

DELONE CATHOLIC HIGH SCHOOL

2018-19

COURSE CATALOG

GRADES 9-12

ADMINISTRATION

Mr. Richard La Rocca, Principal

Mrs. Donna Tompkins, Vice Principal



140 SOUTH OXFORD AVENUE ~ MCSHERRYSTOWN, PA. 17344

PH. 717-637-5969 ~ FAX 717-637-0442

WWW.DELONECATHOLIC.ORG

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MISSION

Delone Catholic High School exists to educate and challenge students spiritually, academically, physically, socially, and aesthetically within the traditions and teachings of the Roman Catholic Church. This challenge will inspire students to experience Jesus Christ personally and to be “Doers of the Word.”

PHILOSOPHY

As a Catholic, coeducational, inter-parochial school, we welcome students of all faiths in Grades 9 through 12. We focus on preparing students for a lifetime of learning, growth, service, integrity, responsibility, accountability and justice. We provide activities designed to promote the practice of self-confidence, self-discipline, creative expression and social graces in daily living. We encourage students to use their minds and cultivate their particular talents.

CATHOLICISM

The goal of Catholic education is to assist young people toward a heightened awareness of their humanity in light of Divine Revelation. We provide a program that promotes a sound understanding of the Catholic faith and its relationship to our society and all aspects of students' lives. We value our Catholic identity because that identity derives its original characteristics and its structure from the mission of the Church. Our school serves as a genuine instrument of the Church by participating in her evangelizing mission. We welcome and embrace a diverse cultural and economic population as a hallmark of our Catholic identity. We challenge our faculty, staff, students and families to witness their beliefs in daily life.

CURRICULUM

We offer a program of studies and activities designed to provide students with diverse experiences, which will equip them to recognize and respond to truth. We offer a program of instruction, instructional support, formation and growth, which promotes self-worth, respect for one's well-being, excellence through healthy competition and appreciation for the unique potential of each person. We foster a critical consciousness, which enables the student to think independently, to analyze complex issues thoroughly and to lead effectively.

CHARACTER DEVELOPMENT

We assist our students in developing and strengthening Christian values as the basis for moral judgments. We encourage them to integrate the spiritual, intellectual, aesthetic, personal, social and physical aspects of life.

CLIMATE AND CULTURE

We foster a Christian climate of responsible freedom and love, which enables all students to build personal and social relationships. We provide a nurturing atmosphere, which fosters respect and equality without regard to race, national origin, gender, economic status or creed. We provide a culture of respect, responsibility and service within a safe and welcoming Catholic environment.

CITIZENSHIP

We prepare students with the social skills they will need to be productive and contributing citizens. This education will enhance their role as faithful, informed and articulate members of the Church and society. We challenge students to strive for excellence, to be responsible global citizens of the modern world and to “Be Doers of the Word.”

COMMUNITY

We provide a quality educational environment through a cooperative effort with stakeholders: parents, alumni, consecrated persons, parishes, businesses and professional organizations.

INSTRUCTIONAL SUPPORT

Catholic Schools in the Diocese of Harrisburg seek to serve as broad a range of students as possible. This includes students who have documented special educational needs and may require some measure of additional instructional support. In determining whether a school is able to meet the needs of prospective students, it is necessary to review all academic records, including psychological educational testing reports. Schools must be able to balance the requirements of a student with documented special needs against the resources available to the school and the student.

Students come to school with varying skills and abilities. They all look forward to a new and rewarding school year. All students will meet with some degree of success, but for some, this success depends upon delivering the right amount of accommodations to students with documented special needs or learning differences. Instructional Support was created for just that purpose; to ensure success of students in the classroom.

Students having difficulty in school, for a variety of reasons, become discouraged, feel alone and dejected due to past or present failures brought on by their learning differences. The learning differences in students can vary from very minor to severe or involved. Regardless of their severity assistance and help are available. These learning differences could require some re-learning of skills - developing good study habits, special accommodations and more individualized one-on-one assistance. This service is provided at no additional cost to the parent.

While involved with Instructional Support, students receive special attention and assistance in subject areas with which they are having trouble as well as work on areas to strengthen their academic and study skills. From help on note-taking skills to test-taking techniques, assistance with overdue assignments to help with homework, students work through individual obstacles that impede their educational process and ultimate success. The student is expected to meet the same academic standards that Delone Catholic has established within the educational community. Students will only get out of Instructional Support as much as they put into it. The program has been designed as a collaborative effort to work together with teachers and students to help develop a more active learner and achieve greater success in the classroom.

FOUR-YEAR EDUCATIONAL PLAN

(for a typical Delone Catholic student)

GRADE 9 7.00 credits	GRADE 10 7.00/7.25 credits
Religion 9 English 9 Language/Elective(s) European Cultures Biology I Pre-Algebra/Algebra I or II Grade 9 Quarter Courses MAP - Music Exploration, Art Appreciation, and Physical Education 9	Religion 10 English 10 Language/Elective(s) Physical Science/Chemistry Algebra I or II/Geometry Basic Computer Applications HHDP - Health, Home & Family Life Science, Driver's Ed., and Physical Education 10 or HHP- Health, Home & Family Life Science, and Physical Education 10 Elective(s)
GRADE 11 7.25 credits	GRADE 12 6.25 credits
Religion II English II Language/Elective(s) American Cultures/Elective Chemistry/Physics/Earth & Space/Biology II/Algebra II/Pre- Calculus/Statistics Physical Education II Elective(s)	Religion 12 English 12 American Government/Economics Physical Education 12 Elective(s)

TOTAL CREDITS EARNED =

at least 27.5/27.75 with the above plan if all courses passed.

An elective can be one full-year or two semester courses.

Total credits needed to earn a Delone Catholic Diploma = 25/25.25

GRADUATION REQUIREMENTS

Delone Catholic High School offers a rich academic program. Course offerings are versatile and designed to meet the needs of students on a wide variety of levels.

GRADUATION REQUIREMENTS	
Religion	4 credits
English	4 credits
Mathematics	3 credits
Science	3 credits
Social Studies	3 credits
Foreign Language	2 credits (recommended)
Required Quarter Courses	1.75 credits
Physical Education	1 credit
Basic Computer Applications	.5 credit
Electives	3/3.25/5.25 credits
Total Academic Hours	25/25.25 credits
Total Works of Mercy Hours	80 hours

WORKS OF MERCY SERVICE PROGRAM

Each student is required to perform 80 works of mercy hours (20 hours per year) in order to earn a Delone Catholic High School diploma.

Works of mercy hours are earned for each service project that is authenticated by the Spiritual Life Director. Students are notified periodically throughout the year as to the status of their works of mercy hours to date. Works of mercy hours are cumulative and the requirements must be fulfilled by the end of the third quarter of the senior year (for Grade 12 students) and by the last day of the present school year (for Grade 9-11 students). For seniors, after the end of the third quarter, each hour turned in will only be credited to the students' service record as one-half hour.

A minimum of 20 works of mercy hours must be earned by the end of each school year by each student from any one of the three areas – Church, School, and Community. Each student must earn his/her 80 works of mercy hours according to the following table:

Church	School	Community	Any Area	Total
20	20	20	20	80

Students may report more than the required hours in order to be competitive when applying for college, university and/or organizational scholarships.

SUGGESTIONS FOR WORKS OF MERCY OPPORTUNITIES

Church

lector, grade school coach, pro-life activities, hospitality, altar server, nursery teacher, parish festival, bingo, maintenance, choir member, Eucharistic Minister, office assistance, PAL Lunch, cantor, youth group activities, Religious Education teacher, mission assistance

School

tutor, tour guide, Peer Minister, host for guests, office assistant, sports announcing, library aide, teacher assistant, School Board Committee, assembly setup crew, maintenance, marketing, Development Office, sports manager, carnival, Teens for Tots, Lenten Dinners

Community

hospital volunteer, migrant ministry, food drive projects, pre-school volunteer, kindergarten volunteer, CROP Walk, senior citizen ministry, public library aide, blood donor, Habitat for Humanity, Christmas gift wrapping, soup kitchen, PAL Lunch, Red Cross helper, CYO volunteer

GRADUATION POLICY

Graduation is an honor earned by those senior students who have satisfied all of the following requirements. It is also a privilege intended to recognize those students who have earned a diploma.

PRACTICE AND PARTICIPATION IN GRADUATION ACTIVITIES

No senior shall practice nor participate in baccalaureate liturgy, senior awards, or graduation if he/she:

1. Has not successfully completed the required 25 academic credits (see page 8);
2. Fails any one of the above required courses within the senior year;
3. Fails two or more elective courses within the senior year (at the discretion of the Director of Studies);
4. Has not completed his/her 80 works of mercy hours. (All completed works of mercy hours must be handed in by the first day of senior exams. Uncompleted works of mercy hours at the end of the third marking period double in number for completion);
5. Has not met all disciplinary obligations; and
6. Has not paid full tuition, library fines, the graduation fee, lost or damaged textbook costs, school property damage costs, locker fees or any other monetary debts.

****Please note that practices and participation are mandatory if a senior is eligible to participate.****

No diploma, transcript or final report card will be issued until all of the above requirements are satisfied.

NCAA-APPROVED CORE COURSES FOR INITIAL ELIGIBILITY

ENGLISH

Creative Writing
English 9, 10, 11 and 12
AP English
Introduction to Journalism
Introduction to Poetry
Speech

MATHEMATICS

Algebra I, II and III
Algebra II/Trigonometry
AP Calculus
AP Statistics
Calculus-H
Geometry
Pre-Calculus
Statistics-H
Statistics-A
Trigonometry

SCIENCE

Anatomy and Physiology
Biology I and II
Chemistry I and II
Conceptual Physics
Earth and Space Science
Electronics I and II
Physical Science
Physics I and II
Practical Chemistry

SOCIAL STUDIES

American Cultures
American Government
AP US Government and Politics
AP Microeconomics
AP US History
Contemporary History
Contemporary Microeconomic Issues
Criminology
Economics
European Cultures
Holocaust
International Relations
Psychology
Sociology
World Area Studies
World Cultures

ADDITIONAL CORE COURSES

French I, II, III, IV and V
Introduction to Philosophical Thought
Latin I, II
Spanish I, II, III, IV and V

COURSES NUMBERS

Individual courses are numbered according to the following system:

First Digit = Curriculum Area

- 0 = Service, Other Electives
- 1 = Religious Studies and Humanities
- 2 = English
- 3 = Foreign Language
- 4 = Social Studies
- 5 = Science
- 6 = Mathematics
- 7 = Business, Computer & Information Technology
- 8 = Family & Consumer Science and Technology Education
- 9 = Technology Education, Art Education, Music Education and Physical Education

Third Digit = Quality Point Level

- 1 = Advanced Placement
- 2 = Honors
- 3 = Academic
- 4 = Fundamental
- 5 = No Level, not part of the GPA

GRADE 9 QUARTER COURSES

****Please Note****

If a freshman fails any one of the required courses, he/she must take the particular course again in the same school year or the following school year until success has been met.

015	Music Exploration	Quarter	Grade 9	Required
<p>Music Exploration is intended to enhance students' understanding of music, an important part of everyone's life. Concepts and skills covered in this course include music in our school, music in our lives, rhythm, melody, harmony, tone color, texture, form, improvising, and reading and writing notation.</p> <p>This course is intended for students who do not play a band instrument or enjoy singing. Students who have experience playing a band instrument or singing are encouraged to take Course 943 (Instrumental Music), 953 (Vocal Music) or 993 (Chorus) instead. If a student chooses any of these three courses in their freshmen year, this course requirement will be waived.</p>				
025	Art Appreciation	Quarter	Grade 9	Required
<p>This course is designed to develop a visual vocabulary and understanding of art media and processes. Students will use critical thinking and problem solving skills to produce two and three dimensional art. Students will become aware of the art forms in everyday life, the career opportunities available and training necessary to achieve personal goals in art. An art fee of \$5 is required.</p>				

GRADE 10 QUARTER COURSES (H, H&FS, D.ED)

055	Health 10	Quarter	Grade 10	Required
<p>This course is designed to provide students with the opportunity to gain the knowledge necessary to develop an optimal level of health. This basic course of study covers: teen health risks, fitness, nutrition and maintaining a healthy weight, sexuality, and the effects of alcohol, tobacco and drugs on the human body.</p>				
065	Home and Family Life Skills	Quarter	Grade 10	Required
<p>This one quarter required course will provide a foundation upon which students can function in everyday life. Students will be provided with the necessary skills to make informed consumer decisions, manage a budget, properly care for clothing (e.g., launder, iron, repair, etc.) and prepare nutritionally balanced meals in a safe and sanitary environment.</p>				
075	Driver Education	Quarter	Grade 10	Required*
<p>This course consists of a two-phase program. Phase one consists of classroom instruction for all students with special emphasis placed on basic driving maneuvers, traffic laws, vehicle failures, drugs and alcohol. Phase two consists of behind-the-wheel instruction and is optional. There are two faculty members who are certified to give driving lessons, as well as administer the Pennsylvania driving test.</p> <p>*Since the Maryland DMV Department no longer accepts Delone Catholic's Driver Education course as a fulfillment towards one's driver license requirements, all of our Maryland residents will be required to choose a semester course to replace Driver Education, unless they opt to take the Driver Education course knowing it will not qualify for Maryland's DMV requirement.</p> <p>**Please Note**</p> <p>Successful completion of both phases of this course is usually required necessary for reduced insurance premiums.</p>				

RELIGIOUS STUDIES

103	Foundations of Faith-A	Year	Grade 9	Required
<p>Throughout this course, the students will examine their faith development as maturing Catholic Christians with increased faith identification and integration through a comprehensive overview of Catholicism. This study is aimed at facilitating a deeper appreciation for the beliefs, rituals, moral vision and prayer life of the Catholic faith.</p>				
113	Sacred Scriptures-A	Year	Grade 10	Required
<p>Sacred Scripture is a comprehensive study of the Old Testament and the New Testament. The Old Testament tells of the first stage in salvation history, stressing the unity of God's plan of salvation. Since our understanding of Jesus is the heart of our Catholic faith, the New Testament offers students a thorough presentation of the life, ministry and message of Jesus and that of the early Church. Throughout the course, an extensive use of the Bible by the students enables them to learn not only how to read the Bible, but to use its message in their daily lives.</p>				
123	Catholic Moral Teaching-A	Year	Grade 11	Required
<p>In the Catholic Morality class, the meaning of the basic concepts and principles of morality will be presented, founded on the truth of the Scriptures, the fathers of the Church, sacred tradition and the Catechism of the Catholic Church. The course will challenge students to grow in the knowledge and love of God in order to be as Christ-like as possible and to better understand the worth of the individual as created in the image and likeness of God. Current moral matters will be discussed extensively.</p>				
133	The Church and Christian Vocations-A	Year	Grade 12	Required
<p>This course combines The Church and Christian Vocation. The Church presents a development of the Church throughout its 2,000-year history focusing on the people of God who make up the Church. It, then, challenges the students to take an active role in the Church community through Christian vocation by helping the students to understand the various states of life and how to respond to God's call (discipleship).</p>				

HUMANITIES

143	The Holocaust & Its Lessons - A	Semester I/II	Grades 11-12	Elective
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The Holocaust and Its Lessons is an analysis of the magnitude of a state-sponsored systematic persecution and annihilation of eleven million European Jewry and minority groups by Nazi Germany and its collaborators between 1933 and 1945. Life before, during, and after the Holocaust will be examined through historical documentation, videos, and personal accounts. Students will gain insight into the historical, social, religious, political, and economic factors which cumulatively resulted in the Holocaust. *Students must complete an interview for this course.

