

UNIVERSITY HIGH SCHOOL

O F I N D I A N A

**Course Guide
2015 – 2016**

Summary of University High School Course Offerings 2015 – 2016

Course descriptions can be found in the 2015 – 2016 Course Guide. **Some classes have prerequisites, require departmental or teacher approval, or have other restrictions on enrollment;** see specific course entries for this information. **To register for an AP class,** a student must meet minimum enrollment requirements.

(Y) – indicates year-long class	(S2) – indicates 2 nd semester class
(S) – indicates semester-long class	(SU) – indicates summer class (add. fee)
(S1) – indicates 1 st semester class	

English

Language and Literature	(Y)	AP English Lang & Composition	(Y)
Great Books	(Y)	AP English Lit. & Composition	(Y)
Adv. English: Contemp. Amer. Novel	(S)		
Adv. English: Gender & Sexuality	(S)	Introduction to Creative Writing	(S1)
Adv. English: African American Lit	(S)		
Adv. English: The Rebel	(S)		
Adv. English: Literature of War	(S)		
Adv. Creative Writing: Fiction	(S2)		

Social Studies

World History	(Y)	U.S. Government	(S2)
AP World History	(Y)	AP U.S. Government & Politics	(S1)
Europe: Reformation & Revolution	(S1)	Economics	(S)
Europe: Modern Era	(S2)		
AP European History	(Y)		
U.S. History	(Y)	AP Psychology	(Y)
AP U.S. History	(Y)		

Mathematics

Algebra I	(Y)	AP Statistics	(Y)
Geometry	(Y, SU)	AP Calculus AB	(Y)
Algebra II	(Y)	Advanced Calculus	(S1)
Trigonometry & Finite Math	(Y)	AP Calculus BC	(S2)
Precalculus	(Y, SU)	Multivariate & Differential Calculus	(Y)

Science

Biology	(Y)	Zoology: Invertebrates	(S1)
Chemistry	(Y)	Zoology: Vertebrates	(S2)
Physics	(Y)	AP Biology	(Y)
Anatomy & Physiology	(Y)	AP Chemistry	(Y)
Astronomy	(Y)	AP Physics C (Mechanics; Electricity & Magnetism)	(Y)
Environmental & Spatial Sciences	(Y)		

World Languages

Spanish 1	(Y)	French 1	(Y)
Spanish 2	(Y)	French 2	(Y)
Spanish 3	(Y)	French 3	(Y)
Spanish 4	(Y)	French 4	(Y)
AP Spanish Language & Culture	(Y)	AP French Language & Culture	(Y)
AP Spanish Literature & Culture	(Y)		
		English as a New Language	(Y)

Arts

Wind Ensemble	(Y)		
Choir	(Y)	Introduction to Art	(S1,SU)
String Ensemble	(Y)	Introduction to Photography	(S)
Beginning Band	(Y)		
Advanced Literature in Music	(Y)	Sculpture I & II	(S1)
Music Appreciation	(S2)	Bookbinding I, II, & III	(S2)
Music Theory	(SU)	Ceramics I, II, III, & IV	(S2)
		Adv. Photography: Film	(S1)
Yearbook	(S1)	Adv. Photography: Portraiture	(S2)
Yearbook / Digital Design	(S2)		
		Portfolio Development	(Y)
Survey of Theater	(S1)	AP Studio Art: Drawing	(Y)
Applied Acting	(S2)	AP Studio Art: 2-D Design	(Y)
Advanced Acting	(S2)	AP Studio Art: 3-D Design	(Y)
		AP Art History	(Y)

Additional Classes

Web Design I	(S1)	Physical Education	(S, SU)
Intro to Computer Science	(S2)	Health	(S, SU)
Apple Help Desk	(Y)		
Advanced iOS App Development	(Y)	Research Scholars	(S)
Accounting	(S1)		

January Term 2016 Classes

Additional costs beyond textbooks: * = \$200 – \$499, \$ = \$500 – \$999, \$\$ = \$1000 – \$1999, \$\$\$ = \$2000 – \$2999, \$\$\$\$ = \$3000 or more; *Italics*: overnight travel. # = Requires application; See Course Guide.

<i>1066: The Norman Conquest</i> ^{\$\$\$\$}	<i>French Culture & Society</i> ^{\$\$\$\$}	Musical Theater*
School House Rocks: The Art of Teaching	Game Theory	<i>National Parks: History & Contemporary Issues</i> ^{\$}
<i>The Cuban Revolution</i> ^{\$\$\$\$}	Goethe	Intro to Philosophy: Thought Experiments
<i>Detroit: Rebirth of a City</i> *	<i>Celtic Culture: The Art & History of Ireland</i> ^{\$\$\$\$}	Fabric and Form*
<i>Disney: Making of an American Icon</i> ^{\$\$}	<i>Jurassic Park: Dinosaur Evolution</i> *	Student Internship
Evolution & Societal Impact of Football	Life & Culture of American Teens	

University High School Four-Year Planning Sheet

Student: _____

This is a document that each student should fill out as part of the registration cycle, in conjunction with discussions with mentor and parents. The idea is not to “set things in stone” but rather to facilitate conversations about academic goals and check that graduation requirements will be met. If the student and his/her mentor keep a copy, the plan can be revised each year during the registration cycle.

<p style="text-align: center;">9th Grade: <i>1st semester / 2nd semester</i></p> <ol style="list-style-type: none"> 1. Two semesters: Language & Literature 2. Two semesters: World History (AP or regular) 3. Two semesters: Biology 4. Math: _____ / _____ 5. World Lang.: _____ / _____ 6. Elective: _____ / _____ 7. Elective: _____ / _____ 	<p style="text-align: center;">10th Grade: <i>1st semester / 2nd semester</i></p> <ol style="list-style-type: none"> 1. Two semesters: Great Books 2. Two semesters: European History (AP or regular) 3. Two semesters: Chemistry 4. Math: _____ / _____ 5. World Lang.: _____ / _____ 6. Elective: _____ / _____ 7. Elective: _____ / _____
<p style="text-align: center;">11th Grade: <i>1st semester / 2nd semester</i></p> <ol style="list-style-type: none"> 1. Adv. Eng: _____ / _____ 2. Social Studies: _____ / _____ 3. Elective: _____ / _____ 4. Elective: _____ / _____ 5. Elective: _____ / _____ 6. Elective: _____ / _____ 7. Elective: _____ / _____ 	<p style="text-align: center;">12th Grade: <i>1st semester / 2nd semester</i></p> <ol style="list-style-type: none"> 1. Adv. Eng: _____ / _____ 2. Social Studies: _____ / _____ 3. Elective: _____ / _____ 4. Elective: _____ / _____ 5. Elective: _____ / _____ 6. Elective: _____ / _____ 7. Elective: _____ / _____

Total number of credits (1 semester = 1 credit): _____

Number of credits in each area:

Eng: ____ Soc. St.: ____ Math: ____ Science: ____ World Lang.: ____ Arts: ____ PE/Health: ____

Make sure to refer to the Course Guide for course offerings, University High School graduation requirements, and Indiana Core 40 and Academic Honors requirements. Some students will take six classes in a semester and have the 7th period serve as a study hall. If that is part of your plan, simply write in ‘study hall’ for one of the electives.

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University High School Minimum Graduation Requirements

English	8 credits
	2 credits: Language & Literature; 2 credits: Great Books; 4 credits of advanced coursework in the junior and senior years
Mathematics	6 credits
	A minimum of 6 credits must be taken in Grades 9 – 12. Students must complete at least Algebra I, Geometry, and Algebra II. Additional credits may be taken in Precalculus, Trigonometry and Finite Math, AP Calculus, AP Statistics, or an equally challenging program. Students are required to take a math or quantitative reasoning course each year in high school (see section on Indiana standards.)* Most Indiana state universities require 7 or 8 semesters of mathematics.
Science	6 credits
	2 credits: Biology; 2 credits: Chemistry; 2 credits: Additional credits from Biology, Chemistry, Physics, Earth and Space Science or an equally challenging program
World Languages	6 credits
	2 credits: Level 1; 2 credits: Level 2; 2 credits: Level 3 Minimum of 4 credits must be taken at a high school
Social Studies	8 credits
	2 credits: World History (AP or regular); 2 credits: European History (AP or regular); 2 credits: U.S. History (AP or regular); 1 credit: U.S. Government (AP or regular); 1 credit: Economics
Fine & Performing Arts	4 credits
	It is highly recommended that at least two of these credits be earned by the end of the 10th grade year and at least one more of these credits be earned by the end of the 11th grade year.
Phys. Ed. & Health	3 credits
	1 credit: Health; 1 credit: Physical Education; 1 credit: 1 additional credit physical education (note: successful participation in a full season on an athletic team can satisfy this third credit). It is highly recommended that at least one of these credits be earned by the end of the 10th grade year and at least one more of these credits be earned by the end of the 11th grade year. Special note for the Classes of 2016 and 2017: These students also need three total credits. One must be either the new Health class or the discontinued Health/PE class. The remaining two credits can be any combination of the current PE class, the old Health/PE class, or successful participation in a full season on an athletic team.
Electives	At least enough to meet the minimum total credit requirement
Total	48 credits

University High School’s educational program is a four-year commitment. All students have to carry at least 6 classes per semester and take one January Term class per year. Courses taken outside of University High School can be used towards the requirements only if approved beforehand. Students and parents should understand that the requirements stated above are *minimum* requirements; the school expects students to push themselves above these requirements.

Indiana Standards for Core 40 and Academic Honors Diplomas:



Effective beginning with students who enter high school in 2012-13 school year (class of 2016).

Course and Credit Requirements	
English/ Language Arts	8 credits Including a balance of literature, composition and speech.
Mathematics	6 credits (in grades 9-12) 2 credits: Algebra I 2 credits: Geometry 2 credits: Algebra II <small>Or complete Integrated Math I, II, and III for 6 credits. Students must take a math or quantitative reasoning course each year in high school</small>
Science	6 credits 2 credits: Biology I 2 credits: Chemistry I or Physics I or Integrated Chemistry-Physics 2 credits: any Core 40 science course
Social Studies	6 credits 2 credits: U.S. History 1 credit: U.S. Government 1 credit: Economics 2 credits: World History/Civilization or Geography/History of the World
Directed Electives	5 credits World Languages Fine Arts Career and Technical Education
Physical Education	2 credits
Health and Wellness	1 credit
Electives*	6 credits <small>(College and Career Pathway courses recommended)</small>
40 Total State Credits Required	

Schools may have additional local graduation requirements that apply to all students

* Specifies the number of electives required by the state. High school schedules provide time for many more electives during the high school years. All students are strongly encouraged to complete a College and Career Pathway (selecting electives in a deliberate manner) to take full advantage of career and college exploration and preparation opportunities.

CORE40 with Academic Honors (minimum 47 credits)

For the Core 40 with Academic Honors diploma, students must:

- Complete all requirements for Core 40.
- Earn 2 additional Core 40 math credits.
- Earn 6-8 Core 40 world language credits (6 credits in one language or 4 credits each in two languages).
- Earn 2 Core 40 fine arts credits.
- Earn a grade of a "C" or better in courses that will count toward the diploma.
- Have a grade point average of a "B" or better.
- Complete one of the following:
 - A. Earn 4 credits in 2 or more AP courses and take corresponding AP exams
 - B. Earn 6 verifiable transcripted college credits in dual credit courses from priority course list
 - C. Earn two of the following:
 1. A minimum of 3 verifiable transcripted college credits from the priority course list,
 2. 2 credits in AP courses and corresponding AP exams,
 3. 2 credits in IB standard level courses and corresponding IB exams.
 - D. Earn a combined score of 1750 or higher on the SAT critical reading, mathematics and writing sections and a minimum score of 530 on each
 - E. Earn an ACT composite score of 26 or higher and complete written section
 - F. Earn 4 credits in IB courses and take corresponding IB exams.

