None)
(Available to grades 10, 11, 12)

This course is designed for students who wish to gain a basic knowledge of music theory. Students are encouraged to apply the knowledge learned in this course to the music they are currently studying and performing in their ensembles and private lessons. Music notation, intervals, chords, scales, modes, rhythms, and transposition will be studied. Students will learn how to take music dictation, gain basic sight reading skills, and create short compositions.

AP Music Theory (3 credits)
(Pre-requisite: Fundamentals of Music and Departmental permission)

***This course will not be offered 2018-19**

Advanced Placement Music Theory is for those students who might be considering music as a major or minor in college. This course is designed to develop more advanced writing and listening skills, includes a review of intervals, chords, scales, modes, and key signatures. New clefs, advanced rhythmic notation, transposition, four-part harmony, analysis of musical forms, melodic and harmonic dictation, sight singing, and composition are studied. Students are expected to sit for the Advanced Placement exam.

Special Music Designations

Jazz Band (0 credits)
Successful audition results in Honors designation for Concert Band
(Co-requisite: Concert Band)

Jazz Band is an auditioned ensemble available to Concert Band students in grades 9-12. Students in Jazz Band will perform various genres of jazz repertoire. Jazz Band meets twice during the ten day rotation. Students in the Jazz Band will play for the winter and spring concerts and the Cookin' Cabaret in May. As members of the Jazz Band, students may also perform concerts for community organizations. Only students enrolled in Concert Band will be eligible to audition for the Jazz Band, with the exception of certain instrumentation being made at the director's discretion.

MadJazz (0 credits)
Successful audition results in Honors designation for Concert Choir
(Co-requisite: Concert Choir)

MadJazz is an auditioned ensemble available to Concert Choir students in grades 9-12. Students in MadJazz will perform music from Renaissance madrigals and motets to modern jazz. MadJazz meets twice during the ten day rotation. Students in MadJazz will sing for the winter and spring concerts, Spring Music Recital, and at the Cookin' Cabaret in May. As members of MadJazz, students may also perform concerts for community organizations. Only students enrolled in Concert Choir are permitted to audition.

Health & Physical Education

Health and Physical Education is required of all students. The physical education requirement is met each season through participation in scheduled physical education classes or by participation on a school athletic team.

Students may be excused from this requirement or parts of this requirement due to a medical reason. The medical excuse from the doctor specifying the duration (i.e. permanent, season, week, etc.) must be turned in to the school nurse and physical education teacher.

Health and Wellness (0.5 credits)

***This course is a requirement for grade 9**

Grade 9 Health and Wellness is a required course which provides the basis for continued methods of developing knowledge, concepts, skills, behaviors, and attitudes related to student health and well-being. This course includes the major content areas in a planned, sequential, comprehensive health education curriculum as expressed in the National and New Jersey Core Content Standards. This course assists students in understanding that health is a lifetime commitment by analyzing individual risk factors and health decisions that promote health and prevent disease. Students will also have a solid foundation in several areas including study skills, technology literacy, public speaking, and understanding the college admission process.

Health Education (1 credit)

***This course is a requirement for grade 10**

Health Education is a required course for graduation. A yearlong course in Health is offered in tenth grade but may be taken in eleventh or twelfth grade. The emphasis of the curriculum is skills-based including decision-making, planning, goal setting, self-management, stress management, advocacy, and communication skills. Information, activities, and examples are inclusive of diverse cultures and lifestyles (such as gender, race, ethnicity, religion, age, physical/mental ability, appearance, and sexual orientation). Strategies promote values, attitudes, and behaviors that acknowledge the cultural diversity of students; strengthen students' skills necessary to engage in intercultural interactions; and build on the cultural resources of families and communities. Through these skills, students will be learning about various content areas such as Wellness, Alcohol, Tobacco and other Drugs, Family Life/Relationships, and Community Health Skills including CPR/AED/First Aid certification with The American Red Cross. Students are supported in their efforts to apply knowledge, attitudes and behaviors toward achieving wellness and maintaining a healthy lifestyle.

@**Healthy Lifestyles** (1.5 credits)
(Available for 11th & 12th grade)

Healthy Lifestyles is a course designed to focus on world-wide health issues among adolescents. The four facets of health, the physical, the social, the mental, and the emotional aspects will be incorporated in to the curriculum. Issues that are real and relevant to many young people, including sex and relationships, STDs, chronic disease in relation to nutrition, stress, body image, drugs, alcohol, tobacco,

and stereotypes/prejudice/racism will be used as epidemiological studies to research various topics on a global level. Student presentations on these topics are required.

Education for healthy living seeks to encourage young people to eat sensibly, stay physically active, and maintain good levels of personal well-being. Overall, Healthy Lifestyles will enable an individual to become health literate and to become a critical thinker and problem solver, a responsible, productive citizen, a self-directed learner and an effective communicator. Healthy Lifestyles will promote choices to encourage long term improvement of the quality of life.

Physical Education (1 credit)

The goal of this course is to develop an appreciation for the positive benefits of physical activity and to stimulate interest in lifetime activities. This is accomplished through the offering of a broad range of activities along with an emphasis on individual development.

Successful completion of the physical education program is a graduation requirement for students who do not participate in a sport during an athletic season. PE credit is awarded to students who successfully attend, participate and adhere to the PE uniform policy. Participation in outside sports does not qualify for PE credit.

Driver Education (0 credit)

Driver training at Wardlaw-Hartridge is accredited by the New Jersey Department of Education. Driver Education classes meet once per week until the end of March and are taught by an instructor from the Edison Driving School. Students aged fifteen and older are eligible to enroll in the classroom course; students aged sixteen and older are eligible for "Behind-the-Wheel" training, which requires a minimum of eight hours of actual driving. Successful completion of both the classroom and the "Behind-the-Wheel" courses entitles the student to maximum driver training discounts by all insurance companies offering such discounts. There is a separate fee for Driver Education.