Prerequisite:

1. Limited to 25 students

153	Mariology - A	Semester I	Grades 11-12	Elective
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This first semester-long course will be a study of Mary, the Mother of God. It will begin with looking at Church teaching on Mary, including Biblical stories and Papal teaching. There will also be a brief history of teachings of Mary in traditions outside of the Bible.

Next, students will survey Mary as presented in culture, through visual art and music. Finally, students will explore Marian spirituality and devotions to Our Lady.

Prerequisite:

1. Limited to 20 students

ENGLISH

202	English 9-H	Year	Grade 9	Required
<p>This course introduces the student to various genre studies of fiction, non-fiction, prose and poetry on an accelerated level. The material is more intensive in scope and rate of coverage than the academic level, creating a foundation for honors courses during the sophomore, junior and senior years. Grammar, composition, vocabulary and literature coverage relies on supplementary materials to accomplish this task.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Placement Test Scores 2. Placement Writing Sample 3. 8th Grade Averages in Language Arts 4. 8th Grade English Teacher Recommendation 				

203	English 9-A	Year	Grade 9	Required
<p>In this course, freshmen will be introduced to the various literary genres: fiction, non-fiction, poetry and prose. The basic skills of literary study learned in Grade 9 will be enlarged upon in Grades 10, 11, and 12. Grammar, composition and vocabulary form an integral part of the course.</p>				

204	English 9-F	Year	Grade 9	Required
<p>This course focuses intensely on the reinforcement of basic language skills. Recognition of the parts of speech, reading comprehension, language usage and mechanics are emphasized. Writing skills focus on the writing process, paragraph development and organizational note taking and study skills which are designed to help in all areas of study.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> 1. Limited to those freshmen who require extra time and help in English as indicated by standardized test scores from their elementary/middle school, recommendation of their 8th grade English teacher, placement test scores (Explore), writing sample score and any documentation regarding their academic abilities. 				

212	English 10-H	Year	Grade 10	Required
<p>In Courses 212, 213, and 214, literature study will concentrate on the aspects of fiction, non-fiction, poetry and drama to give students a solid foundation in the basic skills of literature study through the analysis of selections from world literature. Vocabulary, grammar and composition are also studied to facilitate a greater ease in expression of thought. In 212, a research paper is required.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. 90 percent average in English 9-H or 93 percent in English 9-A 2. Student is self-directed and displays a strong personal desire to achieve, has a positive attitude which is evaluated by the punctuality and thoroughness of assignments and actively participates in class. 3. Student is responsible for supplementary reading and extensive writing assignments. 4. The English teacher, in consultation with the department chair, will make recommendations to the Director of Studies. 				

213	English 10-A	Year	Grade 10	Required
<p>In Courses 212, 213, and 214, literature study will concentrate on the aspects of fiction, non-fiction, poetry and drama to give students a solid foundation in the basic skills of literature study through the analysis of selections from world literature. Vocabulary, grammar and composition are also studied to facilitate a greater ease in expression of thought.</p>				

214	English 10-F	Year	Grade 10	Required
<p>In Courses 212, 213, and 214, literature study will concentrate on the aspects of fiction, non-fiction, poetry and drama to give students a solid foundation in the basic skills of literature study through the analysis of selections from world literature. Vocabulary, grammar and composition are also studied to facilitate a greater ease in expression of thought.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Students presently in a fundamental level are considered first 2. Requests from students in an academic level course will be considered on an individual basis; such students must have been in danger of failing for the year or must have in fact failed at least a quarter of Academic English 				

222	English 11-H	Year	Grade 11	Required
<p>The study of American literature is designed to give juniors an appreciation of our American heritage through a chronological approach. An overview of writings from the seventeenth and eighteenth century is provided. Students will be exposed to writing samples beginning at the nineteenth century and continuing through the present.</p> <p>Selections have been chosen for their appropriateness to the interest and reading levels of students and to cover the major trends in American literature. Vocabulary, grammar and composition are also studied to facilitate a greater ease in expression of thought. A research paper is required.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. 90 percent average in English 10-H or 93 percent in English 10-A 2. Student is self-directed and displays a strong personal desire to achieve, has a positive attitude which is evaluated by the punctuality and thoroughness of assignments, and actively participates in class. 3. Student is responsible for supplementary reading and extensive writing assignments. 4. The English teacher, in consultation with the department chair, will make recommendations to the Director of Studies. 				

223	English 11-A	Year	Grade 11	Required
<p>The study of American literature is designed to give juniors an appreciation of our American heritage through a chronological approach. An overview of writings from the seventeenth and eighteenth century is provided. Students will be exposed to writing samples beginning at the nineteenth century and continuing through the present.</p> <p>Selections have been chosen for their appropriateness to the interest and reading levels of students and to cover the major trends in American literature. Vocabulary, grammar and composition are also studied to facilitate a greater ease in expression of thought. A research paper is required.</p>				

232	English 12-H	Year	Grade 12	Required
<p>In this chronological approach to British literature, the students will have a sampling of the major British writers from the Anglo-Saxon period to the present. The standard requirements of vocabulary, grammar and composition will be studied. A literary analysis is required. Strategies for taking college blue book exams will be introduced and blue book exams will be administered.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. 90 percent average in English 11-H or 93 percent in English 11-A 2. Student is self-directed and displays a strong personal desire to achieve 3. Student is responsible for supplementary reading and extensive writing assignments. 				

4. The English teacher, in consultation with the department chair, will make recommendations to the Director of Studies.

233	English 12-A	Year	Grade 12	Required
<p>In this chronological approach to British literature, the students will have a sampling of the major British writers from the Anglo-Saxon period to the present. The standard requirements of vocabulary, grammar and composition will be studied. A research paper is required. Strategies for taking college blue book exams will be introduced and blue book exams will be administered.</p>				

241	Advanced Placement English Literature and Composition	Year	Grade 12	Required
<p>The Advanced Placement (AP) course in literature and composition is one which concentrates on the development of skills in critical reading of imaginative and discursive literature and the analyzing and evaluating of literature and related ideas. The course combines selections from American, British, and world genres emphasizing drama, poetry, novels and short stories. A balanced offering of close reading, survey reading, in-class and out-of-class writing will occur.</p> <p>The taking of the AP Examination in the spring of the senior year is a requirement of the course and is taken at the students' expense (approximately \$86-\$90).</p> <p>**A satisfactory score of three (3) generally provides the student credit for Freshman English at most colleges and universities.**</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Limited to seniors who have a 93 percent average in English 11-H. On rare occasions, a student in English 11-A may be considered, but only after an interview with the English Department Chair and/or AP English Teacher, as well as with approval of the Director of Studies. 2. The AP student must manifest all the characteristics of a serious scholar, including a capacity for independent study, limited and extensive research assignments, intensive discussion through seminar format, analysis of regular writing assignments of an analytic and persuasive nature. 3. Interested candidates must submit a writing sample and a full practice AP Exam in order to effectively measure probable success. 4. Interested candidates must have the approval of the AP Teacher or the English Department Chair and meet with the English Committee to finalize placement 5. Criteria will in place to re-evaluate students in AP at the conclusion of Quarter 1, 				

253	Introduction to Journalism-A	Semester I/II	Grades 10-12	Elective
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This course will introduce students to the writing techniques of major types of stories, including hard news, news features, features, editorials and op-ed. Students will scrutinize recent issues of local newspapers, write representative articles, some on deadline, and briefly study the history of the American newspaper, resulting in the publication of the school newspaper, *Delonews*.

Prerequisites:

1. The student must have successfully completed English 9-A or English 10-A with a grade of 80 percent or above and have a strong teacher recommendation.
2. Limited to 20 students

263	Creative Writing-A	Semester I/II	Grades 11-12	Elective
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This course will provide a knowledge base and application of structural components in poetry and prose. An overview of exemplary writing, dialoguing, practice writing and peer revision will be used. The course will, at the teacher's discretion, incorporate guest speakers, film and readings in addition to stimulating ideas for writing. Students' work will be directed toward publication including Delone Catholic's literary magazine *Insquire*.

Prerequisite:

1. Student must have successfully completed English 10 and English 11 with an average grade of 80 percent or better.

FOREIGN LANGUAGE

A two-year program in a modern foreign language (French, Spanish, or Latin) is strongly recommended. A stipulated grade is necessary to proceed from one level of a foreign language to the next level.

An incoming freshman who feels he/she qualifies for Spanish II or French II must take Delone Catholic's final exam in Spanish I or French I and receive a 93 percent or above to qualify for the second level.

313	French I-A	Year	Grades 9-12	Elective
<p>French I is designed to introduce the student to the basic skills of foreign language - speaking, reading, listening and writing. Aspects of the culture of the French-speaking world will be presented in the course. Students who anticipate studying French for two or more years are encouraged to begin the language in the ninth grade.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A minimum average of 80 percent in Junior High Language Arts Program 2. Recommendation of the 8th grade English teacher and the Foreign Language Chair 				
323	French II-A	Year	Grades 9-12	Elective
<p>French II is a continuation of the work of the first year. A more in-depth study of the structures and language patterns is the basis of the course. French vocabulary will be stressed and expanded, and the study of the culture of the French-speaking world will be continued.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Successful completion of French I-A (313) with a minimum passing average of 75 percent or above 2. Recommendation of the French teacher 				
312	French III-H	Year	Grades 10-12	Elective
<p>The emphasis of French III will be on advanced vocabulary and grammatical structures necessary to improve the language skills. The history and culture of the French-speaking world will be presented through readings in the text.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Successful completion of French II-A (323) 2. Recommendation of the French teacher 				

322	French IV-H	Year	Grades 11-12	Elective
<p>This class will be conducted mainly in French. Although the fundamentals of grammar will be reviewed, emphasis will be placed on oral and written skills. Readings will focus on the literature, history and culture of the French-speaking world.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Successful completion of French III-H (312) 2. Recommendation of the French teacher 				
333	Spanish I-A	Year	Grades 9-12	Elective
<p>Spanish I is designed to introduce the student to the basic skills of foreign language - speaking, reading, listening and writing. Aspects of Spanish and Latin American cultures are presented in this course. Students who anticipate studying Spanish for two or more years are encouraged to begin the language in the ninth grade.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A minimum average of 80 percent in the Junior High Language Arts Program 2. Recommendation of the 8th grade English teacher 				
343	Spanish II-A	Year	Grades 9-12	Elective
<p>Spanish II is a continuation of the work of the first year. A more in-depth study of the structures and language patterns is the basis of the course. Spanish vocabulary will be stressed and expanded and the study of Spanish and Latin American cultures will be continued.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Successful completion of Spanish I-A (333) with a minimum average of 75 percent 2. Recommendation of the Spanish I teacher 				
332	Spanish III-H	Year	Grades 10-12	Elective
<p>Class will be conducted mainly in Spanish except for the presentation of difficult grammatical structures. Students will have been introduced to all essential Spanish grammar during the course of the year. Culture and history will be presented through readings in the text.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> 1. Successful completion of Spanish II-A (343) with a minimum overall average of 85 percent or an average of 80 percent on all major tests 				

353	Spanish III-A	Year	Grades 10-12	Elective
<p>Emphasis in Spanish III-A will be on basic grammar principles and the speaking and writing of the language. Culture and history will be presented through readings in the text.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Successful completion of Spanish II-A (343) 2. Recommendation of the Spanish teacher 				
342	Spanish IV-H	Year	Grades 10-12	Elective
<p>The class will be conducted entirely in Spanish. Although the fundamentals of grammar will be reviewed, emphasis will be placed on oral and written skills. Readings will focus on Spanish and Latin American literature, history and culture.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Successful completion of Spanish III-H (332) with a minimum overall average of 85 percent and/or an average of 80 percent on all major tests 2. Recommendation of the Spanish teacher 				
352	Spanish V-H	Year	Grades 11- 12	Elective
<p>The class will be conducted mainly in Spanish. Although the fundamentals of grammar will be reviewed, emphasis will be placed on oral and written skills. Readings will focus on Spanish and Latin American literature, history and culture. Students will learn to read short stories and to analyze the texts from a stylistic and literary point of view. This course will focus on composition, conversation, and Spanish and Latin American literature. The student will write a one-two page paper in Spanish per quarter.</p>				
383	Latin I-A	Year	Grades 9-12	Elective
<p>Latin I-A is designed to introduce the student to the basic skills of learning a classical language - vocabulary, grammar, reading and writing will all be introduced. Aspects of classical culture and its influence on the Latin language will also be presented in this course.</p> <p>**Please Note**</p> <p>Only one section of Latin I will be offered, with a maximum of 25 students. Grades 9 and 10 students will be considered first and then Grade 11 and 12 students.</p>				