CORE40 with Technical Honors (minimum 47 credits)

For the Core 40 with Technical Honors diploma, students must:

- Complete all requirements for Core 40.
- Earn 6 credits in the college and career preparation courses in a state-approved College & Career Pathway and one of the following:
 1. Pathway designated industry-based certification or credential, or
 2. Pathway dual credits from the lists of priority courses resulting in 6 transcripted college credits
- Earn a grade of "C" or better in courses that will count toward the diploma.
- Have a grade point average of a "B" or better.
- Complete one of the following,
 - A. Any one of the options (A - F) of the Core 40 with Academic Honors
 - B. Earn the following scores or higher on WorkKeys: Reading for Information – Level 6, Applied Mathematics – Level 6, and Locating Information-Level 5.
 - C. Earn the following minimum score(s) on Accuplacer: Writing 80, Reading 90, Math 75.
 - D. Earn the following minimum score(s) on Compass: Algebra 66 , Writing 70, Reading 80.

Above document from: <http://www.doe.in.gov/sites/default/files/curriculum/core-40-and-honors-rule-summary-12-7-12.pdf>

*For definition of 'quantitative reasoning course' see: <http://www.doe.in.gov/ccr/quantitative-reasoning-courses>. As a brief definition, every mathematics course University High School offers counts as a quantitative reasoning course. Additionally, Accounting, Economics, AP Biology, Chemistry, AP Chemistry, AP Computer Science, Physics, and AP Physics count as quantitative reasoning courses.

College Requirements

Students are reminded to keep in mind the high school course requirements of colleges and universities in which they are interested. It is their responsibility to check on collegiate websites or with college representatives about specific additional requirements for admission.

Standard 9th grade courses

Unless compelling reasons are presented to the student's mentor, each 9th grade student is expected to take Language & Literature, two semesters of World History or AP World History, and Biology.

Standard 10th grade courses

Unless compelling reasons are presented to the student's mentor, each 10th grade student is expected to take Great Books, two semesters of the European history cycle (or AP European History), and Chemistry.

Calculating Grade Point Averages (GPA)

The following numerical values for grades are used to calculate GPA:

A+	A	A-	B+	B	B-	C+	C	C-	WF / F+ / F
4.3	4.0	3.7	3.3	3.0	2.7	2.3	2.0	1.7	0

The sum of all the grade points divided by the total number of classes taken (excluding those with only a "P" [pass] grade) is the GPA.

The school assigns additional weight to AP courses by adding one (1) grade point to the semester grades earned in these courses (for example, a B+ earned in a semester of an AP course would count as a 4.3, instead of the standard 3.3). Weighted GPA is the official GPA stated on report cards and transcripts. Unweighted GPA is used for determining status for honor roll, high honor roll, and academic probation.

Honor Rolls

University High School has two honor rolls: honor roll and high honor roll. A student earns a place on the honor roll when his or her unweighted semester grade point average is at least 3.30 but lower than 3.70. A student earns a place on the high honor roll when his or her unweighted semester grade point average is 3.70 or higher. All semester classes are included in these computations, except for those with only a "P" [pass] grade. January Term is not included in honor roll considerations, since it does not fall into the first or second semester.

What is an F+?

If a student's course grade average in the first semester of a year-long course (or a year-long sequence, like European History or two advanced English electives) is at or above 66.5% but below 70%, the grade is recorded as an F+. This counts as an F towards GPA, honor roll, and academic probation. If, at the end of the second semester, the student's grade in the class is at or above 72.5% (C), then the F+ from the first semester will be changed to a C- (and GPA and credits recalculated). If not, then the F+ is changed to an F.

Reaction to Fs

Any class specifically named in the graduation requirements that the student fails must be retaken – either in summer school or the following school year. Any other class not specifically named in the graduation requirements that the student fails must be accounted for by successfully passing another course – either in summer school or the following school year.

Academic Probation

A student is placed on academic probation if one of the two conditions occurs: (a) the student's unweighted semester grade point average is below 2.00, or (b) the student earns three or more grades below a C (C-, F+, WF, or F) in a single semester.

If the student's performance hits any of the above conditions in any subsequent semester, the student is subject to dismissal. Such dismissal will not be automatic, as the school will wish to take extenuating circumstances into account, but it should be understood that it would be rare for a student to remain at University High School if he or she could not maintain an academic performance better than the two conditions stated on a semester-by-semester basis.

A student may also be placed on academic probation for other circumstances at the discretion of the Head of School.

A student entering into academic probation meets with his or her parents, mentor, and a school administrator early in the new semester to make sure that his or her status is understood and, more importantly, to describe a change in behavior that will result in the student not meeting one of the stated conditions for the rest of his or her University High School career.

Who Should Sign Up for an Advanced Placement (AP) Class?

Grades in the class preceding the AP class*:	Eligible to sign up for AP class?	Should sign up for AP class?
B+ or higher in both semesters	Yes	Should very strongly consider – grades show you're a strong student up to the challenge
B- or B in both semesters	Yes	Should definitely think about it, but think carefully about the number of AP classes taken at one time
C+ or lower in either semester	No	Shouldn't think about it; grades show you're not ready for the AP level yet

* Because the registration for classes is done *before* 2nd semester grades are finalized, this means a student may be denied registration for an AP class if his/her 2nd semester grade in the preceding class is below a B-.

Teachers are often asked about how hard an AP class is; the answer depends on the preparedness and work ethic of a given student. If a student has regularly earned high grades in a given academic discipline, then the AP class is probably the right choice; for them, it's the next logical step. If a student has earned good, but lower, grades (say, like B or B- grades) then the AP class will be more challenging – which, depending on the student, might be the right step or could be too much.

Expectations about Advanced Placement (AP) Classes

AP classes are designed to give a student a chance to take an advanced, upper-level course. Each student will be doing college-level work throughout the year. In May, a national exam is held to test the student's knowledge of the subject studied. Students who do well on this exam may be able to earn college credit and/or placement. All students signing up for an AP class are expected to take the AP exam in the spring.

In order to be successful in an AP class, a student must be ready to make a serious commitment to work throughout the year. An AP course is designed as a college-level course. Therefore, the pace, level of thought expected, and grading standards are set accordingly.

Students in an AP course should commit to:

- 50 – 60 minutes of homework for each class period
- 4 – 6 mandatory class sessions during January Term
- Independent work over January Term, winter break, and spring break
- Possible Saturday sessions; these would include laboratory sessions for AP science courses, and exam preparation sessions for all AP classes
- Possible mandatory work over the summer to prepare for the class
- Taking the AP exam in May

Expectations About Other Upper-Level Classes

It is *not advised* for a student to sign up for an upper-level course which is based on sequential knowledge from a preceding class *unless* the student earned a B- or higher in *both* semesters of the preceding class. Each student should carefully consider the demands of the upper-level course and its expectations. The student should realize that if he/she takes the course without grades of B- or higher from the preceding course, it is quite possible the student will be unprepared to succeed in the course and could possibly earn an F in the course.

Preceding Courses for Non-AP Upper Level Sequential Classes

Non-AP Upper Level Courses	Specific Preceding Courses
Precalculus	Algebra II
Organic Chemistry/Biochemistry	Biology & Chemistry
Anatomy & Physiology	Biology
Spanish 4	Spanish 3
French 4	French 3
Advanced Studio Art (Drawing)	Studio Art (two semesters)

If a student thinks he/she qualifies for registering for an upper-level sequential class without having taken the preceding class specified above, he/she should speak with the teachers of the given department to seek approval.

Courses Taken Outside of University High School

In general, once a student has enrolled in University High School, only courses taken at University High School count towards graduation. Any course taken by a University High School student outside of University High School for the purpose of grades or credits must be cleared by University High School prior to the course being taken. Only courses through an accredited high school, college, or university will be considered.

The student must submit to the Academic Affairs Committee a written proposal (at least one substantial paragraph) that demonstrates how the desired outside course fits into his or her larger educational plan, as well as details about the curriculum of the course (syllabus, topics covered, etc.). In general, the courses approved are ones that the student is taking to make up an earlier failing grade or that the student is taking to advance further in mathematics or world languages. Outside courses are not approved if the desire is simply to not take a given course at University High School. If the institution is not a local high school (such as Carmel, Zionsville, or North Central), the student should also submit information about the accreditation of the institution. This committee will review the information for the course, consult with the appropriate academic department, and either accept or reject the request. If the course is approved, it is the responsibility of the student to provide the school with the transcript of the class to demonstrate successful completion of the course.

For outside courses offered in summer or fall, a student must present information about the course to the Academic Affairs Committee by April 15. The student will be informed of the final decision by May 15. For outside courses offered in the spring, approval must be sought by October 15, with a decision made by the school by November 15. Exception: Students who need to take a summer school course due to failing a second semester course will not know this before April 15. These students should submit the information specified in the preceding paragraph to the Academic Affairs Committee as soon as possible; the Committee will attempt to expedite the process for these students.

Outside courses that are offered while University High School is in session are subject to more stringent criteria. In general, a student may not take such courses that would cause him or her to miss more than one period of the University High School day or courses that are currently offered by University High School. The only courses that the Academic Affairs Committee will consider in this category are in subject areas in which the student (a) has already taken all the available University High School courses or (b) is taking the course in addition to a University High School course from this same subject area (that is, the outside course is for 'doubling up' in a given area).

A higher threshold also exists for an online course. Only junior or senior students are considered for these courses. A student may only take a maximum of one online course per year for University High School credit. The school takes on no responsibility for

overseeing the student in such a course; he/she has to work with the oversight of the other institution. The school will also provide no special technological equipment for such a course; that is the responsibility of the student. Finally, given the independent nature of this type of course, the Academic Affairs Committee will evaluate whether the student is mature enough to handle the course within our school setting.

Approved outside courses may be used to satisfy graduation requirements only if they are passed with a C- or higher.

Middle School Courses

If a student took a high school level mathematics or world language course in middle school (e.g., Algebra I, Geometry, Spanish 1, French 2, etc.), that course can be recorded on the official high school transcript. According to the State of Indiana's Department of Education, "Courses taught for high school credit in middle school must be equivalent to the high school and over the same Academic Standards. In addition, grades and credits for the course must be included on the student's high school transcript and factored into the cumulative GPA."

To meet Core 40 requirements (which are surpassed by the school's requirements), a student must take 6 credits (i.e., three years) of math classes at the level of Algebra I *or higher*. Similar for foreign language -- to earn Indiana Academic Honors, the student has to earn 6 credits in a language at first-year level *or higher* or 4 credits in two different languages at first-year level *or higher*. What this means, for instance, is that Algebra I does not have to be explicitly recorded on the transcript if the student takes Geometry, Algebra II, and Precalculus in high school.

When deciding whether to have the middle school courses placed on the transcript, a student should consider both the requirements (school/Core 40/Indiana Academic Honors) as well as the effect on the cumulative grade point average (GPA). If a middle school course is not needed for the requirements and the grades from the middle school course are lower than what the student expects his/her cumulative GPA to be, it would make sense to not place the middle school course on the transcript.

Dropping / Adding Classes

Any kind of change to a student's schedule will be the result of consensus on the part of the student, parent(s), teacher, and mentor. If a change is suggested by any of these people, the mentor should be notified. The student should discuss the idea with the teacher, parent(s), and mentor. The mentor should direct the student to take the lead in having these discussions, but then should also make a follow-up phone or face-to-face conversation to confirm.

If all parties agree that the change is appropriate, then it will be made. If there is some disagreement, the schedule will not be changed until consensus can be reached. If a problem persists, then either an Assistant Head or the Head of School should be brought into the discussion to help reach a final decision.

Students can make changes to their schedules without penalty by submitting a completed drop/add form to the scheduling coordinator no later than the beginning of the fourth week of the semester. After this point, up to the end of the first day of classes following mid-semester parent-mentor-student conferences, a student who drops a class will have the class recorded on his/her transcript with either a “WP” (withdrew – passing) or “WF” (withdrew – failing). A WP has no effect on the GPA; a WF counts the same as an F in the GPA. After the end of the first day of classes following parent-mentor-student conferences, a student may not make changes to his/her schedule for that semester. Any senior making any changes to his/her schedule must also get the signature of the college counselor.