393	Latin II-A	Year	Grades 10-12	Elective
<p>Latin II is a continuation of Latin I. It is designed to follow and expand upon the course of study introduced in Latin I. The basic skills of learning a classical language (vocabulary, grammar, translation, reading and writing) will continue to be the primary focus of the course. Aspects of classical culture and its influence on not only the Latin language but on modern English as well will be presented in this course.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Successful completion of Latin I (383) with a recommended minimum overall average of 75 percent 2. Recommendation of the Latin I teacher 				

SOCIAL STUDIES

403	European Cultures-A	Year	Grade 9	Required
<p>European Cultures presents a detailed examination of the history of various European groups. Developments in politics, society, culture, and economics are highlighted to give a comprehensive survey of European individuals and nations that have shaped the continent's history. This course fosters an appreciation of European cultures, as well as their people and history. Major debates among historians that consider multiple perspective will also be evaluated. Students will be required to complete a National History Day project.</p>				

412	American Cultures-H	Year	Grade 11	Required
<p>Students will examine several themes in American history in relation to current events including: immigration, rebellion, industrialization, progressivism, civil rights and war. Emphasis will be on utilizing historical thinking. Students in this honors class will be analyzing primary sources and document-based questions. Students will complete a National History Day project.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. 87 percent or above average in European Cultures-A (403) 2. Recommendation of European Cultures teacher 3. Must be enrolled in English 11-H or submit a writing sample to be approved by the Social Studies chairperson 				

423	American Cultures-A	Year	Grade 11	Required
<p>American Cultures brings together America's past, present and future with a focus on seven essential questions:</p> <ol style="list-style-type: none"> 1. Should Americans welcome all who wish to come? 2. When is it acceptable to rebel against the government? 3. Should we ever attempt to restrain technology? 4. Should accommodations be made for groups who have been oppressed? 5. Should the government help those who cannot help themselves? 6. When is it acceptable to use military force against another nation? 7. What makes an event historically significant instead of simply newsworthy? <p>Throughout this course, students are challenged to form and defend their own answers to these questions with thoughtful, historical analysis. Students learn to critically examine primary and secondary sources and practice a variety of methods to communicate their ideas. Students are required to complete a research assignment based on the National History Day outline.</p>				

453	American Government-A	Semester I/II	Grade 12	Required
<p>American Government introduces the student to the real world of governmental decision making on the local, state, and national levels. The student will examine and analyze the role of the executive branch and its bureaucratic arms, the legislative branch and the judicial branch. The function of elections and lobbyists in helping democracy evolve for all citizens will be a focus. Students will develop and defend a position on current issues confronting the United States by conducting research, analyzing alternatives, organizing evidence and arguments, and making written and oral presentations.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> 1. Must be taken with Economics 				

451	Advanced Placement United States Government and Politics	Semester	Grade 12	Required
<p>This course can be taken in lieu of American Government-H or American Government-A.</p> <p>This Advanced Placement (AP) course in U.S. Government and Politics will give students an analytical perspective on government and politics in the United States. This course includes both the study of general concepts used to interpret U.S. government and politics and the analysis of specific examples. It also requires familiarity with the various institutions, groups, beliefs, and ideas that constitute U.S. government and politics. Students will become acquainted with a variety of theoretical perspectives and explanations for various behaviors and outcomes.</p> <p>Students successfully completing this course will:</p> <ul style="list-style-type: none"> ● Know important facts, concepts and theories pertaining to U.S. government and politics ● Understand typical patterns of political processes and behavior & their consequences ● Be able to analyze and interpret basic data relevant to U.S. government and politics ● Develop and defend their own independent political identity <p>Topics include: Constitutional underpinnings of the U.S. government, political beliefs and behaviors, political parties, interest groups and mass media, public policy, institutions of national government, and civil rights and civil liberties.</p> <p>A summer assignment will be distributed and must be completed prior to the start of the course. The required AP exam in the spring costs the student approximately \$90. Students will pay a fee of approximately \$15-20 to use Albert.io online AP preparation. This course can be taken in lieu of American Government H or A.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. An 87 percent or above average in American Cultures-H or 93 percent or a 93 percent or above average in American Cultures-A 2. A personal interview with the teacher 3. A writing sample for those students not enrolled in English 12-H or AP 4. Must be taken with Economics 				

483	Economics-A	Semester I/II	Grade 12	Required
<p>This required semester course in Economics will focus on the development of economic thinking skills. A survey of microeconomics principles will focus on individual households and business firms, the nature and functions of markets, market failures and the role of the government. A survey of macroeconomics principles will focus on measuring the economy, banking and credit, and international trade. Students will also learn about investments by participating in a stock market simulation. A Stock Market Game entry fee of up to \$10 will be required.</p>				

481	Advanced Placement Microeconomics	Semester	Grade 12	Required
<p>This course may be taken in lieu of Economics-A.</p> <p>This Advanced Placement (AP) course provides instruction in basic economic concepts, the nature and function of product and factor markets, market failures, and the role of government. The course promotes understanding of economic decision making and its factors, such as marginal analysis and opportunity costs. The course also teaches how to generate, interpret, label and analyze graphs, charts and data to describe and explain economic concepts.</p> <p>Reading assignments and online assignments will be distributed for completion prior to the start of the course. Students should be able to allow at least one hour for homework on most days. The cost of the AP exam required in the spring costs approximately \$90. Students must borrow or purchase a copy of <i>Naked Economics: Undressing the Dismal Science</i> by Charles Wheelan in order to complete the pre-course reading assignment. Students will pay a fee of approximately \$15-20 to use Albert.io online AP preparation. This course may be taken in lieu of Economics-A.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. An 85 percent or above average in American Cultures-H or 90 percent or above average in American Cultures-A 2. Must have passed Algebra II or Algebra II/Trigonometry-H 3. A personal interview with the teacher 4. Access to a computer with internet service (summer included) 5. A maximum enrollment of 20 students per section 				

431	Advanced Placement U.S. History	Year	Grade 11	Elective
<p>The Advanced Placement (AP) course in United States History is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with U.S. History. This course is for students with superior verbal ability and a strong interest in history. It requires high motivation and an ability to write and speak coherently and analytically.</p>				
<p>Extensive reading assignments and numerous papers and essays will develop the skills necessary to arrive at conclusions on the basis of informed judgments. The course surveys the key political, social, economic and cultural events from the Age of Exploration to the present.</p>				
<p>The areas of concentration include: Colonial America, the American Revolution, the Development of the Constitution, the Jacksonian Era, the Civil War, Reconstruction, the Populist and Progressive Movements, WWI, the Twenties, the Great Depression, the New Deal, WWII, and the Cold War and its aftermath.</p>				
<p>A summer assignment will be distributed and must be completed prior to the start of the course. All students enrolled in the course will be required to take the national AP exam in the spring at their own expense (approximately \$90).</p>				
<p>Prerequisites:</p>				
<ol style="list-style-type: none"> 1. An 93 percent or above average in European Cultures-A (403) 2. Currently enrolled in English 11-H (222) 3. Personal interview with the AP U.S. History teacher 				

413	World Area Studies-A	Semester I/II	Grades 10-11	Elective
<p>This semester course will examine Southeast Asia, Australia, Oceania, Latin America, Canada, the Middle East, Africa, East Asia and South Asia. Emphasis will focus on historical, cultural, social and geographic factors.</p> <p>Prerequisite: Student must have passed European Cultures-A (403).</p>				
433	International Relations-A	Semester I/II	Grades 11-12	Elective
<p>This course examines the history of U.S. foreign policy in the 19th and 20th centuries. Special emphasis will be placed on diplomacy, international law, foreign policy, terrorism and international organizations through a study of current international affairs. Students seeking a broader base of knowledge about decision making concerning global challenges will be encouraged to research a variety of topics. Students will also participate in a model United Nations simulation to further their understanding of international organizations and their role in the world today.</p>				
463	Psychology-A	Semester I/II	Grades 11-12	Elective
<p>Psychology is the study of behavior and mental processes. The course focuses on personality, learning and memory, as well as behavioral disorders and their treatment. Students will examine how the environment, heredity and biological factors influence behavior and thought processes.</p>				
473	Sociology-A	Semester I/II	Grades 10-11	Elective
<p>Sociology deals with investigation and analysis of human relationships, their causes and consequences. Topics of study include: culture, cultural values, norms and sanctions, social class, public opinion, mass communication and propaganda, rural and urban problems, and crime and juvenile delinquency.</p>				

SCIENCE

****Please Note:** For all science course prerequisites that include minimum average requirements, having the minimum average required does not guarantee acceptance into any science course. Other considerations include: endorsement of current science teacher, student work ethic and potential for success, interview with course instructor and interview with Science Department chairperson where indicated.

503	Biology I-A	Year	Grade 9	Required
<p>This course includes the study of life, biochemistry, cell energy, DNA, genetics, basic anatomy, ecology and a survey of the kingdoms of life. Labs are done on a regular basis. Students will learn to use the microscope. A field trip experience is part of the ecology unit.</p>				

504	Biology I-F	Year	Grade 9	Required
<p>This course includes the study of life, the cell, DNA, genetics, basic anatomy, ecology and a survey of the kingdoms of life. Labs are done on a regular basis. Students will learn to use the microscope. A field trip experience is part of the ecology unit.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> 1. Limited to incoming freshmen whose math and reading comprehension scores on the High School Placement Test indicate a weakness in these areas, especially in the reasoning section. 				

512	Physical Science-H	Year	Grade 10	Required
<p>This program introduces basic concepts and key ideas of Physical Science. One semester will focus on Physics and one semester will focus on Chemistry. Students will be using higher mathematical and reasoning skills and reasoning skills to illustrate the relationship of the material to their everyday lives. Students will be expected to do projects during the course of the year. Labs are done on a regular basis.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A minimum average of 87 percent in a higher level of math 2. A minimum average of 90 percent in Algebra I-A (613) 3. A minimum average of 90 percent in Biology I-A (503) 				

513	Physical Science-A	Year	Grade 10	Required
<p>This program is a study of matter and energy. One semester will focus on Physics and one semester will focus on Chemistry. The approach of the course will emphasize everyday applications of physical laws. The course will continue to develop the mathematical skills and the reasoning skills needed in studying science. Students will be expected to do projects during the course of the year. Labs are done on a regular basis.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A minimum average of 80 percent in Algebra I-A (613) or higher level of math, or 90 percent in Algebra I-F (614) 2. A minimum average of 75 percent in Biology I-A (503) or a minimum average of 80 percent in Biology I-F (504) 				

514	Physical Science-F	Year	Grade 10	Required
<p>This program covers all relevant areas of Physical Science using basic mathematics skills. A great deal of the course work involves hands-on activities. Students will be expected to do projects during the course of the year. Labs are done on a regular basis.</p> <p>Students who have taken Pre-Algebra-F or who do not meet the pre-requisite criteria for Physical Science-A should register for this course.</p>				

542	Biology II-H	Year	Grades 11-12	Elective
<p>This course is an in-depth study of the processes of life topics including: evolution, taxonomy, and classification with emphasis on anatomical structure and function within each kingdom, microbiology, virology and bioethical issues related to each topic. Labs will include dissection. Projects and readings from science journals will be required. Students will be introduced to APA format for scientific writing. This course is for students who intend to pursue a biology major in college.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A minimum average of 90 percent in Biology I-A 2. A personal interview with the Biology II teacher 3. If numbers do not warrant offering both Academic and Honors levels, both levels will be combined in to one class. 4. Students must have taken Chemistry I or be taking it concurrently 5. There will be a packet of reading assignments, worksheets and assessments to complete over the summer. 				

543	Biology II-A	Year	Grades 11-12	Elective
<p>This course is an in-depth study of the processes of life topics including: evolution, taxonomy, and classification with emphasis on anatomical structure and function within each kingdom, microbiology, virology and bioethical issues related to each topic. Labs will include dissection. Projects and readings from science journals will be required. Students will be introduced to APA format for scientific writing. This course is for students who have an interest in biology and/or intend to pursue a career related to biological sciences.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A minimum average of 80 percent in Biology I-A or a minimum average of 90 percent in Biology I-F 2. A personal interview with the Biology II teacher 3. If numbers do not warrant offering both Academic and Honors levels, both levels will be combined in to one class. 4. It is recommended that students have taken Chemistry I or be taking it concurrently. 5. There will be a packet of reading assignments, worksheets and assessments to complete over the summer. 				

522	Chemistry I-H	Year	Grades 10-12	Elective
<p>Emphasis is placed on chemical reactions, atomic and molecular structure, chemical bonding, solutions, stoichiometry and organic chemistry. Labs are done on a regular basis. Projects and reading of various science related material are required. This course is recommended for any student who is planning a career in medicine or other science-related fields.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A minimum average of 87 percent in Physical Science-H (512) or a minimum average of 90 percent in Physical Science-A (513) 2. A minimum average of 92 percent in Algebra I-A (613) or a minimum of 87 percent in a higher level math class. <p>**Please Note**</p> <p>A few freshmen to be sophomores will be invited to take Chemistry I-H. The student will receive a letter of invitation from the Science Department Chair. In order for a freshman to be considered, the student must meet the above standards for Algebra I-A (613) or be taking a higher math and maintaining an 90 percent average, as well as maintaining an overall average of 93 percent in Biology I-A.</p>				

523	Chemistry I-A	Year	Grades II-12	Elective
<p>Emphasis is placed on chemical reactions, atomic and molecular structure, chemical bonding, solutions and stoichiometry. Labs are done on a regular basis. Projects and reading of various science related material is required. It is recommended that all college-bound students consider this course, especially those students interested in a medical field, or any student who is planning a career in a science-related field.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A minimum average of 80 percent in Physical Science-A (513) 2. A minimum average of 80 percent in Algebra II-A (633) or higher level of math, or be concurrently taking Algebra II-A (633). 3. Students may not take this level of Chemistry if they will be taking or have taken Algebra II-F as their highest level of Algebra. 				

524	Practical Chemistry-F	Year	Grades II-12	Elective
<p>This course is offered to juniors or seniors who have not taken Chemistry. It is designed for students who need or desire an understanding of the topics in Chemistry. Lab experiments are done on a regular basis. Emphasis is placed on the chemistry encountered in everyday life. Reading of various science related material is required. Recommended for those students who plan on a career as a medical technician, emergency room or x-ray technician, nurses aide or sports trainer.</p>				

****Please Note:** Based on enrollment, Chemistry II-Honors and Academic levels may be combined. Students taking the course for honors credit will receive additional independent work and take a different test than the students taking the course for academic credit.

552	Chemistry II-H	Year	Grades II-12	Elective
<p>This course includes a review of material covered in Chemistry I with further exploration of acids, solutions, gas laws, nuclear chemistry and organic chemistry. Labs will be done on a regular basis. This course is recommended for any student who is planning a career in medicine or other science-related fields.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A minimum average of 83 percent in Chemistry I-H (522) or a minimum average of 87 percent in Chemistry I-A (523) 2. Must have passed Algebra II-A, Algebra II/Trigonometry-H or Pre-Calculus-H or be concurrently taking Algebra II-A, Algebra II/Trigonometry-H, Statistics-H, Pre-Calculus-H or Calculus-H 3. A personal interview with the Chemistry teacher 4. Students will be required to read, study and do various problems in Chapters 1-3 of the Chemistry II textbook over the summer (review of Chemistry I). Students will take a test on all three chapters within a few weeks of the beginning of the new school year. 				
573	Chemistry II-A	Year	Grades II-12	Elective
<p>The course includes a short review of the material covered in Chemistry I with further exploration of acids, solutions, gas laws, nuclear chemistry and organic chemistry. Labs will be done on a regular basis. This course is recommended for any student who is planning a career in medicine or other science-related fields.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A minimum average of 80 percent in Chemistry I-H (522) or a minimum average of 85 percent in Chemistry I-A (523) 2. Must have passed Algebra II-A (633) or Algebra II/Trigonometry H, or be currently taking Algebra II-A or Algebra II/Trigonometry-H, Algebra III-A, Trigonometry-H, Statistics-H, Pre-Calculus-H, or Calculus-H 3. A personal interview with the Chemistry teacher 4. Students will be required to read, study and do various problems in Chapters 1-3 of the Chemistry II textbook over the summer (review of Chemistry I). Students will take a test on all three chapters within a few weeks of the beginning of the new school year. 				

532	Physics I-H	Year	Grades II-12	Elective
<p>Students will be exposed to a survey of major topics in Physics: mechanics, thermodynamics, waves, DC circuits and kinematics. Students will be expected to complete projects during the course of the year. Labs are done on a regular basis. This course will give students the basics needed to complete Physics II-H (552). Recommended for students planning a career in engineering or a science-related field.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A minimum average of 87 percent in Physical Science-H (512) or a minimum average of 90 percent in Physical Science-A (513) 2. Student must have passed Pre-Calculus-H (652) with a minimum average of 87 percent or be currently taking Pre-Calculus-H (652) or 3. Student must have passed Algebra II/Trigonometry-H with a minimum average of 87 percent and be currently taking Pre-Calculus-H (652) 4. A personal interview with the Physics teacher 				
533	Physics I-A	Year	Grades II-12	Elective
<p>Students will experience phenomena in mechanics, thermodynamics, optics, electromagnetism and modern physics. Students will be expected to do projects during the course of the year. Labs are done on a regular basis. Recommended for students planning a career in engineering or science-related field.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A minimum average of 80 percent in Physical Science-A (513) 2. Student must have passed or be currently taking Algebra II (633) 3. Those currently taking Algebra II-A (633) must have had an 80 percent average in Algebra I-A (613). 				
534	Conceptual Physics-F	Year	Grades II-12	Elective
<p>Topics in Conceptual Physics will be discussed with little mathematics included. A great deal of the coursework involves hands-on activities and demonstrations. Students will be expected to do projects during the course of the year. Labs are done on a regular basis.</p>				

****Please Note:** Based on enrollment, Physics II-Honors and Academic levels may be combined. Students taking the course for honors credit will receive additional independent work and take a different test than the students taking the course for academic credit.

562	Physics II-H	Year	Grade 12	Elective
<p>This course may require an independent or group project. It will contain a quick review of Physics I and then move on to the chapters not covered in Physics I. Modern theories (Relativity, Quantum Mechanics, etc.) will be covered. This course is recommended for students who plan on majoring in natural science or engineering in college.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A minimum average of 85 percent in Physics I-H (532) or a minimum average of 90 percent in Physics I-A (533) 2. Must have passed Pre-Calculus-H (652) with at least an 87 percent average or be currently taking Pre-Calculus or Calculus-H 3. A personal interview with the Physics teacher 				
583	Physics II-A	Year	Grade 12	Elective
<p>This course may require an independent or group project. It will contain a quick review of Physics I and then move on to the chapters not covered in Physics I. Modern theories (Relativity, Quantum Mechanics, etc.) will be covered. This course is recommended for students who plan to major in natural science or engineering in college.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A minimum average of 80 percent in Physics I-H (532) or a minimum average of 85 percent in Physics I-A (533) 2. A minimum average of 85 in Algebra II-A or a minimum average of 80 in Algebra II-Trigonometry-H or be concurrently taking Algebra III-A, Trigonometry-H, Statistics-H, Pre-Calculus-H, or Calculus-H 3. A personal interview with the Physics teacher 				
553	Earth and Space Science-A	Year	Grades II-12	Elective
<p>This program consists of four units that emphasize broad up-to-date coverage of basic topics and principles of geology, oceanography, meteorology and astronomy. It will show the relationship between the principles and everyday life. This course requires extensive reading and mastery of extensive content vocabulary. Students will be expected to do projects during the course of the year. Labs are done on a regular basis. Recommended for any student planning a career in the Earth Sciences or elementary education.</p>				

563	Anatomy and Physiology-A	Year	Grades 11-12	Elective
<p>Anatomy and Physiology is the study of the structures and functions of the human body. It provides the opportunity to look at all body systems, and to study important medical and anatomical terminology. This course is designed for students who are interested in pursuing a career in science or a two-year program in nursing, athletic training, physical therapy, kinesiology, physical education, x-ray technician, nutrition or related fields.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A minimum average of 90 percent in Biology I-F or 85 percent in Biology I-A 2. Personal interview with the teacher required 3. Chemistry I, taken previously or concurrently, is recommended 				

572	Anatomy and Physiology-H	Year	Grades 11-12	Elective
<p>This course is an in-depth study of the structures and functions of the human body. It provides an opportunity to look at each body system, as well as study important medical and anatomical terminology. Dissections, microscope work, laboratory investigations and significant lecture will make up the majority of in-class work. Out-of-class work will consist of significant reading, research and homework assignments. This fast-paced course is designed for students who are interested in pursuing a career in science and medicine (medical school, nursing, athletic training, physical therapy, kinesiology or physical education) or planning a career in engineering.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A minimum average of 87 percent in Biology I-A (503) 2. A personal interview with the teacher and the Science Department Chair (if necessary) 3. Students will be required to read Chapters 1-3 of the Anatomy textbook over the summer. Then, they must submit the online quizzes for each chapter to the instructor by e-mail. 4. Chemistry I, taken previously or concurrently, is required. 5. It is recommended that students be taking or have passed Latin I-A. 				

MATHEMATICS

Please Note

1. Having the minimum average required for a course DOES NOT guarantee acceptance into the course. Other considerations, including student work ethic and potential for success, are part of the teacher recommendation requirement
2. Any student failing Pre-Algebra or any level of Algebra I will be required to repeat that entire year of math the following school year.
3. For a list of placement options based on current class and grade, please go to [www.delonecatholic.org/Academics/Mathematics Department/ Placement Breakdown](http://www.delonecatholic.org/Academics/Mathematics%20Department/Placement%20Breakdown)

604	Pre-Algebra-F	Year	Grade 9	Required
<p>A careful study of arithmetic with attention to both basic skill and structure, as well as sound development of the real number system. These skills form an essential part of the mathematical background that all students will need as adults, while at the same time lay a foundation for future work in Algebra I-F (614) or Algebra I-A (613).</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> 1. Placement test scores, 8th grade teacher recommendation, 8th grade math scores, and Math Department evaluation 				
613	Algebra I-A	Year	Gr 9-10	Required
<p>This course covers a study of the real number system and the operations which can be performed on these numbers. Stress is placed on the solution of equations and the solving of problems by means of equations, as well as exponents, polynomials and radicals. Algebra I lays a foundation for every other level of mathematics.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. For Grade 9: Placement test scores, 8th grade teacher recommendation, 8th grade math scores and Math Department evaluation 2. For Grade 10: A minimum average of 95 percent in Pre-Algebra F (604) and teacher recommendation. 				
614	Algebra I-F	Year	Gr 9-10	Required
<p>This course covers the Algebra I topics of real numbers, equations, exponents, polynomials and radicals. Compared to Algebra I-A (613), this course allows more time for understanding to develop through the use of continual review, practice and reinforcement.</p> <p>Prerequisites</p> <ol style="list-style-type: none"> 1. For Grade 9: Placement test scores, 8th grade teacher recommendation, 8th grade math scores and Math Department evaluation 2. For Grade 10: Pre-Algebra F (604) and teacher recommendation 				

623	Geometry-A	Year	Grade 10-12	Required
<p>This course covers Euclidean plane geometry and the development of logical thinking. It develops visualization skills, including congruence, similarity, parallel lines, circle properties and constructions. It also provides in-depth instruction of the understanding of the basic properties of geometric figures involving area and volume, deduction, and induction.</p> <p>Geometry and Honors Statistics may only be taken concurrently if the average in average in Algebra II/Trigonometry-H (632) was 90 percent or above. Geometry and AP Statistics may be taken concurrently if the average in Algebra II/Trigonometry-H is/was 94 percent or higher. A student may NOT choose to take Honors or AP Statistics instead of Geometry in 10th grade.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> 1. A minimum grade of 75 percent in Algebra I-A (613) or a minimum grade of 95 percent in Algebra I-F (614) and teacher recommendation 				

624	Geometry-F	Year	Grades 10-12	Required
<p>This course begins with the study of definitions and then proceeds to fundamental axioms and finally employs both in developing proofs. The logical pattern of thought is stressed but the development of proofs is not as rigorous as in Geometry-A (623). Hands-on activities and manipulations are used to enhance tactile learning.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> 1. Algebra I-A (613) or Algebra I-F (614) and teacher recommendation 				

632	Algebra II/Trigonometry-H	Year	Grades 9-12	Required
<p>This course includes the study of real and complex number systems, algebraic expressions, exponents, linear, quadratic, and higher power equations, inequalities, relations and functions, polynomials, rational expressions, and the introduction to trigonometry, graphs, and relationships.</p> <p>Prerequisites for Grade 9:</p> <ol style="list-style-type: none"> 1. Placement test scores, 8th grade teacher recommendation, 8th grade math scores, and Math Department evaluation 2. A minimum average of 87 percent earned in a full-year Algebra I course 3. A minimum grade of 75 percent earned on the Algebra II Trigonometry placement test <p>Prerequisites for Grade 10:</p> <ol style="list-style-type: none"> 1. Teacher recommendation 2. Completed Algebra I-A (613) with a minimum average of 93 percent 3. A minimum grade of 75 percent earned on the Algebra II Trigonometry placement test 				

Prerequisites for Grade 11:

1. Teacher recommendation
2. A minimum grade of 93 percent in Geometry (623) and in Algebra I-A (613)
3. A minimum grade of 75 percent earned on the Algebra II Trigonometry test

633	Algebra II-A	Year	Grades 9-12	Required
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This course is normally the next course taken after Geometry-A (623). Students contemplating further study in a four-year college are encouraged to take this course. It includes continued study of polynomials, linear equations, inequalities and graphs and introduces and studies systems of equations and inequalities, quadratic functions, rational exponents and expressions and radical equations.

Prerequisites for Grade 9:

1. Placement test scores, 8th grade teacher recommendation, 8th grade math scores and Math Department evaluation
2. A minimum average of 75 percent earned in a full-year Algebra I course
3. A passing grade on the Algebra I final administered by Delone Catholic

Prerequisite for Grade 11:

1. A minimum average of 75 percent in Algebra I-A (613) and Geometry-A (623), or a minimum average of 95 percent in Algebra I-F (614) and Geometry - A (632), as well as teacher recommendation

634	Algebra II-F	Year	Grade 11	Required
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This course is normally the next course taken after Geometry-F (624). It reviews concepts of Algebra I, introduces advanced Algebra concepts and terminology and practices them throughout the year. Topics include linear equations, functions, systems of linear equations, inequalities, quadratic equations, polynomials, exponents, and rational expressions.