Learning Support Services

Learning Support Services is for students who have supporting documentation to indicate that they need learning support. The resource is also available for students who are referred by their mentors and upon approval of the Director of Learning Support Services for additional study skills, test-taking skills, time management skills and organizational skills. These students generally meet in the College Counseling Conference Room but also utilize Room 116 and the Director’s office for testing.

Research Scholars Program

Students who are accepted for this program will spend considerable time and effort to develop, research, and write an extensive thesis; they will also give an oral presentation of findings. Students will develop the initial idea for the project in the spring of their junior year, work on it over the summer, and continue the work through the first semester of their senior year. They will earn one credit upon its successful completion. Participation in this program will give a student significant experience in managing a complex independent research project, as well as the satisfaction of pursuing a topic of one’s own choosing. It will give a student considerable training for college honors/thesis programs, and it will enhance applications for college admission.

A junior student who is interested in pursuing this program for his or her senior year should speak to the Dean of Academic Affairs for more information.

English

Course: Language and Literature

Prerequisite: None

Length: Year-long class

Special Note: This is the standard 9th grade English course.

This course strengthens the skills of analytical reading and writing. Its key elements (literature, written expression, oral discussion, language, and listening) are integrated with the history curriculum giving the students opportunities to be involved in meaningful activities that help to develop an understanding of systems of knowledge, concepts, and issues that frame the external world. This enables the students to gain a better understanding of how to apply the skills and make greater connections in their learning. Language & Literature explores a variety of genres, which connect and expand the curriculum generated from science, history, or personal interest. Critical-thinking skills such as classification, sequencing, analyzing, and predicting outcomes are reinforced as character development, point of view, plot, and theme are analyzed. A variety of assessments are used to evaluate student application of material, such as vocabulary tests, literature logs, journal responses, essays, creative writing, true/false, multiple choice, sequencing, and predictions. Speech presentations and peer discussion groups are also used. Finally, students must become analysts of their own strengths and weaknesses in order to develop strategies for improvement in reading, writing, and thinking.

Course: Great Books

Prerequisite: Language & Literature or equivalent 9th grade course

Length: Year-long class

Special Note: This is the standard 10th grade English course.

In this course, students will read excerpts of essays, novels, and articles written by some of the greatest writers and thinkers, from antiquity to modern times, in the Western tradition. Utilizing a seminar approach to facilitate discussion, students will explore the meaning, ethics, and motives of these authors, as well as seek to examine the connections between their own personal and cultural knowledge, popular/mass media knowledge, and mainstream academic knowledge, especially in considering the power of texts to transform society. Students will complete three to four formally drafted essays each semester, as well as sit for several exams covering specified units of study. Students will also be expected to submit less formally written pieces focusing on other aspects of class. These pieces will take the form of blogs and written journal responses. Regular vocabulary and grammar lessons will augment the class.

Course: Advanced English: African-American Literature

Prerequisite: Great Books or equivalent 10th grade course

Length: Semester-long class

Special Note: This satisfies 1 credit of advanced coursework from the graduation requirements.

From spirituals to contemporary fiction, from Frederick Douglass to the Notorious B.I.G.,

American literature has been shaped and guided by the voices of those once held in chains. This course will survey African American literature throughout the history of *our* country. We will look at both vernacular (or popular) works, such as songs, folktales, raps, and films, as well as contemporary essays on race and the works of major authors like Harriet Jacobs, W. E. B. DuBois, James Baldwin and Toni Morrison. Major assignments include two essays, an independent creative project, and a culminating exam. Students should also expect regular reading/viewing assignments and weekly writing.

Course: Advanced English: Gender and Sexuality in Literature

Prerequisite: Great Books or equivalent 10th grade course

Length: Semester-long class

Special Note: This satisfies 1 credit of advanced coursework from the graduation requirements

This class will focus on the role that gender and sexuality play in literature, especially in terms of perspectives that are traditionally and historically silenced. We will read Victorian and Gothic literature by women, a graphic novel that explores the personal growth of a young woman and her father, a biography of a modern-day mountain man, and other works that help us to further understand how gender and sexuality play a role in the creation of literature. Students should expect to participate daily in class discussions. Major assignments include two essays, a project, and a final exam.

Course: Advanced English: Contemporary American Novels

Prerequisite: Great Books or equivalent 10th grade course

Length: Semester-long class

Special Note: This satisfies 1 credit of advanced coursework from the graduation requirements

Contemporary American Fiction will focus on American novels that explore the idea of the Bildungsroman, or the coming of age in American society. Novels such as *Catcher in The Rye* and John Green's *Looking for Alaska*, among others, will be used to deepen a student's recognition and understanding of the myriad issues that are relevant in adolescents' lives.

Course: Advanced English: The Literature of War

Prerequisite: Great Books or equivalent 10th grade course

Length: Semester-long class

Special Note: This satisfies 1 credit of advanced coursework from the graduation requirements.

People have fought wars throughout time; they've then written about these experiences (some of the earliest literature is war writing). Why do people fight wars? How do these wars affect soldier and civilian alike? This class will examine the literary response to war. It will use some non-fiction sources (letters, diaries, and memoirs) and fictional sources (some poetry, short stories, and novels). Major assignments will include several papers and projects.

Course: Advanced English: The Rebel

Prerequisite: Great Books or equivalent 10th grade course

Length: Semester-long class

Special Note: This satisfies 1 credit of advanced coursework from the graduation requirements.

From the revolutionary to the troublemaker, this class will explore the archetype of the rebel from a broad range of sources. The class will begin by using philosophical sources to attempt to define "the rebel" and the role of such a person as both an actual figure and a motif. From there, examples will be brought forth from history, politics, literature, art, film, music, and business. Whether it's Che Guevara in the *Motorcycle Diaries*, Randal P. McMurphy in Ken Kesey's *One Flew Over the Cuckoo's Nest*, or John Hughes's Ferris Bueller, the majority of our time will be spent analyzing and comparing some of the most important examples of modern "rebels" and the impact they've had on history and society.

Course: AP English Language and Composition

Prerequisite: Great Books or equivalent 10th grade course; see 'Who Should Sign Up for an Advanced Placement Class?' and 'Expectations about Advanced Placement Classes' at start of this guide.

Length: Year-long class

Special Note: This satisfies 2 credits of advanced coursework from the graduation requirements.

AP English Language and Composition is designed to mirror a college-level composition class. Its primary goal is to help students "write effectively and confidently in the college course across the curriculum and in their professional and public lives" (The College Board, *AP English Course Description*. May 2007, May 2008, p. 6). In this course, students will strive to become critical readers, analytical writers, and successful communicators. While the objectives and requirements listed in the *AP English Course Description* guide the organization of this course, multi-week thematic units center on the discussion and analysis of an American cultural myth in order to encourage students to think critically about their beliefs and their world. Selections for each unit are composed of written and visual texts including (but not limited to) essays, political writing, autobiographies, social-science writing, criticism, cartoons, posters and advertisements, and readings are designed to complement the study of United States history that most students also take during the junior year. Each unit will be anchored by a multi-drafted piece of writing on which students will receive peer and teacher feedback. This writing is evaluated based on effective and appropriate use of a variety of vocabulary and sentence structure, logical organization, development and support of ideas and claims, effective use of rhetoric (including tone, voice and emphasis), and an understanding of purpose and audience (The College Board *AP English Course Description*, May 2007, May 2008. p. 8).

Course: AP English Literature and Composition

Prerequisite: Great Books or equivalent 10th grade course; see 'Who Should Sign Up for an Advanced Placement Class?' and 'Expectations about Advanced Placement Classes' at start of this guide.

Length: Year-long class

Special Note: This satisfies 2 credits of advanced coursework from the graduation requirements.

In this course, we will read selected works of American and British literature. Beyond exposing ourselves to a number of excellent (and enjoyable) pieces of writing, the focus of this course is to understand how structure and style work to create and enhance meaning. Writing will be a major part of the course, as will be close reading. In-class AP-style essays, informal personal responses, and take-home essays will be practiced regularly. The primary goal will be to develop the necessary skills and knowledge in order to perform well on the AP exam at the end of the year.

Course: Introduction to Creative Writing

Prerequisite: None

Length: Semester class offered in the second semester

Introduction to Creative Writing is an entry-level course designed to help students learn to incorporate writing in their lives and to expose them to a workshop environment. Reading and writing activities will cover the basic elements of the four main genres of creative writing: fiction, poetry, drama, and non-fiction. Students will study the techniques of each genre through handouts, selections in the text, and the creation of their own pieces. There will be a short test and cumulative project at the end of each unit over the specific writings and practices we've covered. In lieu of a final exam, students will create a portfolio containing polished writing samples, a personal writing metaphor, and a self-evaluation. At the end of this semester, students will be familiar with themselves as both writers and critics.

Course: Creative Writing: Fiction

Prerequisite: Introduction to Creative Writing (or instructor permission)

Length: Semester class in the second semester

Special Note: This satisfies 1 credit of advanced coursework from the graduation requirements.

Creative Writing: Fiction is an advanced elective course centered on the workshop environment. It is expected that students in this class already harbor a genuine interest in writing fiction. While we will cover concepts of basic story writing (characterization, plot, point of view, etc.) and major authors in the genre, students will spend the majority of the class establishing personal writing practices and developing their unique narrative perspective. In short, there will be reading, writing, and much discussing of students' own stories.

Social Studies

Course: World History

Prerequisite: None

Length: Year-long class

Special Note: This (or AP World History) is the standard 9th grade history class.

This course is a study of human history covering the period between 8000 B.C.E. and the present. The course will touch on the major developments of human civilization across the globe. Roughly equal attention will be paid to each region and period covered, giving students a wider perspective of the events and peoples that shaped our world. Particular focus will be on the development of historical thinking and writing skills, which will prepare students for future history courses at University and beyond.

Course: AP World History

Prerequisite: See ‘Who Should Sign Up for an Advanced Placement Class?’ and ‘Expectations about Advanced Placement Classes’ at the start of this guide.

Length: Year-long class

Special Note: This (or the regular world history course) is usually taken as a 9th grader. Other students may take this course as an elective.

The AP World History course is a global study of human history covering the period between 8000 B.C.E. and the present. Given such a breadth of time and geography, the course is organized to focus on developing students’ skills of historical analysis using a thematic approach. It is taught at the level of a college survey course, and it follows the guidelines provided by College Board’s Advanced Placement program. As such, the academic expectations, amount of reading and writing, and testing are significantly greater than in the regular world history class.

Course: Europe: Reformation & Revolution/Modern Era

Prerequisite: None

Length: Each is a semester-long class

Special Note: These two semesters (or AP European History) constitute the standard 10th grade social studies course, and they satisfy the ‘European history’ graduation requirement. Other students may take these courses as electives.

These courses focus on European history from the 1500s to the modern era. The primary content goal is for students to gain an appreciation of European history with emphasis on political, diplomatic, and military history; geography; religion and philosophy; artistic and cultural movements; economic history; and social history. Achievement of this goal is furthered by allowing for some depth of study, hence the division into four semesters.

Course: AP European History

Prerequisite: See ‘Who Should Sign Up for an Advanced Placement Class?’ and ‘Expectations about Advanced Placement Classes’ at start of this guide.

Length: Year-long class

Special Note: This (or two semesters of the regular European history cycle) is usually taken as a 10th grader. Other students may take this course as an elective.

The AP European History course will trace the development of European history from 1450 to 2001. Students will study cultural, diplomatic, economic, intellectual, political, and social history while learning about key concepts, facts, and personalities of the time period. This course follows the guidelines of the College Board’s Advanced Placement program and is consequently taught at an increased pace and with the heightened expectations of a college course. Students must be prepared for significantly more reading, writing, and testing than regular European History. Assessments will contain both multiple-choice and essay questions in order to model the actual AP test, which will take place in May.