Prerequisite:

1. Geometry-F (624) or students who had difficulty with Algebra I-A (613) and/or Geometry-A (623) with particular emphasis on the Algebra I achievement and teacher recommendation

642	Pre-Calculus-H	Year	Grades 11-12	Required/ Elective
<p>This course addresses a thorough study of relations and functions. Particular emphasis is placed on linear, polynomial, trigonometric and logarithmic functions and their graphs.</p> <p>Two calculators (one graphing and one scientific) are required. The class is taught using a TI-83/TI-84 graphing calculator, therefore, this model is recommended. If you choose to purchase a different brand/ model, you may have to utilize the manual and/or see the teacher for help outside of class time.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A grade of 87 percent or higher in Algebra II/Trigonometry-H or an 80 percent in Algebra II/Trig-H along with completion of Trigonometry-H, or 93 percent in Algebra II-A (633), 85 percent in both Algebra III (683) and Trigonometry (662) or 85 percent in Algebra II-A with completion of Trigonometry-H 2. Teacher recommendation 3. Completion of summer assignment 4. Pre-Calculus and AP Statistics or Virtual High School Math and Modern Logic may only be taken concurrently if the average in Algebra II/ Trigonometry-H was 94 percent or above. 5. Pre-Calculus and Honors Statistics or Virtual High School Math and Modern Logic may only be taken concurrently if the average in Algebra II/ Trigonometry-H was 90 percent or above 				

652	Calculus-H	Year	Grade 12	Elective
<p>This course includes the study of the Cartesian plane and functions; limits and their properties; differentiation and applications of the derivative; integration and applications of the integral and if time allows, a study of logarithmic, exponential and other transcendental functions. Compared to AP Calculus (651), the pace of this class will be more deliberate. Taking the AP examination is an option.</p> <p>A graphing calculator is required. The class is taught using a TI-83/TI-84, therefore, this model is recommended. If you choose to purchase a different brand/ model, you may have to utilize the manual and/or see the teacher for help outside of class time.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Pre-Calculus-H with a minimum average of 87 percent 2. Teacher recommendation 3. Completion of summer assignment 				

651	Advanced Placement Calculus	Year	Grade 12	Elective
<p>This is an advanced placement (AP) course for seniors following the Calculus AP curriculum including a study of the Cartesian plane and functions; limits and their properties; differentiation and applications of the derivative; integration and applications of the integral and a study of logarithmic, exponential and other transcendental functions.</p> <p>A graphing calculator is required. The class is taught using a TI-83/TI-84 calculator, therefore, this model is recommended. If you choose to purchase a different brand/ model, you may have to utilize the manual and/or see the teacher for help outside of class time.</p> <p>The taking of the AP examination in the spring of the senior year is a requirement of the course. This exam is taken at the student's expense (approximately \$90). A satisfactory score on this exam qualifies the student for credit for freshmen Calculus in most colleges and universities.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Pre-Calculus (642) with a minimum average of 92 percent 2. Teacher recommendation 3. Completion of summer assignment 				

673	Statistics-A	Year	Grades II-12	Require/ Elective
<p>Students will be introduced to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Four themes covered include: describing patterns and departure from patterns, planning and conducting a study, exploring random phenomena using probability and simulation, and estimating population parameters and testing hypotheses. Students will be provided additional support during class and on tests than in Honors and/or A/P Statistics. If offered as a separate class than Statistics-H (672), the pace of this class will be more deliberate.</p> <p>A graphing calculator is required. The class is taught using a TI-83/TI-84 calculator; therefore, this model is recommended. If you choose to purchase a different brand/model, you may have to utilize the manual and/or see the teacher for help outside of class time.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> Grade in highest level of mathematics previously taken: 92 or higher in Algebra II-F (634), 80 - 84 in Algebra II-A (633), 70-79 in Algebra II/Trigonometry-H (632), 70-79 in Algebra III (683) and/or Trigonometry (662) or 70-76 in Precalculus-H (642) Teacher recommendation 				
672	Statistics-H	Year	Grades II-12	Require/ Elective
<p>Students will be introduced to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Four themes covered include: describing patterns and departure from patterns, planning and conducting a study, exploring random phenomena using probability and simulation, and estimating population parameters and testing hypotheses. Students will be provided additional support during class and on tests than in Honors and/or A/P Statistics. If offered as a separate class than Statistics-H (672), the pace of this class will be more deliberate.</p> <p>A graphing calculator is required. The class is taught using a TI-83/TI-84 calculator; therefore, this model is recommended. If you choose to purchase a different brand/model, you may have to utilize the manual and/or see the teacher for help outside of class time.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> Grade in highest level of mathematics previously taken: 85 percent or higher in Algebra-II (633), 80 percent or higher in Algebra II/Trigonometry-H (632), Algebra III and/or Trigonometry or 77 percent or higher in Pre-Calculus-H (642) Teacher recommendation Pre-Calculus and Statistics-H may only be taken concurrently if the average in Algebra II/Trigonometry-H (632) was 90 percent or above Geometry and Statistics-H may only be taken concurrently if the average in Algebra II/Trigonometry -H (632) was 90 percent or above <p>** Please Note: A student who is eligible for Statistics-H will not be approved to take Statistics-A.</p>				

661	Advanced Placement Statistics	Year	Grades 11-12	Require/ Elective
<p>Students will be introduced to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Four themes covered include: describing patterns and departure from patterns, planning and conducting a study, exploring random phenomena using probability and simulation, and estimating population parameters and testing hypotheses.</p> <p>A graphing calculator is required. The class is taught using a TI-83/TI-84 calculator, therefore, this model is recommended. If you choose to purchase a different brand/ model, you may have to utilize the manual and/or see the teacher for help outside of class time.</p> <p>The taking of the AP examination in the spring is a requirement of the course. This exam is taken at the student's expense (approximately \$90). A satisfactory score on this exam may qualify the student for credit for Statistics at many colleges and universities.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A grade of 90 percent or higher in Algebra II-A (633), 85 percent or higher in Algebra II/Trigonometry-H or in Algebra III (683) and in Trigonometry (662) or 83 percent or higher in Pre-Calculus-H 2. Teacher recommendation 3. AP Statistics and Pre-Calculus may be taken concurrently if the average in Algebra II/Trigonometry-H is/was 94 percent or higher 4. AP Statistics and Geometry may be taken concurrently if the average in Algebra II/Trigonometry-H is/was 94 percent or higher 				

662	Trigonometry-H	Semester I/II	Grades 10-12	Elective
<p>This course focuses on an in-depth study of trigonometry. The subject matter includes, but is not limited to the following topics: the basic trigonometric functions and their relationships within the unit circle, inverse trigonometric functions, graphs of trigonometric functions, solving and applying trigonometric equations, triangle trigonometry, the law of sines and cosines, and trigonometric identities.</p> <p>A calculator with trigonometric abilities is required for this course; introductory use of graphing calculators is also incorporated in several portions of this course.</p> <p>Prerequisites:</p> <p>Grade 10 (in order to double with Geometry to prepare for Precalculus)</p> <ol style="list-style-type: none"> 1. A grade of 85 percent or higher in Algebra II-A (663) or 80 percent or higher in Algebra II/Trigonometry-H (632). 2. Teacher recommendation <p>Grade 11 or 12</p> <ol style="list-style-type: none"> 1. A grade of 85 percent or higher in Algebra II-A (663) or 70 percent or higher in Algebra II/Trigonometry-H (632) 2. Teacher recommendation 				

683	Algebra III-A	Semester I/II	Grades 11-12	Elective
<p>This course is an extension and expansion of topics covered in Algebra II and an exploration of other related mathematics topics. Topics covered may include but are not limited to: performing matrices, solving and graphing quadratic equations and conic sections, solving and graphing exponential and logarithmic functions and calculating sequences and series. This course is designed for students with average grades in mathematics who do not otherwise have a mathematics option for junior or senior year. A calculator with exponential and logarithmic abilities is required for this course.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Satisfactory completion of Algebra II-A (633) or minimum average of 75 percent in Algebra II-F (634) 2. Teacher recommendation 3. Students who have been enrolled in any Honors math classes for any period of time will not be permitted in this course 				

BUSINESS

703	Accounting I-A	Year	Grades II-12	Elective
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The goals of Accounting I are to:

- Provide students with a thorough background in the basic accounting procedures used to operate a business
- Provide students with a sound background for employment in office jobs and preparation for studying business courses in college; and
- Provide students with an understanding that success in the accounting profession depends on one's ability to communicate and make ethical decisions

Accounting is the "language of business." It is used by most individuals in everyday life. Therefore, individuals having accounting skills are better prepared for what lies ahead for them, whether it be in college, in the work world, or in their personal lives.

713	Accounting II-A	Year	Grade 12	Elective
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This is an advanced course and a continuation of Accounting I-A. It covers/ includes the following chapters:

- Reviewing the ten steps in the Accounting Cycle
- Cash, Short-Term Investments and Accounts Receivable
- Notes Receivable
- Accounting for Inventories
- Property, Plant, and Equipment Assets and Intangible Assets
- Notes Payable, Accounts Payable and Other Current Liabilities
- Stockholder's Equity: Earnings and Distribution
- The Work Sheet, Adjustments and Financial Statements
- Analyzing and Interpreting Financial Statements
- Partnerships: Formation, Dissolution and Liquidation
- Partnerships: Division of Profits and Losses
- Internal Control and the Voucher System
- Product Costing: Job Order and Process Cost Accounting Systems

Prerequisites:

1. Completion of Accounting I with at least a final average of 88 percent
2. Teacher recommendation

723	Managing Your Personal Finances-A	Year	Grades 10-12	Elective
<p>The major goal of this course is to review arithmetic fundamentals and expand on everyday living through skill-building activities and application exercises. Application exercises include checkbook records, bank reconciliations, finding gross pay, averages, unknown items, regular time, overtime, piece rate, problems in fractional relationships, taxes, fringe benefits, commissions, budgets, credit cards, loans, interest and life insurance. Emphasis will be placed on teaching students problem solving techniques to be used in mastering personal, everyday mathematical problems.</p> <p>Absolutely no calculators may be used in this course. The course correlates to the accounting principles and concepts and is recommended as a prerequisite to accounting.</p>				

733	Contemporary Microeconomics Issues-A (Marketing and Management)	Semester I	Grades 11-12	Elective
<p>This course provides students with insight into the marketing and management aspects of business. Topics include, but are not limited to:</p> <ul style="list-style-type: none"> ● Historical development of business in America, including globalization ● One's role as a consumer, including one's rights and responsibilities ● The free enterprise system ● The legal and ethical environment of business ● The functions of business ● The social responsibility and ethics of business ● Marketing research, production and distribution of goods and services ● The psychology of advertising ● Getting a Job—cover letters, resumes, applications, interviews, and thank you notes ● Managing one's self on the job. 				

COMPUTER AND INFORMATION TECHNOLOGY

****Please Note****

A fee of \$10 is required for each of the following Computer and Information Technology courses for use of consumable supplies.

753	Basic Computer Applications	Semester I/II	Grade 10 Grade 9	Required see below
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This semester course is a mandatory graduation requirement which began with the Class of 2015, but this course may also be included in the freshmen elective choices if successfully completed will satisfy the sophomore mandatory requirement.

It is expected that the students should have mastered the Touch Typing Method covered in their previous computer classes. Speed and accuracy will be stressed. Word will introduce the student to techniques for properly creating term papers using MLA, APA, CBE and Chicago styles, business and personal business letters, brochures, tables, resumes, emails and hyperlinks. Excel will introduce the student to the power of spreadsheets using functions, formulas, themes, graphics and charts. Power Point will introduce the student to slide shows, and their use for creating exciting and interactive presentations. Desktop Publishing using Publisher will introduce students to creating flyers, booklets, newsletters, cards, and brochures.

783	Web Design Using Dreamweaver-A	Semester I/II	Grades 10-12	Elective
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Adobe Creative Suite is a user friendly, fast, effective way to create and manage professional Internet web sites without programming. Emphasis will be placed on good design techniques. Concepts will be reinforced with hands-on practices.

Dreamweaver: The student will first learn how to get started with Dreamweaver and how to create a website and develop a web page. Then, the student will work with text, images and links. Next, the student will learn to position page content with CSS and tables. Next, the student will learn how to manage a web server and files.

Prerequisite:

1. Limited to 22 students per semester

793	Flash and Fireworks-A	Semester I/II	Grades 10-12	Elective
<p>Flash: Students will learn Flash through step-by-step instructions and in-depth explanations. Students will first learn how to get started with Flash, how to draw objects and how to work with symbols and interactivity. Next, students will focus on creating animations and creating special effects.</p> <p>Fireworks: Students will learn how to get started and work with Fireworks. Next, students will learn how to work with new and existing documents, layers, shapes and text. Students will also work with vector tools, vector objects, imported files and selections.</p>				

743	Computer Programming-A	Year	Grades 11-12	Elective
<p>An introductory programming course using Visual Studio 2010. Emphasis will be placed on developing a student's problem solving skills: analyzing a problem carefully, breaking it down into separate parts and then writing the appropriate computer program.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A minimum average of 85 percent in Algebra II-A or Algebra II-F 2. Teacher interview required 3. Other students considered on an individual basis with teacher approval 4. Limited to 21 students per section 				

FAMILY AND CONSUMER SCIENCE

804	Culinary Arts Foundations-F	Semester I/II	Grades 9-11	Elective
<p>In this introductory study of culinary arts skills, students will explore accepted procedures for kitchen and food safety, nutritional awareness, meal etiquette and concepts basic to the study of ingredients for application in the cooking and baking process. Emphasis: recipe reading , measuring and mixing techniques and the chemistry of baking. A lab fee of \$15 will be charged.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> 1. Limited to 20 students per section <p>**Please Note** Grade 9-10 students will be considered first for enrollment in Culinary Arts Foundations-F.</p>				

823	Culinary Arts Plating and Presentation-A	Semester	Grades 10-12	Elective
<p>Students will develop and apply advanced techniques in food preparation, culinary tools/equipment and the principles of plate presentation and design. Emphasis: bake shop principles (breads, pastries and confections), advanced culinary knife skills and garnishing techniques. A lab fee of \$15 will be charged.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Successful completion of Culinary Arts Foundations-F (804) 2. Recommended average of 85 percent in Culinary Arts Foundations-F 3. Limited to 18 students per section 				

843	Culinary Arts International Cuisine-A	Semester	Grades 10-12	Elective
<p>Explore the diversity of culinary origins, food staples and cultural traditions for application in the cooking and baking process. Students will demonstrate advanced culinary skills in food preparation, etiquette and presentation as they prepare menus from around the world with an emphasis on recipe and ingredient origins across cultures. A lab fee of \$15 will be charged.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> 1. Successful completion of Culinary Arts Foundations-F (804) 2. Recommended average of 85 percent in Culinary Arts Foundations-F 3. Limited to 18 students per section 				

814	Foundations in Fashion Design and Construction-F	Semester I/II	Grades 9-11	Elective
<p>Students explore the foundations of the fashion industry as they develop the skills necessary to operate basic sewing equipment, complete clothing repairs and alterations, select and construct a well-fitted garment and accessory. Students are responsible for the purchase of a pattern, fabric and notions for each project.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> 1. Limited to 20 students per section <p>**Please Note** Grade 9-10 students will be considered first for enrollment, followed by Grade 11 students.</p>				

833	Fashion Design and Construction-A	Semester II	Grades 10-12	Elective
<p>This one semester course is a continuation of skills acquired during Foundations in Fashion Design and Construction-F. Students will explore the role of fashion designers in the manufacturing process as they apply the principles and elements of design to creating customized garments and accessories. Emphasis: the interrelationship between design elements and principles as they relate to current trends in fashion, garment design and construction and personal style. Students will create two garments and one accessory using re-design, pattern modification and original design techniques. The student is responsible for purchasing the pattern, fabric and notions for custom projects.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Successful completion of Foundations in Fashion Design and Construction-F (814) 2. Recommended minimum average of 85 percent in Foundations of Fashion Design and Construction-F 3. Limited to 24 students per section 				

883	Innovation in Design-A	Semester	Grades 10-12	Elective
<p>Students will explore the diversity of the design industry as they apply elements and principles of design to transform innovative ideas into fashion, textiles and interior decor. Topics include: proportions of the fashion figure, introduction to draping (silhouette), understanding and achieving mood through visual and tactile texture and digital fashion and room design. Students are responsible for the purchase of materials and/or notions for custom design projects.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Successful completion of Foundations in Fashion Design and Construction-F (814) 2. Recommended minimum average of 85 percent in Foundations of Fashion Design and Construction-F 3. Students who have not completed Foundations in Fashion Design and Construction-F may be considered for the course based on equivalent experience at the intermediate level (grades 6-8). In this case, an entrance interview and skill level assessment with the course instructor is required. 4. Limited to 24 students per section 				

893	Child Growth and Family Development-A	Semester	Grades 11-12	Elective
<p>In this comprehensive study of hereditary and environmental influences on human growth and development, students will analyze the contribution of developmental theory, strengthen communication and decision-making skills and evaluate the potential for related career opportunities within the context of family. This course also examines ways to improve communication and to handle challenges in a marital situation within a Catholic environment.</p> <p>*Recommended for students with a genuine interest in pursuing a child-related career (e.g., social work, psychology, teacher, coach, special education, health education, etc.).</p>				

TECHNOLOGY EDUCATION

Technology Education Limitations

1. Students who achieve a grade of 90 percent or greater may pre-register for the next level course in that discipline (e.g. Drafting, Architectural Drawing, Electronics).
2. Grades 9-10 are limited to two technology education courses per academic year.
3. Grades 11-12 are limited to three technology education courses per academic year.