Course: United States History

Prerequisite: None

Length: Year-long class

Special Note: This (or AP U.S. History) is usually taken as an 11th or 12th grader.

If we want to understand our country and ourselves, we need to know the character of the land and why people in this country act as they do. Therefore, this course covers the major political, social, economic, diplomatic, and military events that shaped both colonial life and life in the United States. The first semester begins with colonial history and ends with the conclusion of the Civil War and Reconstruction. The second semester begins with the changes in American life in the late nineteenth century and ends with an overview of the U.S. in the late twentieth century. The course requires students to learn specific factual material, then analyze and synthesize that information through writing essays, writing papers, and completing projects.

Course: AP United States History

Prerequisite: See ‘Who Should Sign Up for an Advanced Placement Class?’ and ‘Expectations about Advanced Placement Classes’ at start of this guide.

Length: Year-long class

Special Note: This (or U.S. History) is usually taken as an 11th or 12th grader.

The AP United States History course covers the historical development of the U.S. from colonial times up to the 21st century. Students have to study and comprehend many specific historical events from this time span, as well as understand and connect them through the seven themes of U.S. history called out by the College Board: identity, work, exchange, and technology, peopling, power and politics, environment and geography, culture, belief and ideas, and America in the world. The AP U.S. History course follows the guidelines and requirements provided by the College Board’s Advanced Placement program, and it is taught with the academic expectations and rigor of a college survey course. Consequently, the amount of reading, testing, and writing is significantly more than the regular U.S. History course.

Course: United States Government

Prerequisite: None

Length: Semester-long class

Special Note: This (or AP Government and Politics: United States) is usually taken as an 11th or 12th grader.

The purpose of this course is to achieve a basic understanding of how U.S. government was devised and how it functions, with particular emphasis on the three branches of government – legislative, executive, and judicial – as well as the role of the federal bureaucracy and the press. The class focuses on the Constitution – what it says, what it means, how it has developed, and how it is applied. To that end, the text of the document itself will be thoroughly examined, augmented by other formative primary documents, and analyzed by various secondary sources. A major emphasis of this course also will be current events and civic responsibility.

Course: AP Government and Politics: United States

Prerequisite: See ‘Who Should Sign Up for an Advanced Placement Class?’ and ‘Expectations about Advanced Placement Classes’ at start of this guide.

Length: Semester class offered in the first semester

Special Note: This is usually taken as an 11th or 12th grader.

This AP United States Government course addresses numerous topics including the history and content of the Constitution and the details of the legislative, executive, and judicial branches and the interaction of all three. It also covers other subjects such as federalism, elections and campaigns, political parties, civil liberties, interest groups, and the relationship between the media and politics. This course follows the guidelines of the College Board’s Advanced Placement program and is consequently taught at an increased pace and with the heightened expectations of a college course. Students must be prepared for significantly more reading, writing, and testing than they would find in the regular United States Government course.

Course: Economics

Prerequisite: None

Length: Semester-long class

Special Note: This is usually taken as an 11th or 12th grader.

The class is a survey of the basic terms and concepts in microeconomics and macroeconomics. The primary reading is from a formal introductory text. Supplemental reading and studies include primary sources (Adam Smith), articles, and current issues.

Course: AP Psychology

Prerequisite: See ‘Who Should Sign Up for an Advanced Placement Class?’ and ‘Expectations about Advanced Placement Classes’ at the start of this guide.

Length: Year-long class

Psychology is the systematic, scientific study of behaviors and mental processes. In this yearlong course, students will be exposed to major thinkers, famous experimental studies,

key concepts, and methods related to the field of psychology. This class is meant to simulate the experience of taking an introductory level course in psychology in a college setting, and will culminate with the opportunity to take the advanced placement exam for psychology.

Mathematics

Course: Algebra I

Prerequisite: None

Length: Year-long class

This course builds on students' prior mathematical knowledge and skills. Students increase their ability to work with algebraic equations and to interpret data. They work with increasingly more complex problems and applications of the mathematical ideas they are learning. Students are expected to start building a deeper understanding of the algebraic concepts and to start looking at why problems are set up the way they are, not simply memorizing a single approach to a problem. Graphing calculators are used throughout much of the course. The different utilities allow for exploring mathematical ideas in a way not practical by hand. By the end of the year students should be more comfortable with their ability to manipulate numbers and solve mathematical equations.

Course: Geometry

Prerequisite: Algebra I

Length: Year-long class

Special Note: With mentor and teacher approval, this course can be taken concurrently with Algebra II.

Geometry is the oldest and most studied field of mathematics largely due to its intuitive base. It is about shapes and figures and their relationships to one another. This course builds on the topics discussed in Algebra I and explores in detail the many different geometric figures and the complexity that can be pulled out of these seemingly simple figures. The purpose of this course is to explore these different figures, make conjectures about them, and then experiment with the conjectures using an inductive approach. This course focuses on hands-on activities in the development and testing of these conjectures. These hands-on activities make use of many different types of technology, ranging from paper and pencil to the graphing calculator and the graphing utility built into the student's computer. By the end of this course, students have an understanding of geometry as a coherent system of interrelated ideas and a thorough sense of how these ideas are developed, tested, and verified.

Course: Algebra II

Prerequisite: Algebra I

Length: Year-long class

Special Note: With mentor and teacher approval, this course can be taken concurrently with Geometry.

This course builds on the foundation laid by Algebra I and Geometry. Students learn about the importance of functions in mathematics and their applications with real world examples. The class studies a variety of functions including (but not limited to) linear, quadratic, exponential, logarithmic, polynomials, trigonometry, and statistical. Students develop an understanding of these different types of functions through teacher lectures, practice with classmates in class, and homework problems. Students are expected to think deeply about the foundation of the subject instead of just memorizing facts. Students are

shown how and why different concepts work, not just the rules. Technology, in the form of graphing calculators, is an integral part of the course. Traditional paper and pencil skills are taught to reinforce understanding of concepts and not leave the students dependent on the calculators.

Course: Trigonometry & Finite Mathematics

Prerequisite: Algebra II

Length: Year-long class

The class will cover a variety of topics beginning with trigonometry. We will review the basic trigonometric functions and then work with those functions to model real-world behavior. We will begin the year by using trigonometry to address the global warming question. After our work with trigonometry we will begin to explore different topics from the book *For All Practical Purposes*. The book covers a wide variety of real-world problems that can be modeled and solved by quantitative means. In science and industry, mathematical models are the major tools for analyzing and solving problems: What is a cost-efficient route for a garbage truck? How are flights scheduled to maximize profits? How can the future value of a stock be found? How long can renewable resources last? Can game theory provide insight into conflicts between nations? These are only a few of the problems we will learn how to solve. By doing mathematics on practical problems, the student gains the tools to understand and use the power of mathematics in the modern world.

Course: Precalculus

Prerequisite: Algebra II

Length: Year-long class

Special note: Teacher approval required if Algebra II was not taken the year immediately prior to Precalculus

Algebra is the generalization of arithmetic; calculus is the study of the dynamics of functions. Precalculus bridges the gap between the two, both in terms of content and approach. The course reviews topics from advanced algebra, focusing on graphing and functions. Students also study trigonometric functions, polar functions, and conics – all tools that help to better describe the world in mathematical terms. The course also includes a review of exponential and logarithmic functions. Precalculus is not a required course; students who elect this course should understand that it is demanding; it goes beyond the ability to deal successfully with equations and formulas. It requires a commitment to understanding and explaining the rationale of the topics covered.

Course: AP Statistics

Prerequisite: Precalculus; others with teacher and mentor approval; see ‘Who Should Sign Up for an Advanced Placement Class?’ and ‘Expectations about Advanced Placement Classes’ at start of this guide.

Length: Year-long class

The AP Statistics course is equivalent to a one-semester, introductory, non-calculus-based college course in statistics. The students use computer statistics programs as well as a graphing calculator in this course; technology is an important part of mathematics at

this level. Much of the mathematics involved is not difficult. What is hard is putting many different ideas together in order to solve a problem. The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes:

1. Exploring Data: Describing patterns and departures from patterns
2. Sampling and Experimentation: Planning and conducting a study
3. Anticipating Patterns: Exploring random phenomena using probability and simulation
4. Statistical Inference: Estimating population parameters and testing hypotheses

This course is a rigorous one, but one that can be completed successfully with work.

Course: AP Calculus AB

Prerequisite: Precalculus; see ‘Who Should Sign Up for an Advanced Placement Class?’ and ‘Expectations about Advanced Placement Classes’ at start of this guide.

Length: Year-long class

AP Calculus is equivalent to a first semester college-level course. The text used is a college-level text, and the students are expected to work at a rapid pace. The curriculum followed is the curriculum outlined by the organization that administers the Advanced Placement exam in May. The students also use a graphing calculator, as technology is an important part of mathematics at this level. The students are required to think outside the box in calculus. Much of the mathematics involved is not difficult; what is hard is putting many different ideas together in order to solve a problem.

The course begins with a short review of pertinent material covered in previous courses. The first semester is used to discover how the derivative of an equation is found and how that derivative is used. There are many applications of the derivative, and the students are exposed to a variety of situations. In the second semester, students work with integrals. Again, they are expected to use their knowledge to solve a wide range of applications.

The course is a rigorous one, but one that, with effort, can be successfully completed. It prepares students for a college-level calculus class, and in many instances, a student can place out of a college class with a good score on the AP exam in May.

Course: Advanced Calculus

Prerequisite: Any student having completed AP Calculus AB and wanting more advanced math is encouraged to apply. A rising senior who has completed Precalculus with an A or A+ average may, with instructor permission, take this course concurrent with AP Calculus AB.

Length: Semester-long class offered in the first semester

This course is intended for students who wish to explore advanced areas of mathematics that fall within the post-analytic geometry realm. It is intended for students who are seriously considering a career or ultimate pursuit of an advanced degree in a technical or mathematical field. The course should prove interesting and enjoyable to students who like both mathematical challenge and mathematical thinking. The course will explore the

topic of number theory, historical proofs, complex variables, linear algebra, numerical analysis, differential equations and advanced calculus.

Course: AP Calculus BC

Prerequisite: Any student having completed AP Calculus AB and wanting more advanced math is encouraged to apply. A rising senior who has completed Precalculus with an A or A+ average may, with instructor permission, take this course concurrent with AP Calculus AB.

Length: Semester-long class offered in the second semester

This one semester class represents a capstone semester for students who have completed AP Calculus AB or, for very strong students, who are taking Calculus AB.

All the topics of AP Calculus AB should be considered as review material for this semester. In effect, the AP Calculus AB course exists with a college board approved syllabus, and this class should be considered as a third semester extension of that class.

Students should take this course if interested in more mathematics after Calculus AB and if interested in exploring advanced math in preparation for a technical or math-heavy degree at the college level.

Course: Multivariate Calculus and Differential Equations

Prerequisite: AP Calculus BC

Length: Year-long class

Special note: The class will be coordinated through the Online School for Girls:
<http://www.onlineschoolforgirls.org/course/advanced-mathematics-multivariable-calculus-and-differential-equations/>.

Multivariate Calculus and Differential Equations will cover a number of other topics beyond the AP Calculus BC curriculum, including calculating volumes by using shells, surfaces of revolution, and centers of mass and centroids. The course also explores topics that are studied in a typical college-level third semester calculus course, including vectors and vector valued functions, differentiation in several variables, optimization in several variables, multiple integration, and line and surface integrals. The course concludes with an introduction to differential equations. Topics include solving exact first-order equations, solving second-order homogeneous and non-homogeneous linear equation, and exploring applications to various scientific fields.

Science

Course: Biology

Prerequisite: None

Length: Year-long class

Special Note: This is the standard 9th grade science course.

This class serves as an introduction to biology. Students learn about cellular and molecular biology, genetics, evolution, ecology, and some of the systems of the human body. In addition to learning factual information in each of these areas, students are expected to explore the interactions and interrelationships of the different fields. This is accomplished through frequent experiments, paper-and-pencil activities, and class discussions. The class emphasizes biology as a dynamic and growing field of study by including in discussions and activities areas where knowledge is changing and expanding. It is important for students to understand that biology is not simply a finished subject found only in a textbook.