**As with all material lab courses, student behavior as related to lab performance and safety issues may be grounds for failure and/or dismissal from the class – Courses 872, 882, 892, 914, 924, 934, 944, and 954.

904	Intro to Engineering Drafting I-F	Semester I/II	Grades 9-11	Elective
<p>A beginning study of methods, tools, techniques and equipment used in engineering and architectural drawing. Topics include: geometric construction, measurement, fractional and decimal mathematics and mechanical drawing basics. Coursework includes classroom instruction, group and individual projects and research assignments. Students will be required to purchase some of their own drafting equipment at the beginning of the course. A lab fee of \$10 is required to cover consumable supplies.</p>				

803	Advanced Engineering Drafting and CAD II-A	Semester I	Grades 10-12	Elective
<p>The continued study of drafting tools and methods including the use of Computer-Aided Design (CAD) software. Students will work with advanced isometric and orthographic projection drawings. Complicating dimensioning and 3D design will be explored. Coursework includes classroom instruction, individual and group projects and research assignments. A lab fee of \$15 is required to cover consumable supplies and expansion of drafting tools.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> 1. 80 percent or above in Engineering Drafting I-F (904) 				

813	Engineering and Mechanical Drafting III-A	Semester I	Grades 10-12	Elective
<p>An advanced class on engineering drafting. Students work will with complex isometric drawings, orthographic projections, detail and assembly and in introduction to animation. Coursework includes classroom instruction, individual projects and research assignments. Students will be required to upgrade their drafting kit to meet the course requirements. A lab fee of \$10 is required to cover consumable supplies.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. 90 percent or above in Engineering II-A (803) 2. Permission of the Vice Principal and the teacher 				

863	Architectural Drawing II-A	Semester II	Grades 10-12	Elective
<p>An introduction construction and architecture. CAD will be implemented. Students will work with and research building types, plot plans, floor plans, elevation views and matrix charts. Coursework includes classroom instruction, individual and group research projects, research and assignments and oral presentations. Students will be required to upgrade their drafting kit to meet the course requirements. A lab fee of \$15 is required to cover consumable supplies.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> 1. 80 percent or above in Engineering Drafting I-F (904) 				

873	Architectural Drawing III-A	Semester I	Grades 10-12	Elective
<p>Specific application of drafting tools and methods. The language of architectural drawing is expanded. Students will work with more complex plot plans, floor plans, elevation views, matrix charts, as well as plumbing and electrical layouts. Coursework includes classroom instruction, individual and group projects, research assignments and oral presentations. Students will be required to upgrade their drafting kit to meet the course requirements. A lab fee of \$10 is required to cover consumable supplies.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. 90 percent or above in Architectural Drawing II-A (863) or 2. Permission of the Vice Principal or the teacher Advanced Technologies/ Independent Study-H Semester I/II Grade 12 Elective. 				

	Advanced Technologies/ Independent Study-H	Semester I/II	Grade 12	Elective
872	Engineering Drafting IV-H			
882	Architectural Drawing IV-H			

<p>An advanced study in a specific area of technological interest of the student's area of expertise or vocational interest. Possible choices include: mechanical engineering, civil engineering, architecture, manufacturing, etc. Textbooks must be purchased by student as needed.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Limited to five students per semester 2. Advanced recommendation of the teacher 3. Approval of the Vice Principal 4. An average of 90 percent or above in Engineering Drafting III or Architectural Drawing III 				
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914	Introduction to Materials Technology-F	Semester I/II	Grades 10-11	Elective
<p>Introduction to industrial materials, tools, and processes, as well as instruction elements and craftsmanship with a safety emphasis. Students may work with a variety of materials including wood, plastic, glass and composite materials. Students will work with portable and stationary power equipment, as well as a variety of hand tools. Coursework includes a safety emphasis with classroom instruction, research reports and required class projects. Students may provide their own project materials. A lab fee of \$20 is also required to cover consumable supplies.</p>				

924	Materials Technology-Joinery-F	Semester I	Grades 10-12	Elective
934	Materials Technology-Cabinet Making-F	Semester I	Grades 10-12	Elective

Advanced materials processing for experienced students. Coursework includes instruction in the elements of Cabinet Making/Joinery plan layout, construction, assembly, finishing processes and presentation. A working knowledge of Engineering Drafting I is desirable. Each student will work on an individual contract basis allowing the student to achieve a level of success commensurate with the student's ability.

Coursework includes project plan research and development, project assembly, exams, term reports and oral presentations. Students may need to provide their own project materials. Some tools may be need to be purchased for class. A lab fee of \$30 is also required to cover consumable supplies each semester.

Prerequisites:

1. Average of 80 percent or above in Introduction to Materials Technology I-F (914)
2. Engineering Drafting I Recommended

944	Intro to Electronics I-F	Semester I/II	Grades 9-12	Elective
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A beginning study of electrical circuits, soldering, house wiring, power supplies and discrete electrical components. Circuit protection, switching, and safety issues will also be covered. Coursework will include schematic, diagram interpretation, circuit board writing, soldering, basic hand tool use and construction of project kits. A lab fee of \$15 is required to cover basic supplies.

****Please Note**** Grade 9-10 students will be considered after Grade 11-12 students have been considered.

954	Electronics II-Advanced Circuitry and Programmable Circuits-F	Semester II	Grades 10-12	Elective
<p>A study of electricity, electronics, and control circuitry and how to interface them with simple machines. Coursework includes schematic wiring exercises, circuit board wiring problems, control wiring circuit and mechanical part fabrication. Written reports and assembly views, as well as out-of-class reading and research, will be included. Standard Materials Lab safety requirements are in effect at all times. A lab fee of \$25 is required to cover basic supplies.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Average of 80 percent or above in Engineering Drafting I 				

964	Electronics III - Robotics	Semester	Grades 11-12	Elective
<p>A study of programmable electronics. Coursework includes a research project, programming of three different devices, and wiring of complex circuits.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Average of 80 percent or above in Engineering Drafting I, Materials Technology I, and Electronics I and II. 2. Approval by aptitude test and interview by Technology Education Instructor. 				

ART EDUCATION

903	Introduction to Art-A	Year	Grades 10-12	Elective
<p>Students will develop their visual vocabulary of art through the general art experience. Projects will include: still-life drawing, two-point pen perspective drawing, figure drawing, color theory, watercolor and acrylic painting, sculpture, and pen and ink value shading. Art history will be explored. Students will use their knowledge of aesthetics and art criticism to critique their art projects. Seniors who enroll in this class are encouraged to participate in the Senior Art Show to be held in May. An art fee of \$20 is required.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A genuine interest in pursuing additional art classes at Delone Catholic High School 2. An average of 80 percent or above in Art Appreciation 				

273	Publications-A	Year	Grades 10-12	Elective
<p>This semester course is open to sophomores, juniors and seniors interested in collaboration on producing the yearbook. Student tasks include: advertising, picture selection, page layout, writing copy, taking pictures and meeting strict deadlines.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. 90 percent or higher in present English course or Art class 2. Writing sample 3. Teacher recommendation 4. Limited to 15 students 				

913	Introduction to Design-A	Semester I/II	Grades 10-12	Elective
<p>Students will continue their exploration of the visual arts with drawing, painting, sculpture and printmaking activities. Students will have an opportunity to learn about different artists and cultures. Students will use their knowledge of aesthetics and art criticism to critique their art projects.</p> <p>Students who enroll in this one semester class will be encouraged to display their work in the various art exhibits in the lobby and in the community. Seniors who enroll in this class are encouraged to participate in the Senior Art Show to be held in May. The class will meet at the same time as the Introduction to Art classes (similar to Vocal Music and Chorus) but include students who could only meet for one semester. Students could take semester one or two and complete the same activities as the Introduction to Art classes during that period. An art fee of \$10 is required.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. A genuine interest in pursuing additional art classes at Delone Catholic 2. An average of 80 percent or above in Art Appreciation (025) 				

923	Two-Dimensional Design-A	Year	Grades 11-12	Elective
<p>In addition to drawing and painting, students will engage in illustrations, color theory, silk screen graphics and mixed media projects. Still life, landscapes, and self-portraits will be explored with a focus on observation skills. Students will experience watercolor, acrylic, and pastel painting, pencil, charcoal, and pen and ink drawing techniques. Seniors who enroll in this class are expected to participate in the Senior Art Show to be held in May. An 8.5 x 11" sketchbook is recommended. An art fee of \$30 is also required.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Students must possess a serious commitment to art at Delone Catholic 2. An average of 85 percent or above in Introduction To Art-A (903) or Introduction to Design-A (913) 				

933	Three-Dimensional Design I-A	Year	Grades 11-12	Elective
<p>Students will explore sculpture production in paper, clay, wood and wire expressed through design, illustration, functional and non-functional ceramics, puppetry, fibers and installation art. Seniors who enroll in this class are expected to participate in the Senior Art Show to be held in May. An “8 ½ x 11” sketchbook is required. An art fee of \$30 is also required.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Students must possess a serious commitment to art at Delone Catholic 2. An average of 85 percent or above in Introduction To Art-A (903) or Introduction to Design-A (913) or Two-Dimensional Design (923). 				

932	Independent Art-H	Year	Grade 12	Elective
<p>This course is designed for the mature art student who has demonstrated an ability to produce quality art without constant direction. This student is often, though, not always looking ahead to a career in art. The goal of the first semester is to develop a portfolio of observational work in two- and three-dimensional design which could be submitted for college acceptance or scholarship opportunities. The second semester challenges students to develop creative solutions while exploring their own spirituality and later, the world of fantasy. Students will practice cutting mats for two-dimensional work. Each project will be self-evaluated and professionally presented to the instructor for a grade. A minimum of three, well-designed projects are required each quarter. Students will develop their artist statement and find a suitable means to convey their statement to their viewing public. Seniors will prepare, hang, and conduct a Senior Art Show in May as evidence of their growth. An “8 ½ x 11” sketchbook is recommended An art fee of \$30 is also required.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Teacher approval will be based on a formal portfolio review. 2. Interview with the art instructor 3. An average of 90 percent or above in Introduction to Art-A (903) or Introduction to Design-A (913) 4. Must have completed or be currently enrolled in either Two-Dimensional Design-A (923) or Three-Dimensional Design I-A (933) 5. Approval of the Director of Studies 				

MUSIC EDUCATION

942	Instrumental Music-H	Year	Grades 11- 12	Elective
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Prerequisites:

1. Must be juniors or seniors
2. Take regular private lessons on their instruments with a qualified instructor throughout the school year
3. Try out for District Band (if one plays an instrument used in that festival)
4. Participate in at least one Delone Catholic extra-curricular instrumental performance group such as marching band, jazz band or flute choir
5. Complete one of the following projects by fourth quarter interims:
 - A written music research paper on a topic approved by the music instructor, in the format prescribed by the music instructor
 - A written report on an approved classical concert or recital which the student has attended as an audience member. The report must follow the format prescribed by the music instructor
6. Complete occasional extra homework assignments as prescribed by the music instructor
7. Complete all the requirements placed upon the academic level instrumental music students (Course 943)

****Please Note****

If, after registering for the honors level class (942), the student fails to fulfill any of the above described prerequisites by the expected date, the student's grade will be significantly lowered for each appropriate quarter.

943	Instrumental Music-A	Year	Grades 9- 12	Elective
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This course is intended to enhance the student’s understanding of music through concentrated study of a band instrument, keyboard or bass guitar. Participation in concert band is a required part of this study. Specific concepts and skills covered in this course include instrument care, posture, breathing, embouchure or stick grip, technique, articulation, tone quality, intonation, balance, blend, expression, conducting, listening, notation, basic music theory, aural training and creativity. Music for public performance is also rehearsed at this time. This course may be taken all four years. Credit is given for each year the course is taken and successfully completed.

Students are required to attend two or three rehearsals a year outside of school hours, as well as the Christmas Concert, Spring Concert, Memorial Day Parade and several in-school assemblies, including liturgies.

Instrumental Music Class is required for students who wish to participate in Concert Band, Jazz Band, Flute Choir, County Band or District Band.

Students will need to purchase white band shoes for their band uniforms and pay a \$15 uniform cleaning fee.

Prerequisite:

1. Any student desiring to play in Concert Band should register for Instrumental Music.

963	Music Theory I-A	Year	Grades 11- 12	Elective
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Music Theory I is intended for serious music students, especially for those planning to pursue music study in college. The course is intended to give advanced students a deeper understanding of music theory and broader ear training experience than is possible during Instrumental or Vocal Music class. College bound music students will receive the background necessary to succeed in their freshman music theory courses in college. Specific concepts covered in the course will include written and aural training in basic acoustics, pitch, rhythm, intervals, scales, key signatures, chords and four-part harmonic writing.

Prerequisites:

1. Teacher approval
2. Ability to read music notation

952	Music Theory II-H	Year	Grade 12	Elective
<p>Music Theory II is intended for advanced music students, especially those planning to pursue music study in college. Students will continue study where they finished in Music Theory I, including advanced work in four-part harmonic writing, cadences, non-harmonic tones, seventh chords, altered non-harmonic tones, secondary dominants, modulation to closely related keys and borrowed chords. Coursework will include written exercises, ear training, elementary keyboard harmony and original composition.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> 1. Successful completion of Music Theory I-A (963) 2. Teacher approval 				

953	Vocal Music-A	Year	Grades 9-12	Elective
<p>The purpose of this course is to provide the students with an understanding of correct singing techniques and basic music theory. Specific concepts and skills covered in the course include: posture, breathing, tone quality, diction, intonation, expressive tone color, extension of range and dynamics, notation, basic music theory, aural training, vocal anatomy and health, listening, conducting and creating. A wide variety of music will be sung throughout the year.</p> <p>As a practical application of the course material, all students are required to participate in at least three performances and two rehearsals outside of school hours, as well as several in-school assemblies, including liturgies.</p>				

993	Chorus-A	Semester I/II	Grades 9-12	Elective
<p>Chorus is offered to any student who would like more vocal training and experience than is possible during the chorus activity period alone. Students who enroll in this one-semester class are encouraged, but not required, to take the chorus activity period as well. Concepts and skills covered include: posture, breathing, tone quality, tonal and rhythmic notation, aural training, critical listening and creating. A variety of music will be sung throughout the semester.</p> <p>As a practical application of the course material, all students in Chorus are required to participate in a mandatory rehearsal and one or two concerts outside of school hours, as well as one or two in-school assemblies, including liturgies.</p>				

PHYSICAL EDUCATION

****Please Note****

All physical education classes are co-educational. Male and female students will be grouped together in a cooperative, physical educational environment. They may be separated by gender within classes when the activities instructed acknowledge a concern for safety due to the size, weight and strength of the participants in that activity.

Requirement for each level of Physical Education:

A regulation Delone Catholic physical education uniform must be purchased in our school bookstore.

905	Physical Education 9	Quarter	Grade 9	Required
Physical Education 9 is a vital and integral part of the educational program. Teaching students the value of staying physically active and developing their sports skills for present and leisure pursuits is important.				
915	Physical Education 10	Quarter	Grade 10	Required
Physical Education 10 will focus on the teaching of skills, the acquisition of knowledge, and the development of attitudes through movement.				
925	Physical Education 11	Quarter	Grade 11	Required
Regular physical activity stimulates the development of cardiovascular function, muscular strength and endurance. Additionally, properly conducted physical education programs provide psychological benefits which contribute to a sense of well being and support academic achievement.				
935	Physical Education 12	Quarter	Grade 12	Required
Regular physical activity stimulates the development of cardiovascular function, muscular strength and endurance. Additionally, properly conducted physical education programs provide psychological benefits which contribute to a sense of well being and support academic achievement.				

VIRTUAL HIGH SCHOOL

Delone Catholic High School is proud to offer a selection of courses in different disciplines through our partnership with Virtual High School. These courses can be a fruitful supplement to a student's coursework. Credit within an academic discipline will only be offered for courses that are at the "AP" level. All other courses taken through VHS will be granted only an elective credit. DCHS pays for the fees associated with these courses, unless a student fails or withdraws, in which case the parents of that student are responsible for all costs associated with the course. These courses are only for the highly motivated and capable student. Approval to take any VHS course must be granted by the DCHS department chair.

SCIENCE

15 Weeks	Environmental Science - Honors	Grades 11, 12
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Prerequisites:

1. Biology I, Chemistry I

Every day, millions of human and natural activities are altering the planet on which we live. Environmental Science provides an opportunity to develop a broad understanding of the environmental challenges that humanity is facing today and our need to develop a sustainable relationship with our planet and its resources. This course focuses on the application of biological, chemical, and physical principles to the study of contemporary environmental issues such as air and water pollution, global climate change, hazardous and solid waste, alternative energy resources, soils, deforestation, biodiversity, and endangered species. Using a combination of traditional hands-on laboratory exercises, modern web-based animations and simulations, and an independent research project, this course offers a core laboratory experience that complements the classroom portion through firsthand observations of scientific principles.

35 Weeks	AP® Environmental Science	Grades 11, 12
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Prerequisites:

1. Biology I, Chemistry I

Special Requirements: Students will need access to both a scanner and a digital camera to complete assignments for this course. The scanner is needed only occasionally, but the digital camera will be used every couple of weeks. Please note: This course has a lab fee and an AP Fee. Upon enrollment students are required to print, read and have a parent or guardian sign the Lab Materials Use Agreement. Additional Requirements This AP course has a required summer assignment. Students are expected to complete their summer assignment before the course begins and submit their work by the end of Week 1. Students who register on or after September 1st will receive an extension to complete the summer assignment by the end of Week 3. There is a \$75/year fee for each enrollment in a VHS AP® course. The kit allows stu-

dents to perform modified versions of several AP® Environmental Science labs suggested by the College Board. Students will need to care for kit contents responsibly, follow directions carefully and work independently to successfully complete these labs. The lab kit price of \$175 is for courses running on a standard VHS schedule.

Course Description: This full year AP® Environmental Science class is equivalent to an introductory, one semester, college level, environmental science class. If you have successfully completed both high school level biology and chemistry, if you are interested in the environment, and if you are looking for a challenge, this course might be for you! Because this is a college level course, be ready to commit time to your study. This course will cover concepts in ecology, geology, sociology, economics, biology, and chemistry, that will further your understanding of how humans can live in a sustainable way. Integrated in the course is a field study component which will improve your observational skills, allow you to develop and conduct well-designed experiments, and provide opportunity to interpret and share your observations, results and conclusions with your classmates. You will be applying concepts learned in the weekly lessons to your local field study, as well as collaborating with your classmates regularly on case studies and local environmental concerns to gain a global perspective on environmental issues. During the second semester you will engage in an independent research project which culminates in a project showcase where you will present your research to your classmates. Students enrolled in Advanced Placement VHS courses are required to take the AP exam, and to report their AP exam scores to VHS. By enrolling in an AP VHS class, the student authorizes their school administration to report AP exam scores to VHS. Exam results will not affect the student's VHS grade or future enrollment in VHS courses.

15 Weeks	Astronomy Principles - Honors	Grades 11, 12
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Prerequisites:

1. Completion or concurrent enrollment in Algebra II.
2. Physics is recommended, but not required.
3. Only available when Delone Catholic is not offering Earth Science

Additional Requirements: Materials for labs

Course Description: This course is an introduction to astronomy. Student will learn how to observe the sky we see and how it appears to change over time. Then they will learn more about the planets of our solar system and the structure and life of stars. Lastly students will study the Milky Way galaxy as well as those beyond and end by looking to the future. Students will be evaluated on weekly contributions to: discussions; reading assignments; regular, outside, nighttime observation assignments in their Sky Watch journal; and other activities and assignments. Activities will involve hands-on and virtual labs, web inquiries, and using planetarium software. There will be a midterm and final project.

15 Weeks	Environmental Science - Academic	Grades 11, 12
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Prerequisites:

1. Algebra II Academics
2. Only available when Delone Catholic is not offering Earth Science

Additional Requirements: digital camera and assorted materials for labs

Course Description: Every day, millions of human and natural activities are altering the planet on which we live. Environmental Science provides an opportunity to develop a broad understanding of the environmental challenges that humanity is facing today and our need to develop a sustainable relationship with our planet and its resources. This course focuses on the application of biological, chemical, and physical principles to the study of contemporary environmental issues such as air and water pollution, global climate change, hazardous and solid waste, alternative energy resources, soils, deforestation, biodiversity, and endangered species. Using a combination of traditional hands-on laboratory exercises, modern web-based animations and simulations, and service learning opportunity, this course offers a core laboratory experience that complements the classroom portion through firsthand observations of environmental principles.

15 Weeks	Meteorology - Academic	Grades 11, 12
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Prerequisites:

1. Algebra II - Academic
2. Only available when Delone Catholic is not offering Earth Science

Course Description: Earth's weather and climates have influenced and continues to influence daily human events as well as human history. We are inundated daily with accounts of weather, both good and bad. Our daily activities depend, a great deal, on the weather. Weather phenomenon, such as hurricanes, floods and tornadoes have caused loss of life and damage of property. Loss of food crops has resulted from drought or extremes of temperature. We cannot fly a plane, have soldiers jump out of planes, or, for that matter, fight a war without consulting meteorologists to see what the weather is supposed to be on any given day. The Persian Gulf War and the Iraq War were planned according to the weather. The weather helped bring Allied victory on the Russian front during World War II. This class is designed to introduce you to the basic factors of weather/meteorology and to engage your natural curiosity in it. I hope you will find this course interesting as well as challenging. This class was designed around the Internet like our daily activities are designed around the weather. Simple meteorological observations are interwoven with online based assignments, mapping activities, data gathering and graphing activities, and writing assignments to introduce students to the many facets of weather. We will address questions such as: What is climate change? What might be causing it? How does location affect temperature and precipitation? What causes thunderstorms? Why do most weather systems move from west to east in the United States? Join us to find out the answers to these and many other questions related to weather.

15 Weeks	Climate Science - Honors	Grades 11, 12
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Prerequisites:

1. Physical Science and/or Chemistry I
2. Only available when Delone Catholic is not offering Earth Science

Course Description: Current and future generations will be forced to deal with the consequences of our Earth's changing climate. Understanding how life on Earth has been shaped by, depends on and affects climate, is essential for making scientifically informed and socially responsible decisions about our future. Focusing on real-world case studies, this honors level course encourages students to question the cause and effects of climate in the world around them and then explore the science associated behind those questions. This class focuses student learning on better understanding Earth as a dynamic system and then challenges students to evaluate how certain factors are connected to and ultimately impact this system. The course curriculum is anchored in the scientific investigation of Earth's energy budget, carbon chemistry, paleoclimatology and climate data sources. Through this science, students have the opportunity to interpret current research and evaluate the latest news and then work together to investigate decision-making processes around public policy that will impact their future. A major project in this course allows each student to research and evaluate a specific climate change impact story of their choice. Across both terms, course assignments guide students to develop a comprehensive climate report that ultimately can be shared publicly. Students are given the opportunity to demonstrate their expertise and advocate for those in their report via public policy proposal as they participate in a climate congress at the end of the course. Students will take away from the course newfound knowledge and confidence that will allow them to communicate about climate issues in meaningful ways.

35 Weeks	Earth and Space Systems Science - Academic	Grades 11, 12
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Prerequisite:

1. Only available when Delone Catholic is not offering Earth Science

Additional Requirements: This course has a \$150 lab kit fee. Upon enrollment students are required to print, read and have a parent or guardian sign the Lab Materials Use Agreement. Students will use Google Earth, Image (requires Java), GIS (Geographic Information System) and Stellarium to collect and analyze data throughout the course. Students will also need a digital camera to document hands on work throughout the course.

Course Description: Starting from the farthest reaches of space and time, and journeying toward Earth, students will investigate Earth and space science, develop a deep appreciation of Earth as a system, and then consider human impact on this system. The course is organized into three week, theme-based modules that explore Earth's place in the universe and solar system, examine the five spheres of the Earth (atmosphere, hydrosphere, geosphere, cryosphere, and biosphere), and consider the impact of human activity on Earth. Students engage in a series of inquiry-based and

investigative activities designed to have them become participants in Earth science instead of passive observers. As they learn Earth science, they incorporate the same methods that scientists employ in their work, and use the same technology tools scientists use to “do science”. In place of a textbook, this course incorporates a variety of multimedia resources. Students will perform hands-on and virtual investigations to develop a deeper understanding of earth science, incorporating the same online data sets and rich technology tools that scientists use. Students will engage in collaborative activities to generate and evaluate class data, and discuss observations, trends and questions. In each module, students complete a “Challenge,” a summative performance assessment project where they have the opportunity to demonstrate how to apply the knowledge they have acquired in a variety of ways.

15 Weeks	Oceanography - Honors	Grades 11, 12
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Prerequisites:

1. It is strongly recommended that students have a working knowledge of basic Algebra, Geometry and Trigonometry. Chemistry I
2. Only available when Delone Catholic is not offering Earth Science

Additional Requirements: Students will be expected to provide “kitchen science equipment” such as a clear plastic container, food coloring, aluminum foil, paper towels, etc.

Course Description: “There are no passengers on Spaceship Earth. We are all crew.” Marshall McLuhan. Students will board the USS Cyber, a virtual oceanographic research vessel modeled after the flagship of NOAA’s fleet for a sail that begins in Woods Hole, Massachusetts, and ends in San Diego, California. As the crew of the ship, students will perform scientific experiments and collect data that will teach them about the geology, chemistry, and physics of the ocean. From the Bay of Fundy in Nova Scotia to the Caribbean and Antarctica, from the coral reefs to the hydrothermal vent communities deep in the ocean, students will make observations about the sea’s ecosystems and the sometimes unexpected life within them. There are no traditional tests. Students are expected to participate fully as members of the expedition. If you have ever wondered what it might be like to go to sea, pack your bags, and join us. This is a survey course covering the basics of physical oceanography and marine biology presented in a fun and engaging format. There are no traditional tests. Students will be graded on their weekly assignments, which will include both individual and group projects. In lieu of a midterm or final exam, students will be expected to complete a major individual project each term. There will be a strong multimedia component to the course, and students will have the opportunity to choose from reading assignments that meet their comfort level.