Course: Anatomy and Physiology

Prerequisite: Biology

Length: Year-long class

This class explores the anatomy and physiology of the human body. Students study the major structures within the body on both a macro- and microscale, learning to identify those major structures using appropriate vocabulary. Students build an understanding of how the various parts are arranged and interconnected. Students also study how the different systems within the body work, in addition to learning what signals are used and what pathways are followed. While studying the structures and functions of the healthy body, students also learn what happens when there is a malfunction or disease. By the end of the class, it is expected that students have an increased appreciation for and be able to discuss the structures and functions of the human body in an informed manner.

Course: Environmental & Spatial Sciences

Prerequisite: Biology and Chemistry

Length: Year-long class

Special note: Students in this class should be motivated, independent, and prepared to complete hands-on work. Outdoor laboratory work on campus and at off-site locations will be major components of the course.

This survey course will teach students the principles of ecological systems through the use of our local community and applied technology. Students will learn that the natural world and the human-built world are not stand-alone entities, but rather one interconnected system. Students will also learn the complexity of environmental problems our world is facing today and understand how the integration of scientific and societal data helps us make more informed, sustainable decisions. Much of learning in this course will occur through applied technology and project-based learning. Students will learn how to use the core technologies used in the field of environmental and spatial sciences such as global positioning systems (GPS), global integrated system (GIS) mapping tools, remote sensing information data, 3D architectural design software, digital

photo and video editing tools, and graphic design software. The second semester will culminate in partner groups identifying an environmental challenge in our local community and proposing a possible solution.

Course: Zoology: Invertebrates

Prerequisite: Biology

Length: Semester-long class offered in first semester

Zoology is a laboratory science emphasizing the process of scientific investigation through the study of living things. The course is specifically designed to study the major phyla of the invertebrate animals: Porifera, Cnidaria, Platyhelminthes, Nematoda, Mollusca, Annelida, Arthropoda, and Echinodermata. Invertebrates account for 95% of the animal diversity on our planet! We will explore this amazing degree of diversity through several dissections, behavioral labs with living organisms, and guest speakers/field trips. The overall goal of this class is to foster a deeper appreciation for non-vertebrate organisms and to encourage a hands-on approach to science. Students that enroll in this course should be comfortable with dissection and working in the lab setting. Labs included in this course: working with living *C. elegans*, leech dissection, worm behavior, squid dissection, how to make calamari, crayfish behavior, sea star dissection, and more.

Course: Zoology: Vertebrates

Prerequisite: Biology

Length: Semester-long class offered in second semester

Zoology is a laboratory science emphasizing the process of scientific investigation through the study of living things. The course is specifically designed to study Phylum Chordata and the major classes of vertebrate organisms. We will use the overarching themes of evolution, animal design, and comparative body systems to explore the differences between vertebrate organisms and to foster a deeper appreciation of how vertebrate organisms have evolved specific adaptations to function in different environments. Guest speakers and possible field trips will be part of the course. Students that enroll in this course should be comfortable with dissection and working in the lab setting. Labs included in this course: fish dissection and behavior, amphibian and birdcall identification, mammal skull investigation, and more.

Course: AP Biology

Prerequisite: Biology and Chemistry; see ‘Who Should Sign Up for an Advanced Placement Class?’ and ‘Expectations about Advanced Placement Classes’ at start of this guide.

Length: Year-long class

Special Note: While not required, taking the Anatomy & Physiology or Zoology classes prior to AP Biology is encouraged.

This class is a college-level course designed to challenge students to extend their knowledge of biological theory and processes. Students will increase their factual knowledge of biology. The class will provide students an understanding of the larger

concepts and underlying themes of biology, and in addition present biology as a dynamic process. The themes covered will include evolution, energy transfer, continuity and change, regulation, interdependence in nature, structure vs. function, science as a process, and science in technology and society. In general, the course content will follow that set by the College Board for an AP Biology course.

Course: Chemistry

Prerequisite: Biology and Algebra I

Length: Year-long class

Special Note: This is the standard 10th grade science course

This is a first-year, laboratory-based course designed to give students an opportunity to explore a variety of topics in general chemistry. Chemistry is the study of matter, its structure, properties, and composition, and the changes that matter undergoes. In this course, students will study the fundamental principles of chemistry, which allows them to study all the major subdivisions of chemistry in greater depth in future courses.

The laboratory portion of this course reinforces concepts and processes discussed in class and provides a hands-on experience that directly connects with the lecture/textbook material. During the lab, students will use LabPro units attached to their computers to collect and analyze various types of numerical data. Students will usually work in pairs during the lab.

Course: AP Chemistry

Prerequisite: Chemistry; see ‘Who Should Sign Up for an Advanced Placement Class?’ and ‘Expectations about Advanced Placement Classes’ at start of this guide.

Length: Year-long class

This course is equivalent to a first-year college general Chemistry course. It will build upon the chemistry principles studied in a first-year Chemistry course and explore new topics. The following topics will be covered: measurement, atoms, chemical bonding, chemical reactions, states of matter, solutions, equilibrium, acids/bases, thermodynamics, reaction rates (kinetics), electrochemistry, organic chemistry, and coordination chemistry. There will be greater emphasis on the mathematical formulations associated with these chemical principles than in a first-year Chemistry course.

Students may work independently or in pairs in the laboratory, and the laboratory activities will reinforce concepts and processes discussed in class. The nature and variety of laboratory experiments will also be more detailed than in a first-year Chemistry course. During the lab, students will use LabPro units attached to their computers to collect and analyze various types of numerical data.

Course: Astronomy

Prerequisite: Student must be a junior or senior.

Length: Year-long class

The course offers a broad survey of modern understanding of the cosmos and how astronomers have built that understanding. It assumes no prior knowledge of astronomy or physics but does occasionally use basic algebra. It emphasizes process as well as facts and is a solid introduction to how science is done. Because astronomy is an observational science, the student will use computerized laboratory exercises to collect and analyze data. From ancient views of the solar system to the existence of extra-solar planets; from the birth and death of stars to black holes; from globular clusters to near and ancient galaxies; from familiar cosmic geometries to exotic ones, the course helps students understand their place in the universe.

Course: Physics

Prerequisite: Algebra I, Geometry, Algebra II (Algebra II can be taken concurrently)

Length: Year-long class

This course covers basic Newtonian mechanics during the first semester as well as electricity and magnetism during second semester. The class will also explore optics and thermodynamics as well as some modern physics. A willingness to engage oneself in deeply scientific thought and analytical challenge makes this a rewarding course.

Course: AP Physics C: Mechanics and AP Physics C: Electricity and Magnetism

Prerequisite: Physics; AP Calculus is a co-requisite or prerequisite; see ‘Who Should Sign Up for an Advanced Placement Class?’ and ‘Expectations about Advanced Placement Classes’ at start of this guide.

Length: These are two 1-semester classes, offered in sequence as a year-long class.

The goal of this course is to provide an introductory college-level understanding of calculus-based mechanics, electricity, and magnetism. This will be done through student-driven discussions, problem solving and laboratory experiments.

World Languages

Course: French 1

Prerequisite: None

Length: Year-long class

This is an introductory French language and culture course and is designed for students who have had little or no previous French study. The program includes work in the four traditional areas of language acquisition (listening, speaking, reading, and writing) as well as a cultural component. Students will be introduced to the rules of French pronunciation and to the basic structure of the language, including the conjugation of present-tense regular and irregular verbs, the concepts of gender of nouns and adjective agreement, the use of articles (indefinite, definite, etc.), simple comparisons, basic question forms, and the past and “near future” tenses. Topics of study will include describing people and places, school, food and restaurants, clothing, air and train travel, summer and winter sports, and the weather.

Course: French 2

Prerequisite: French 1 or by placement

Length: Year-long class

French 2 is a language and culture course that is designed for students who have had one year of high school French. The program includes work in the four traditional areas of language acquisition (listening, speaking, reading, and writing) as well as a cultural component. After a review of first-year content, students will be introduced to new grammatical structures, including reflexive and reciprocal verbs, direct and indirect object pronouns, the two past tenses (passé composé and imparfait), the simple future, the conditional, and relative pronouns. Topics of study will include daily routines, the arts, health and medicine, technology, banking and postal services, cooking, driving and public transportation, the city, and the country.

Course: French 3

Prerequisite: French 2 or by placement

Length: Year-long class

French 3 is a language and culture course that is designed for students who have completed two years of high school French. The program includes a cultural component as well as work in the four traditional areas of language acquisition (listening, speaking, reading, and writing), with a special emphasis on reading comprehension and vocabulary acquisition. The class is conducted mostly in French. Students will review previously learned grammar structures and be introduced to more advanced structures, including the subjunctive, demonstrative pronouns, interrogative pronouns, possessive pronouns, indefinite expressions, the past conditional tense, and the past perfect tense. Topics of study will include work, travel, leisure activities, housing, technology, French history, nature, and health.

Course: French 4

Prerequisite: French 3 or by placement

Length: Year-long class

French 4 is a language and culture course that is designed for students who have completed three years of high school French. The program includes a cultural component as well as work in the four traditional areas of language acquisition (listening, speaking, reading, and writing), with a special emphasis on essay writing and vocabulary acquisition. Students at this level are expected to have already learned the rules of French grammar, including the formation and use of all verb tenses and the proper use of articles, pronouns, prepositions, adjectives, and adverbs. Basic structures will be reviewed as needed, but only the most complex grammatical structures will be taught formally. The course is conducted entirely in French. The main goals of this course are to expand students' vocabulary and ability to read authentic French literary and non-literary texts, refine their use of French grammar, increase their ability to write formally and speak extemporaneously on a variety of topics, and to improve their understanding of spoken French in a variety of contexts.

Course: AP French Language and Culture

Prerequisite: French 4 or consent of instructor; see 'Who Should Sign Up for an Advanced Placement Class?' and 'Expectations about Advanced Placement Classes' at start of this guide.

Length: Year-long class

The AP French Language and Culture course emphasizes communication (understanding and being understood by others) by applying interpersonal, interpretive, and presentational skills in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. The course is structured around six themes: Beauty and Aesthetics, Contemporary Life, Families and Communities, Global Challenges, Personal and Public Identities, and Science and Technology. Students are expected to engage in spoken and written interpersonal communication; synthesize information from a variety of authentic print and audiovisual resources; and plan, produce, and present spoken and written presentational communications. To best facilitate the study of language and culture, the course is taught almost exclusively in French.

Course: Spanish 1
Prerequisite: None
Length: Year-long class

This course is designed for the true beginning language learner. The language program reflects an approach that seeks to balance the four skills traditionally associated with language acquisition, namely, aural comprehension, reading, writing, and speaking. The skills needed to recognize and produce the target language are developed progressively via the building of essential vocabulary and idiomatic expressions as well as the introduction of fundamental grammatical structures. In addition to the linguistic component of this course, students will have the chance to explore, through a variety of media, various aspects of the Spanish-speaking cultures.

Course: Spanish 2
Prerequisite: Spanish 1 or by placement
Length: Year-long class

This course is designed for students who have completed one year of Spanish instruction at the high school level or equivalent. The focus will be on developing and increasing skill levels in the areas of aural comprehension, speaking, reading, and writing. Students will have the opportunity to continue to enrich their vocabulary and utilize it in more complex aural and oral contexts. At this level, students will continue to hone grammar skills and will ultimately be able to express ideas in the present, past, and future tenses. In addition to the linguistic component of this course, students will have the chance to explore, through a variety of media, various aspects of the Spanish-speaking cultures.

Course: Spanish 3
Prerequisite: Spanish 2 or by placement
Length: Year-long class

This course will build upon the grammatical structures and vocabulary of the Spanish language learned in levels 1 and 2. The focus will be on developing and increasing skill levels in the areas of aural comprehension, speaking, reading, and writing. Communication at this level will require a more complex level of oral and written expression in a variety of tenses and moods as well as an enriched vocabulary and knowledge of idiomatic expressions. In addition to the linguistic component of this course, students will have the chance to explore, through a variety of media, various aspects of the Spanish-speaking cultures.

Course: Spanish 4
Prerequisite: Spanish 3 or by placement
Length: Year-long class

This course is designed for students who have completed three years of Spanish instruction at the high school level or equivalent. Students will continue working on consolidating all four language skills, namely listening, speaking, reading, and writing as well as exploring the cultures of the Spanish-speaking people. Students will be exposed

to literary and cultural readings. Students will apply more complex structures and enriched vocabulary in their writing. This class will be taught in Spanish.

Course: AP Spanish Language and Culture

Prerequisite: Spanish 4 or permission of instructor; see ‘Who Should Sign Up for an Advanced Placement Class?’ and ‘Expectations about Advanced Placement Classes’ at start of this guide.

Length: Year-long class

AP Spanish Language and Culture has been designed to provide advanced high school students with a rich and rigorous opportunity to study the language and culture of the Spanish-speaking world. It is approximately equivalent to an upper-intermediate college or university Spanish course. It encompasses aural/oral skills, reading comprehension, grammar, and essay writing. Students who enroll in this course should have a good command of Spanish grammar and be competent in the four language skills. This course will be taught entirely in Spanish.

Course: AP Spanish Literature and Culture

Prerequisite: AP Spanish Language or permission of instructor; see ‘Who Should Sign Up for an Advanced Placement Class?’ and ‘Expectations about Advanced Placement Classes’ at start of this guide.

Length: Year-long class

AP Spanish Literature and Culture is a survey course with a thematic approach to the study of Spanish literature and culture. The readings span from medieval to modern times, allowing students to examine the universality of literature and make comparisons and connections through historical and contemporary cultural contexts. Students will explore the interdisciplinary connections between literary works and other artistic forms of expression such as music, painting, architecture, and film. This course prepares students to read and critically analyze representative works of Spanish literature in all genres. Students will focus on the terminology of textual analysis, learn to identify the different elements of style, and interpret texts in correct oral and written Spanish. All of the works from the required reading list for the AP Spanish Literature and Culture exam are read in full text form. All instruction, discussion, and writing is in Spanish in order to support the development of students’ language proficiency necessary for success in the AP Spanish Literature and Culture course and exam.

Course: English as a New Language

Prerequisite: None

Length: Year-long class

Special note: There is an additional cost for students in this course.

This is an English language course designed for students whose native language is not English. The program includes work in the four traditional areas of language acquisition (listening, speaking, reading, and writing) as well as vocabulary for both everyday life and academics. In addition to daily oral practice, students will complete a variety of writing assignments on topics ranging from life experiences to opinion pieces to research

papers. The focus will be on increasing students' ability to understand spoken and written English, particularly in the academic setting, and on developing their ability to express themselves effectively both orally and through writing.

Fine and Performing Arts

Course: Yearbook
Prerequisite: None
Length: Semester-long class

Yearbook is a semester-long course that focuses on the study and practice of journalistic writing and photojournalism. Students in this class will be responsible for the production, publication, and marketing of the school yearbook. All aspects of yearbook production will be covered including graphic design, copywriting and editing, photographic composition, interviewing techniques, ad sales, and organizational and management skills. Students may take yearbook for a year-long class and will have the opportunity to focus more on digital design during the second semester.

Course: Yearbook/Digital Media Design
Prerequisite: None
Length: Semester-long class

This class will study and practice the use of journalistic writing and photojournalism with a focus on the digital design aspect of journalism. Students will be responsible for completing *Elements*, the school yearbook. In addition, students will dive into the collection, creation, and presentation of audio, video, and photographic images. Students will learn the best practice in all three areas of digital media. Projects in this class will include the use of digital video and still cameras as well as photo editing software. The content created by this class will be published as part of the yearbook as well as on the school's website.

Course: Beginning Band
Prerequisite: None
Length: Year-long class

Beginning band is open to any student who has not previously played a wind, brass, or percussion instrument and wishes to have the experience of learning an instrument. Furthermore, students who have played an instrument in the past and wish to refresh their musical chops may also take this class. In addition to learning the technical aspects of playing an instrument, students will learn how to read music. The student will be responsible for renting his/her instrument, but please do not choose an instrument without assistance from the instructor. The class will culminate in a performance at the end of the semester.

Course: Advanced Literature in Music
Prerequisite: Students who are proficient musicians are eligible for this class. Anyone interested in taking this class should talk to Mr. Geter so he can assess the student's ability.
Length: Year-long class

In it, students will delve into more complex solo literature written for their instrument. In

addition to musical preparation and interpretation, students are expected to research the history of the piece, and the composer. Guest clinicians will come to the class presenting master classes for each specific instrument. The class will culminate in a recital at the end of the semester, but will also incorporate various performances throughout the semester at University High School, and the greater community.

Course: Wind Ensemble

Prerequisite: Wind, brass and percussion players who have played their instruments for at least two years are eligible to perform in the wind ensemble.

Length: Year-long class

Students in the wind ensemble will perform more traditional band music in a concert band setting. This class differs from beginning band in that it will play more advanced literature, as the student should be more proficient on his/her instrument. This is a year-long class. With the exception of some percussion, students are expected to supply their own instruments.

Course: Choir

Prerequisite: None

Length: Year-long class

This class is designed for students in any grade who desire to participate in a vocal ensemble. There is no prerequisite, although the ability to read music is strongly encouraged. In addition to learning the basics of the music, students will sing in different languages, learn about other cultures, review important moments in history as it relates to the music, study the text (poetry, literature, etc.) and learn general information about the composer.

Course: String Ensemble

Prerequisite: Need to have played a string instrument

Length: Year-long class

This class is designed for students in any grade who desire to participate in an instrumental ensemble. Students must be able to play a stringed instrument and be able to read music. This class will provide students with the opportunity to study string literature in a chamber music setting. In addition, there will be an examination of the background information (era, composer, etc.) of the piece(s) performed. There may also be an opportunity for students to study important solo literature.

Course: Music Appreciation

Prerequisite: None

Length: Semester-long class offered in second semester

Music appreciation is a course that allows students to study the history of music from the Renaissance to the present. In addition to classical forms, students will examine musical theater, jazz, and popular music. At the completion of the class, students should be able

to identify well-known pieces of music and be able to define basic musical terminology. No previous experience in music is required.

Course: Music Theory

Prerequisite: Permission of the teacher

Length: Semester-long class

Music theory is a class designed for students who wish to learn about the mechanics of music. This includes learning the names of chords, their inversions, major and minor intervals and analyzing works from the Common Practice period. Students must be able to read treble and bass clefs fluently. Some piano skill is helpful.

Course: Survey of Theater: From the Greeks to Glee and Shakespeare to Shrek

Prerequisite: None (no prior theatrical knowledge or experience is needed for this introductory course)

Length: Semester-long class offered in first semester

This course is designed to introduce students to the study and practices of the theater and performance. Throughout the semester, students will read and analyze play texts from different historical and artistic periods. Coursework will provide the theoretical, historical, and practical contexts of the various aspects of theater. Through lectures, discussions, and written assignments, students will examine the roles of the audience in the live performance, the playwright, actor, director, and designers.

Course: Applied Acting

Prerequisite: Either the completion of a January Term acting class or instructor approval (through an interview or audition)

Length: Semester-long class offered in second semester

Special Note: This course meets concurrently with Advanced Acting.

This course is designed to be a continuation of the January Term introductory acting class, *The Actor's Craft*. The primary focus will be on deepening the student's powers of observation, imagination, commitment, sense of ensemble, and self-confidence using the basic acting techniques presented in January Term. Acting exercises designed by Stanislavsky, Strasberg, Spolin, Boal and others will serve as a foundation for exploration. While promoting responsibility and self-direction, opportunities will be provided to apply these theories through rehearsal and performance of scenes, short plays, monologues, and improvisations.

Course: Advanced Acting

Prerequisite: Applied Acting or instructor approval (through an interview or audition)

Length: Semester-long class offered in second semester

Special Note: This course meets concurrently with Applied Acting.

Students will explore acting beyond the basics and begin to develop a way of working balancing technique and method. Students will hone acting skills and abilities, refine physical, emotional, and imaginative awareness, and further develop the creative process

as an actor. They will learn ways “to live truthfully under imaginary circumstances,” and discover how actors can improve their performances by letting emotion based on the truth of the action, on subtext, and on the other characters around them be their guiding forces. Approach will be reflective of Meisner, Grotowski, Chekov, and Lesaac.

Course: Introduction to Art

Prerequisites: None

Length: Semester-long class offered in Spring Semester

This course is an introduction studio art course that develops skills, principles, and techniques in drawing and other 2-dimensional mediums. Students will develop an understanding of the elements of art, basic vocabulary for describing visual aspects of their work, as well as a general understanding of the roles art has played throughout history and influences of the visual arts and culture. Demonstrations, slide lectures, group and individual critiques will be the primary tools utilized during class time to allow students to fully develop their technical understanding of 2 and 3-D space. This course will also introduce students to color theory and allow them to experiment with a variety of mediums.

Course: Introduction to Photography

Prerequisites: None

Length: Semester-long class offered Spring and Fall

This class is an introduction to the fundamentals and principals of photography. Throughout the semester students will be provided with the basics needed to gain a thorough knowledge of digital photography and also develop a strong understanding of how to create imagery using composition and aesthetics. The primary content of the class will offer students the opportunity to elevate the quality of their imagery and appreciation of photography as an art form by developing a better understanding of these mediums. With the addition of Adobe Lightroom and Photoshop the students will learn to create and explore their photography to create digital images.

Course: Bookbinding I

Prerequisite: Introduction to Art

Length: Semester-long class offered in first semester

This is a beginning course dealing with the technical aspects of building handmade books. Along with several traditional bookbinding and box-building techniques student will develop an understanding of the general history of the book as a fine art object. Students are instructed on the use of tools and materials. Projects are designed to encourage exploration and experimentation of the book as a sculptural form.

Course: Bookbinding II

Prerequisite: Introduction to Art

Length: Semester-long class offered in first semester

This course builds upon the skill set learned from Bookbinding I. It will focus on

developing an understanding of more complex binding techniques such as box-building, embossing and constructing with leather, as well as possibly using alternative materials. Students will also learn to create works that focus on the artistic and creative characteristics of an artist book.

Course: Bookbinding III

Prerequisite: Bookbinding II

Length: Semester-long class offered in first semester

This course will focus primarily on the conceptual aspects of the handmade book. Students will utilize their prior understanding of bookbinding techniques to further experiment with concept and meaning. Projects are meant to push students understanding of the three-dimensional object and equally allow them to develop and create works that reflect their own voice.

Course: Advanced Photography: Film

Prerequisite: Intro to Photography

Length: Semester-long class offered in first semester

This course will focus on the techniques and creative processes using 35 mm and medium format film cameras. Students will be using traditional black and white film and students will be supplied with all materials needed. Throughout the course of the semester students will shoot with various 35 mm and medium format cameras, including but not limited to the Twin Lens Reflex, Holga camera and even a handmade pinhole camera. Subject matter will vary and students will be developing and printing their own images throughout the semester in the darkroom.

Course: Advanced Photography: Portraiture

Prerequisite: Intro to Photography

Length: Semester-long class offered in second semester

From the paintings of the Masters to the photographic selfies of today, portraits are and have been a huge part of Art history. Students will explore different styles of portraits. They will learn how lighting can create and affect the way the audience views a picture. Students will use dslr cameras, flash/strobe and available and continuous light sources to create their photographs.

Course: Sculpture I

Prerequisite: Introduction to Art

Length: Semester-long class offered in Fall semester

This course is an investigation of the principles and techniques in sculpture and three-dimensional forms. Students will gain a working knowledge of form, shape, balance, volume, proportion, texture, movement, and composition. This course will also introduce students to structural theory and allow them to experiment with a variety of 3-Dimensional mediums, including and not limited to paper, wood, wire, and clay through a variety of projects throughout the semester.

Course: Sculpture II

Prerequisite: Sculpture I

Length: Semester-long class offered in Fall semester

This is an advanced sculpture course that will build on the skill set acquired from Sculpture I. Throughout the semester students will create sculptural works that emphasize the conceptual aspects of Three-dimensional design. The projects will focus on developing creative expressiveness, while continuing the development of technical skills in various sculptural processes and materials.

Course: Ceramics I

Prerequisite: Introduction to Art

Length: Semester-long class offered in second semester

For this course students will learn the basic techniques of wheel throwing and hand building ceramic vessels. Students will focus on developing the skills of using a potter's wheel as a tool for making shapes, trimming pottery, making handles, sets, and spouts, decoration with slips and glazes, glaze application, and firing. For the hand-building portion of the course, students will create pieces using design elements such as texture, form, color and balance. Specifically we will focus on basic structural aspects of working with clay and discuss methods such as scoring, slipping, and additive and subtractive methods. In addition to studio work, students will participate in demonstrations and discussions on surface embellishment and firing processes, and learn how both affect the Function and aesthetics of the ceramic object. Experimentation with clays, slips, glazes and kiln firing procedures are encouraged.

Course: Ceramics II

Prerequisite: Ceramics I

Length: Semester-long class offered in second semester

For this course students will further improve skills of wheel throwing and hand building ceramic vessels. Projects will develop a variety of skill sets that will allow students to function on and off the wheel and equally feel comfortable combining both construction methods. Students will additionally experiment with surface embellishment, slips, glazes and will develop an understanding of various types of kilns and firing techniques by utilizing both the kilns at University as well as employing alternative firing processes.

Course: Ceramics III

Prerequisite: Ceramics II

Length: Semester-long class offered in second semester

This course will offer an advanced exploration of ceramic sculpture and vessel construction. Students will work both on the wheel as well as construct pieces using hand-building techniques. They will also gain knowledge of the different clay materials and clay bodies as well as possibilities slips may offer. Students equally will gain a general understanding of glaze chemistry by creating their own glaze. Throughout the

semester students will apply their skills to create forms that become both technically and structurally sound, but also more conceptual in nature.

Course: Ceramics IV

Prerequisite: Ceramics III

Length: Semester-long class offered in second semester

This is a course for students who wish to further improve specific ceramic skills, with emphasis on the aesthetic development of personal style. Students will focus on developing a cohesive body of work through the investigation of their chosen approach to the clay. At the onset of the semester, students will submit a proposal of the various projects they would like to explore throughout the course and will be tasked with meeting those goals. Students will be given more independence than in previous semesters to experiment and problem solve, but will regularly discuss progress with the instructor. A large emphasis is placed on a student's personal responsibility and ability to time manage.

Course: Portfolio Development

Prerequisite: at least 3 prior studio classes; at least a B in prior art class

Length: Semester-long or year-long class

This course is a precursor to the senior year AP Drawing, Photography, or 3-D portfolio. It allows students to gain additional one on one attention with an instructor and also develop their skills beyond the introductory and advanced courses offered. Throughout the semester students will be exploring the Breadth portion of the final AP portfolio. Works will focus on primarily developing technical skills and towards the end of the year/semester students will begin to think more conceptually. Their work should display a broad understanding and mastery of a variety of materials, techniques, and concepts and investigate art in all aspects. Students will develop mastery in concept, composition; and execution of drawing and be able to discuss artwork through critiques with their peers and instructor.

Course: AP Studio Art: Drawing

Prerequisite: Seniors only; see 'Who Should Sign Up for an Advanced Placement Class?' and 'Expectations about Advanced Placement Classes' at start of this guide

Length: Year-long class

Throughout the semester students will be exploring the three primary components of the AP portfolio; Quality, Concentration, and Breadth and create 24 well-executed works. Each piece should display a broad understanding and mastery of a variety of materials, techniques, and concepts and investigate art in all aspects (historical, cultural, and technical). Students will develop mastery in concept, composition; and execution of 2-D design and be able to discuss artwork through critiques with their peers and instructor.

As a survey course, the material is approached as an introduction to the discipline. The primary goals of this course are for students become versed in the visual language of art

and simultaneously encourage further study in college. In preparation for the AP Exam students will be able to write essays and complete exams defining vocabulary from the field of art history, fully identify specific works of art (title, artist, media, culture, artistic movement or period, and date), and analyze composition, symbolism and psychological function of those works of art.

Course: AP Studio Art: 2-D Design

Prerequisite: Seniors only; see ‘Who Should Sign Up for an Advanced Placement Class?’ and ‘Expectations about Advanced Placement Classes’ at start of this guide

Length: Year-long class

This course is geared primarily for seniors who may possibly be thinking about a career in photography or the graphic arts. Throughout the year students will choose a selected portfolio that is appropriate for their personal goals in the art program. They will explore in depth the three primary components of the AP portfolio; Quality, Concentration, and Breadth and in April will select 24 of their strongest pieces to submit to the College Board. Students should investigate art in all aspects (historical, cultural, and technical) allowing them make informed and critical decisions while creating their own works as well as develop mastery in concept, composition; and execution of printing and editing digitally. Throughout the semester the class will have regular critiques with their peers and instructor to guide them along the process.

Course: AP Studio Art: 3-D Design

Prerequisite: Seniors only; see ‘Who Should Sign Up for an Advanced Placement Class?’ and ‘Expectations about Advanced Placement Classes’ at start of this guide

Length: Year-long class

The AP 3-D goals for students throughout the course of the year are to develop creative and systematic investigations into the formal and conceptual issues in 3-D design. By the end of the year, they should be able to demonstrate versatility with techniques, problem solving, and application of mediums within the development of their work.

Throughout the semester, students will be presented with a variety of problems, which they must solve three-dimensionally in creative and thoughtful ways. In addition to this, they will be challenged with a variety of media. Students will also investigate current and past three-dimensional artists and develop an understanding of the place of sculpture within the context of art history.

Course: AP Art History

Prerequisite: See ‘Who Should Sign Up for an Advanced Placement Class?’ and ‘Expectations about Advanced Placement Classes’ at start of this guide

Length: Year-long class

The purpose of this course is to study the development of art and its relationship with history from prehistoric times to present (contemporary) day. This course will teach students to understand works of art within their historical context by examining issues

such as politics, religion, patronage, gender, function, and ethnicity. Various artistic media is studied in these approximate proportions: 40% painting and drawing, 25 % architecture, 25% sculpture, and 10 % other media. This course combines proper historical techniques and procedures with an emphasis on the role played by both the artist and the work of art, its context, and the critic. Equally important is the comparison between European art with examples of art from other cultures that exist and explored art beyond the European tradition.

Physical Education & Health

Course: Physical Education

Prerequisite: None

Length: Semester-long class

Students in this class will learn and develop many important skills, activities, and behaviors that promote physical fitness and wellness. University High School implements a comprehensive physical education program for all students to promote health and fitness by teaching skills in diverse physical activities and educating students in team dynamics, sportsmanship, cooperative effort, and the ability to think strategically. University High School believes it is important to develop a sound body as well as a sound mind.

Course: Health

Prerequisite: None

Length: Semester-long class

University High School believes that health awareness is very important for students. There is a direct link between our overall health and wellness and how we perform on a daily basis – in academics and extracurricular activities. This course covers material from the assigned textbook and current event issues in order to improve upon our health and to make better choices and decisions. The course covers a variety of topics – wellness, personal care and body systems, sex education, tobacco, alcohol, and drug education, and nutrition.

Technology Courses

Course: Web Design I

Prerequisite: None

Length: Semester-long class offered in first semester

The focus of this course is on web design skills. Even though the technology of web programming is rapidly evolving, the concepts and skills taught here will be useful no matter the level of programming know-how the student eventually achieves. Students in this class will learn basic website-building skills, with emphasis on HTML. Students use a text-editing software package to produce web pages of increasing complexity. They learn to critically evaluate their work as well as commercially produced sites. They spend time in discussions about current technology events and the application of technology in daily life. Students leaving this class will be able to create a small website capable of placement on the web.

Course: Introduction to Computer Science

Prerequisite: None

Length: Semester-long class offered in second semester

Introduction to Computer Science is designed to introduce students to the breadth of the field of computer science through an exploration of engaging and accessible topics. Rather than focusing the entire course on learning particular software tools or programming languages, the course is designed to focus the conceptual ideas of computing and help students understand why certain tools or languages might be utilized to solve particular problems. The goal of this class is to develop in students the computational thinking practices of algorithm development, problem solving and programming within the context of problems that are relevant to the lives of today's students. Students will also be introduced to topics such as interface design, limits of computers and societal and ethical issues.

Course: Apple Help Desk

Prerequisite: Sophomore, junior and senior students with teacher approval

Length: Year-long class

This course is designed to involve students in our 1:1 laptop program. Students with a desire to learn more about the Apple operating system will get an in-depth knowledge of the inner workings of their computer and provide valuable technical support skills to the University community. In addition, students will gain insights into problem solving and working with community members in a number of different settings. They will be involved in fixing hardware, assessing software problems and training users in the use of their systems. The first semester of the course is classroom-based. The second semester is dedicated to setting up and running the help desk, addressing problems that arise, and providing training to students and staff as necessary. One of the objectives of the second semester is to give students insight into the life of an IT professional. It is designed to be self-directed with faculty in a supervisory role.

Course: Advanced iOS App Development

Prerequisite: AP Computer Science and permission of instructor

Length: Year-long class

This course covers development of applications for iOS, incorporating the latest tools and techniques as used by current app developers. The first semester covers the essentials of the iOS framework, including topics such as user interfaces, accessibility, extensions, and background processing. At the end of the first semester, students will have built three fully functional apps – versions of Evernote, Snapchat and Tinder. In the second semester, students will take a deep dive into the latest and greatest iOS features, including CloudKit, HealthKit, and HomeKit.

Other Courses

Course: Accounting

Prerequisite: None

Length: Semester-long class offered in the first semester

Accounting is the language of business. This course is an interesting and fun introductory look at the world of accounting. We will learn fundamental accounting concepts including analyzing, interpreting, and recording business transactions, commonly known as bookkeeping. We will also learn to prepare and analyze financial statements, bank reconciliations, and payroll transactions. There will also be some basic personal finance topics covered, including check writing, credit, and budgeting. By the end of the course, the student should have some idea if they have any interest in possibly pursuing accounting and should have gained some knowledge to help them with their personal finances.

January Term 2016 Course Offerings

Course: The Norman Conquest
Instructor: Maggy Dean and Collin Lawrence
Estimated Costs/Fees: \$3,000 – \$3,500

Does one battle change an entire culture? What happened when feudal France met Anglo-Saxon England? This class will explore life in medieval France and England, in particular the differences between the two societies not only their military tactics but also their laws, political structures, and arts. In the third week of the January Term, the class will travel to England. The visit will be based in London where we will visit major sites connected with the Norman Conquest (the Tower, Westminster Hall, and Westminster Abbey) as well as related museums (the British Museum and the National Portrait Gallery). A day trip to the site of the Battle of Hastings will include a tour of Battle Abbey, the Battle Museum, and the opportunity to wander the battlefield itself. The return to London will include a stop in Canterbury.

Course: Schoolhouse Rocks: The Art of Teaching
Instructors: Jenny Cox and Maddy MacAllister
Estimated Costs/Fees: about \$100

In this class, students will be working three times a week in local public and private elementary and middle schools to learn good teaching methods. We will read various textbook chapters and articles about teaching and discuss the differences between traditional vs. flipped classes and charter vs. public schools. We will also learn a bit about child psychology and how to communicate with both the children and the parents. In addition, we will teach students about hidden curriculum and culturally relevant teaching. National and State Standards will be discussed, and students will learn about the requirements to teach at both public and private schools.

Course: The Cuban Revolution
Instructors: Susana Bollinger and Jim Fadely
Estimated Costs/Fees: \$3,000 – \$3,500

This course will explore the history of the Cuban Revolution of 1959 in depth. Students will also study a wide range of cultural topics, including music, art, dance, food, and religion. There will be Spanish language instruction to provide basic communication skills while in Cuba. After two weeks of study on campus, the class will travel to Cuba and visit several historic sites such as Havana Vieja (Old Havana – a UNESCO World Heritage Site), author Ernest Hemingway's village and home where he wrote *The Old Man and the Sea* for which he won the Nobel Prize for Literature, La Cabaña Fortress, The Museum of Cuban Art, and The Museum of the Revolution. Students will also attend a Cuban dance performance, and visit arts and crafts markets.

Course: Detroit: Rebirth of a City
Instructors: Kirstin Northenscald
Estimated Costs/Fees: under \$500

Detroit, once called the Paris of the United States for its culture and booming downtown scene, is now looked at as an example of capitalism gone terribly wrong. The auto industry once employed thousands, only to leave unemployment in its wake. The race riots of 1943 and then 1967 highlighted the city's racial and economic polarization and segregation. In 2013, Detroit filed for bankruptcy. Buildings have sat abandoned for years, only to be torn down or eventually reclaimed by nature. Fifteen of the twenty cheapest zip codes in America, according to *Business Insider*, are inside of or closely surrounding Detroit city limits. The cheapest nine are solidly within Detroit, where you can buy a house for an average of \$6,388. But, within this decay is now a sense of growth and rebirth. Many young people, who decades ago would have avoided Detroit at all costs, are now moving to the city. This class will look at Detroit as a unique example of urban decay and growth, but also as a model for America's urban centers. We will use the lenses of art, sociology, design, and others to view the urban landscape. The course will end in a trip to Detroit.

Course: Disney: The Making of an American Icon
Instructors: Jeannie Sager and Brett Kriebel Snyder
Estimated Costs/Fees: \$1,000 - \$1,200

This course will look at the history of Disney. Class time will cover the biography of Walt Disney and explore the development of the industry and its impact on society. Specific topics will include Disney pioneered developments such as the formation of the Disney Imagineers and the invention of audio-animatronics. The impact of Disney on everyday life including global consumerism, social impact, tourism and social critique will also be examined with daily reading assignments. Students will have a research topic of their choice that will culminate in a final paper/presentation. The class will include a 3-day/4-night trip to Walt Disney World in Orlando where the class will take part in a behind the scenes "Keys of the Kingdom" tour and take one course in the Disney Youth Education Series. The third day will be spent in the parks on teacher determined Disney "quests."

Course: The Evolution and Societal Reach of Football
Instructors: Erion Clark
Estimated Costs/Fees: about \$50

Students will learn about the historical development of today's game. Special attention will be given to the following topics: the specialized role of the coaches and coordinators, the use of professional players to promote awareness or advocacy of an issue, the inclusion of women in the sport, the economic impact of the game on the college and pro levels, play design and play-calling. Students will participate in daily training drills and play flag football. The cost of the class will pay for team meals and costs associated with travel to the Colts training facility near Eagle Creek.

Course: French Culture and Society

Instructor: Shannon Swann and Moises Gomez-Pastor

Estimated Costs/Fees: \$2800 – \$3000

Special Note: This class is open to French students of all levels

In this course, we will focus on contemporary France. We will learn about current trends and issues in French society and gain an understanding of daily life in France, looking in-depth at such topics as family, food, leisure activities, transportation, education, politics, the media, and the arts. A second component of the course will be an introduction to the various regions of France, with a particular emphasis on the differences between the Ile-de-France (Paris) region, the provinces, and southern France. Finally, we will engage in daily language practice to prepare for the final week of the course, when we will travel to France, exploring Paris, the Alps, and the Mediterranean coast.

Course: Game Theory

Instructor: Jamie Napier

Estimated Costs/Fees: under \$100

Special Note: Successful completion of Algebra I is a prerequisite for this class

Game Theory is an active and growing branch of mathematics and economics. In this course students will study a host of models to represent how humans have evolved to adapt or overcome situations of conflict or hard decisions. From the Prisoner's Dilemma to the stag hunt to global nuclear war, full knowledge and Nash equilibriums, Game Theory has in the past twenty years started to provide wisdom about the whys and the hows of some of the questions we have historically seen as unanswerable – not just in games but in the fields of social science and political science.

The class will explore human components such as greed, altruism, hope, despair, bluffing and commitment just to name a few. It will be an active class with lots of games and post-game analysis along with readings and movies that exemplify game theory: *A Beautiful Mind*, *Dr. Strangelove*, *Moneyball*, and *The Princess Bride*.

Course: The Life, Works, and Influence of Johann Wolfgang von Goethe

Instructors: Damien Geter

Estimated Costs/Fees: under \$50

In this class, students will read English translations of the works of Goethe. We will consider the role Goethe played in the Romantic movement and in the cultural history of Germany. We will also discuss how Romantic composers frequently used the poems and stories of Goethe as the basis for their compositions. Along with reading, we will listen to art songs based on the Goethe's poetry and analyze how the composer uses the text to shape his/her music.

Course: Celtic Culture

Instructors: Erica Adams and Meredith VanRooy

Estimated Costs/Fees: \$2,500 – \$3,000

Irish history is rich with mythology, art, and folklore. Their mythology was very different from that of the more widely known Greek and Roman. The Celtic people believed in the power of magic, fairies, banshees and the luck of the leprechauns. These stories retell of a place of grand celebrations and bloody wars, all of which became anchored in Celtic life and culture. Many of these tales have lived on to play a role in globally celebrated holidays and in newly founded religions that seek to tap into the ancient wisdom of the Celts. Aspects of this culture are gaining popularity in America and can be seen today in art, music, modern design and sports.

Students will learn about the features of ancient and medieval Celtic social conditions, their histories, archeology, and art. Students will recreate their own illuminated manuscript heading, using traditional gold leafing methods, as well as create their own Celtic designs. In this class you will meet devious gods and oppressive kings, learn about mighty conquests and the unconquerable *Tuatha Dé Danann*. You will experience the ancient Gaelic sports of hurling and football, as well as trying your hand in a traditional Celtic dance. Students will learn about the features of ancient and medieval Celtic social conditions, their histories, archeology, and art.

After learning about this country's rich history and culture we will travel to the Emerald Isle during the final week of this course. We will stop in Dublin to visit St. Patrick's Cathedral, and the "Book of Kells" at Trinity College. We will also drive through the Emerald Hills to see many of the other attributes that have contributed to the Art and folklore in the culture of this rich land (country). Such as; but not limited to Blarney, Killarney, Galway, the Cliffs of Moher and others.

Course: Jurassic Park: Fact or Fiction? The Evolution of Dinosaurs

Instructor: Carolyn Bradley and Stacey Summitt-Mann

Estimated Costs/Fees: about \$300

Whether your inspiration is Land Before Time, stuffed animals, digging in the dirt, or movies like Jurassic Park, who hasn't been fascinated by dinosaurs at some point in their lives? This class will look at the evolution of life on earth during the Mesozoic Era, specifically focusing on the three primary geologic periods—Triassic, Jurassic, and Cretaceous—in which dinosaurs existed. Key questions will include—What is a dinosaur? What was alive when? What happened during and after the great extinctions? How has our knowledge and depiction of dinosaurs changed with new technological advances and new discoveries? In addition to the science of dinosaurs, we will explore how these fascinating creatures are depicted in literature and cinema. We will examine how artistic renderings have changed over time.

We will be reading and watching various science articles and documentaries as well as works of science fiction and movies. There will be lively discussions, laboratory activities, independent research, and several field trips. There will be trips to visit the Indianapolis Zoo, the State Museum, and the Children's Museum (which has the sixth

most complete *Tyrannosaurus* skeleton ever found). We are also planning a trip to Chicago to visit the Field Museum.

Course: The Life and Culture of the American Teenager

Instructor: Tom FitzGibbon and Jake Thurman

Estimated Costs/Fees: about \$50

This course will explore numerous themes relating to the everyday lives of teenagers, including relationships (dating, family, friends, and others), academic and social pressures, alcohol and drug use, and identity issues relating to race, ethnicity, religion, sexual orientation, and social class. It will also examine how popular culture has portrayed and attempted to appeal to teenagers. As a result, students will watch classic and current films and television shows, read books, and listen to music (yes, including from boy bands), all of which attempt to document the teenage experience in both serious and purely entertaining ways.

Course: Musicals: Origin and Creation of Musical Theatre

Instructor: Ty Stover and Alicia LaMagdeleine

Estimated Costs/Fees: \$450

This course will cover the creation and development of musical theatre from its roots in opera and operetta to Broadway of today. We will view, listen to, analyze, and discuss a variety of musicals librettos and scores (from *The Black Crook* to *Hello, Dolly!*, from *Wicked* to *Once*) and musical-theatre composers (from Gilbert & Sullivan to George M. Cohan to Stephen Schwartz to Green Day). Travel destinations in this class will include local theatres, Chicago, and Cincinnati.

Course: National Parks: History and Contemporary Issues

Instructor: Chris Bradley and Wes Priest

Estimated Costs/Fees: \$500 - \$700

Special Note: Students in this class will spend significant time outdoors in this class – in January! Students must want to be active outside in the winter!

This class will explore many of the topics that surround the national parks of the United States, focusing on the history of the parks and contemporary issues that deal with the parks. Among the issues we will examine are the use of the land in the parks, the social and economic effects on the people who live near the parks, and the effect of tourism in the parks.

We will gather our knowledge from many sources, including books, films, lectures, discussions, internet sources, and guest speakers. Additionally, we will have several outdoor activities that will put us in the mindset to consider some of the issues raised. The biggest of these activities is a five-day trip to the Great Smoky Mountains National Park. The course will include a good deal of writing through short response exercises and one longer paper.

Course: Introduction to Philosophy: Thought Experiments
Instructor: Derek Thomas
Estimated Costs/Fees: under \$50

Thought experiments are a way to work through possible outcomes and consequences that result from premises, principles, theories, etc. without ever leaving the (dis)comfort of our chairs and minds. This class will use thought experiments as a gateway to the study of philosophy. We will study many important thought experiments such as Schrödinger's Cat, Zeno's Paradox, the Paradox of the Heap, the Floating Man, the Prisoner's Dilemma, the Chinese room. The class will consist of readings, discussion, blog posts and writing, group projects, and the creation of a student's own thought experiment.

Course: Fabric and Form
Instructor: Tasha Barger and Luke Crawley
Estimated Costs/Fees: \$200 – \$400

This course merges fabric manipulation and welded sculpture. The students will practice several fabric techniques: dying, painting, and quilting pieces together. In addition, this course will combine fabric art with welding into a mixed media sculptural form. In order to further emphasize their design elements, students will also be encouraged to explore the incorporation of other media such as internal or external lighting and sound art.

This class will cover the basics from using a sewing machine as well as provide a solid understanding of welding techniques and methods. Experiences outside the classroom will include museum visits and talks with local artists who work with similar materials.

Along with learning the technical aspects, students will develop an understanding of the history, tradition, and use of these art forms within American culture. We will address how contemporary artists have transformed and challenged many of the traditional expectations of fabric construction and functionality into highly conceptual and elevated fine art.

Course: Student Internships
Instructor: Anna Seldner
Estimated Costs/Fees: Usually small; student has to provide his/her own daily transportation

This offering is available to a junior or senior student who has completed an application to the program that has been accepted by the Academic Affairs Committee and the director of internships. Students should have a passion or interest in learning more about a particular career, business, or organization. Students spend each day of January Term off campus, working with an individual or an organization.

Students are responsible for making their own arrangements, but they will receive the guidance and support of the director. Students submit a daily electronic journal entry at the end of each day. In addition, each student will articulate his or her personal experience and evaluate his or her work during the internship through a longer written piece and an oral presentation to the school.