15 Weeks	Animal Behavior and Zoology - Honors	Grades 11, 12
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Prerequisites:

1. Biology I-Academic, Chemistry I

Course Description: This course explores the tremendous diversity of animal life and the interconnectedness of different animal species with each other and with humans. The first part of the course explores the classification and characteristics of all the animal phyla, with an emphasis on the evolution of animals and the adaptations that have allowed such diversity to flourish. The second part of the course focuses on many different animal behaviors (including human behavior). Students learn about different types of behaviors – from innate (genetic) behaviors to learned behaviors. The social interactions between animals will be covered in depth as we study courtship, aggression, altruism, and parental behaviors in animals. Students also discuss different careers in the animal sciences as a culminating activity, which should be of great interest to students who wish to pursue their love of animals as their professions. The course will utilize a number of interesting articles, discussions, virtual field trips, activities, videos, and projects to give a wider perspective of the animal kingdom and animal behavior.

15 Weeks	Biochemistry - Honors	Grades 11, 12
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Prerequisites:

1. Biology I and Chemistry I

Additional Requirements: Java is required for students to complete Molecular Workbench activities to visualize and manipulate molecules. You will also need access to a digital camera/scanner.

Course Description: Biochemistry explores the structure and role of essential biological molecules focusing on carbohydrate, lipid, nucleic acid and protein chemistry. Biochemistry is a survey course designed to review general principles of chemistry and biochemistry while relating them back to the physiological conditions of an organism, understanding the chemical and molecular events involved in biological processes. Topics designed in this course include the structure and function of biomolecules, relationship of biochemistry to the physiology of an organism, relationship of bioenergetics to the physiological state of an organism, description of the chemistry underlying metabolic reactions, regulation of metabolic pathways, nutrition and metabolism, enzyme structure and catalysis, DNA, RNA and protein synthesis, and the role of DNA in inheritance. This course provides the linkage between the inanimate world of chemistry and the living world of biology.

15 Weeks	Biotechnology - Academic	Grades 11, 12
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Prerequisite:

1. Introductory high school biology

Additional Requirements: DNA Software download (free)

Course Description: Nearly every day there is amazing news about biotechnology and genetic engineering. This is an exciting, dynamic area that includes many applications that we hear about often – cloning, stem cells, genetically engineered plants and animals, DNA fingerprinting and forensics, gene therapy, and the Human Genome Project. This course is intended to provide you with an overview of biotechnology, starting with a review of DNA structure and function and extending to the current research ongoing in the field. Biotechnology is a course designed to familiarize you with these current innovative technologies based on our use of the DNA molecule. You will examine the opportunities and challenges that these abilities have created for us all. You will look at the techniques that are used in biotechnology and will also see just what kind of work modern biotech companies are involved in. In this class, we will be looking at how scientists use or plan to use DNA in all sorts of fascinating ways. We have all heard of DNA fingerprinting, but there are many, many other ways in which DNA is being used these days, and that's what we'll be looking at in this course, from DNA vaccines to cell therapy to genetically engineered corn.

15 Weeks	Genes and Disease - Honors	Grades 11, 12
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Prerequisite:

1. Biology I-Academic

Course Description: Buried in the cells of each newborn is a unique set of genetic instructions. These molecular blueprints not only shape how the child will grow and develop and whether it will have brown eyes or blue, but what sorts of medical problems it might encounter. Errors in our genes, our genetic material, are responsible for an estimated 3,000-4,000 hereditary diseases, including Huntington disease, cystic fibrosis, and Duchenne muscular dystrophy. What's more, altered genes are now known to play a part in cancer, heart disease, diabetes and many other common diseases. Genetic flaws increase a person's risk of developing these more common and complex disorders. The diseases themselves stem from interactions of genetic predispositions and environmental factors, including diet and lifestyle. This course will focus on four genetic areas, (1) classical or Mendelian genetics, diseases where major effects are from a single gene, (2) multifactorial inheritance, continuous traits and discontinuous traits where several genes plus environmental factors are involved, (3) cytogenetics, diseases involving chromosomal abnormalities, and (4) mathematical genetics, including population genetics, linkage, and mapping.

15 Weeks	Pre-veterinary Medicine - Honors	Grades 10, 11, 12
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Prerequisites:

1. Biology I and Chemistry I

Course Description: Are you interested in becoming a veterinarian or a veterinary technician? Do you love animals and wish to learn more about them? Pre-veterinary Medicine will introduce you to basic vertebrate anatomy by covering the major systems of the body including the digestive, reproductive, skeletal, cardiovascular, respiratory, excretory, and integumentary systems. We will use examples from small animal medicine (dogs and cats although some large animal anatomy will be covered) and discuss medical problems that are commonly seen in veterinary offices. Every week we will have a "Dilemma of the Week" where students will examine and discuss common ethical dilemmas that veterinarians face on a regular basis. Following the introduction to anatomy and physiology, you will learn the diagnostic procedures that assist veterinarians in making appropriate diagnoses. You will learn how to take a medical history, perform a basic physical examination, and what types of tests (blood, X-ray, fecals) that vets employ to get a better picture of the animal's health. For the remainder of the course, you will work in small groups on case studies. You will follow cases from start to completion, brainstorming about potential causes of ailments, diagnoses and treatment options.

35 Weeks	AP® Biology	Grades 11, 12
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Prerequisites:

1. Biology I and Chemistry I

Additional Requirements: This AP course has a required summer assignment. Students are expected to complete their summer assignment before the course begins and submit their work by the end of Week 1. Students who register on or after September 1st will receive an extension to complete the summer assignment by the end of Week 3. There is a \$75/year fee for each enrollment in a VHS AP® course. There is also a lab kit for this course that must be purchased for an additional fee of \$200. The kit allows students to perform modified versions of several AP® Biology labs suggested by the College Board. Students will need to care for kit contents responsibly, follow directions carefully and work independently to successfully complete these labs.

Course Description: The Advanced Placement course in Biology is equivalent to a full-year Freshman Biology course taught at any major University. Students will be reading the same text that is used at many major colleges and universities, and working at a rigorous pace to cover the material and prepare for the Advanced Placement Examination in May. Upon successful completion of the exam, students may receive college credit and will be well-prepared for any future Biology course. This class will build upon prior knowledge of Biology. The course covers topics such as molecular genetics, biochemistry, human anatomy and physiology, cell biology, plant biology and ecology. Using the text, the Internet, class discussions, and projects,

the course will cover a tremendous amount of material in order to give students a complete understanding of the study of biology. Biweekly examinations will test students' knowledge of the material as well as prepare them for the AP[®] examination. Due to the volume and level of the material, this course is designed to challenge extremely motivated students who have a strong interest in the Biological Sciences. Students enrolled in Advanced Placement VHS courses are required to take the AP[®] exam, and to report their AP[®] exam scores to VHS. By enrolling in an AP[®] VHS class, the student authorizes their school administration to report AP exam scores to VHS. Exam results will not affect the student's VHS grade or future enrollment in VHS courses. This AP course has a required summer assignment. Students are expected to complete their summer assignment before the course begins and submit their work by the end of Week 1. Students who register on or after September 1st will receive an extension to complete the summer assignment by the end of Week 3.

15 Weeks	Epidemics - Academic	Grades 11, 12
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Prerequisite:

1. Successful completion of a full year of high school biology or equivalent

Course Description: One of the most fascinating and frightening aspects of disease, epidemics are known to have affected civilizations, medicine, and human interactions since the beginning of written history. If you were born even a century ago, your chances of dying or becoming disabled by an infectious disease as a child would have been very high. Thanks to modern medicine like antibiotics and vaccines, many of those childhood illnesses are all but eradicated in our world. Unfortunately, our battle against epidemic diseases continues, despite medical successes and our improved understanding of the causes and process of disease. New diseases are emerging, and those considered controlled are re-emerging in more virulent, resistant forms. News reports are documenting outbreaks of strange diseases in both underdeveloped regions and those with the highest levels of medical care. This dynamic course is designed to enable students to understand why new diseases are appearing and why those we thought conquered are reappearing. This is done in the context of basic concepts upon which our understanding of biology is built; the interdependence of life and the interconnectedness of our world.

35 Weeks	AP [®] Chemistry	Grades 11, 12
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Prerequisites:

1. One full year of high school Chemistry I-Honors, one full year of high school Algebra 2, and student must be taking Pre-Calculus, or Calculus.

Additional Requirements: Students will need to access a number of YouTube videos throughout the course. There is a \$75/year fee for each enrollment in a VHS AP[®] course. This course also requires a lab kit that must be purchased for an additional fee of \$200. The kit allows students to perform modified versions of several AP[®] Chemistry labs suggested by the College Board. Students will need to care for kit contents responsibly, follow directions carefully and work independently to suc-

successfully complete these labs. This AP course has a required summer assignment. Students are expected to complete their summer assignment before the course begins and submit their work by the end of Week 1. Students who register on or after September 1st will receive an extension to complete the summer assignment by the end of Week 3.

Course Description: This Advanced Placement Chemistry Course is equivalent to a full-year Introductory Chemistry college-level course. The rigor and pace of this course is consistent with that of many major colleges and universities, and will prepare students for the Advanced Placement Examination in May. Upon successful completion of the exam, students may receive college credit and will be well-prepared for additional advanced chemistry coursework. AP[®] Chemistry builds upon prior knowledge of Chemistry. Students will investigate topics such as chemical reactions, stoichiometry, atomic theory, periodicity, bonding, states of matter, thermodynamics, kinetics and equilibrium. This course incorporates a variety of textbook and multimedia resources and will require students to perform hands on and virtual experiments to develop a deeper understanding of chemistry. Students will engage in collaborative activities such as class discussions, contribute to class data and attend regular “lab meetings” throughout the course. AP practice quizzes and unit exams will help prepare students for the AP examination. Due to the rigor and pace of the content, this course is designed to challenge extremely motivated students who have a strong interest in Chemistry. The summer assignment is intended to review crucial content associated with pre-requisite knowledge for the course, where applicable, as well as to allow students to better understand the rigor associated with the content. The required summer assignment for AP[®] Chemistry can be found here: AP Summer Work. Students enrolled in Advanced Placement VHS courses are required to take the AP[®] exam, and to report their AP exam scores to VHS. By enrolling in an AP VHS class, the student authorizes their school administration to report AP[®] exam scores to VHS. Exam results will not affect the student's VHS grade or future enrollment in VHS courses.

35 Weeks	AP [®] Physics 1	Grades 11, 12
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Prerequisite:

1. One full year of high school Algebra 2.

Additional Requirements: Students will need to access a number of YouTube videos throughout the course. Students will also use the Pearson Virtual Physics Lab program to complete select labs throughout the course. The Virtual Physics software package is available as a single downloadable compressed file linked within the course and requires a Windows operating system to run.*Please note: There is a \$75/year fee for each enrollment in a VHS AP[®] course. There is also a lab kit for this course that must be purchased for an additional fee of \$225. The kit allows students to perform modified versions of several labs suggested by the College Board. Students will need to care for kit contents responsibly, follow directions carefully and work independently to successfully complete these labs. The lab kit price of \$225

is for courses running on a standard VHS schedule. International schools will be responsible for the shipping cost for the lab kit. This AP course has a required summer assignment. Students are expected to complete their summer assignment before the course begins and submit their work by the end of Week 1. Students who register on or after September 1st will receive an extension to complete the summer assignment by the end of Week 3.

Course Description: This Advanced Placement Physics 1 Course is equivalent to a first semester, algebra-based, Introductory Physics college-level course. The rigor and pace of this course is consistent with that of many major colleges and universities, and will prepare you for the Advanced Placement Examination in May. Upon successful completion of the exam, you may receive college credit and you will be well-prepared for additional advanced physics coursework. Students will investigate topics such as Newtonian mechanics (including rotational dynamics and angular momentum), work, energy, power, mechanical waves and sound. Students will also be introduced to electric circuits. This course incorporates a variety of textbook and multimedia resources and will require students to perform hands on and virtual experiments to develop a deeper understanding of physics. Students will engage in collaborative activities such as class discussions, contribute to class data and attend regular “lab meetings” throughout the course. AP practice quizzes and unit exams will help prepare students for the AP examination. Due to the rigor and pace of the content, this course is designed to challenge extremely motivated students who have a strong interest in Physics. This AP course has a required summer assignment. Students are expected to complete their summer assignment before the course begins and submit their work by the end of Week 1. Students who register on or after September 1st will receive an extension to complete the summer assignment by the end of Week 3. The summer assignment is intended to review crucial content associated with prerequisite knowledge for the course, where applicable, as well as to allow students to better understand the rigor associated with the content. The required summer assignment for AP[®] Physics 1 can be found here: [AP Summer Work](#). Students enrolled in Advanced Placement VHS courses are required to take the AP[®] exam, and to report their AP[®] exam scores to VHS. By enrolling in an AP[®] VHS class, the student authorizes their school administration to report AP[®] exam scores to VHS. Exam results will not affect the student's VHS grade or future enrollment in VHS courses.

15 Weeks	Forensic Science - Academic	Grades 11, 12
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Prerequisites:

1. Biology I and Chemistry I

Additional Requirements: household materials for labs

Course Description: Forensics will provide students with an in-depth knowledge of techniques and strategies used by forensic scientists. They will learn the steps involved in analyzing a crime scene in order to provide evidence that will be admis-

sible in a court of law. Emphasis is placed on the investigative process. They will get a detailed knowledge of the industry in order to explore the potential for careers in forensic science. Students will research different methods that forensic scientists use to solve crimes and analyze crime scene data to solve crimes themselves. Topics include collecting evidence, fingerprinting, blood-typing, ballistics, trace evidence, anthropology, and of course, DNA!

15 Weeks	Nuclear Science - Academic	Grades 11, 12
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Prerequisites:

1. Chemistry I and Physics I The student should have a basic understanding of atomic structure and have some experience with graphing calculators.

Course Description: Formerly titled Nuclear Physics. The focus of this course are the scientific, technological, and societal implications arising from nuclear physics. Students have an opportunity to explore, in-depth, a topic that has played a major role in the science, technology, politics, philosophy, and everyday life of the past century. The student's primary goal during the course is to answer the question: "What should an informed citizen know about nuclear issues?" The student has some flexibility choosing the areas they wish to concentrate on. The science topics in the course include the history of discovery, types of nuclear reactions, interactions between radiation and matter, the standard model of subatomic matter and current research. Although some math is used to provide better understanding of the concepts covered, math problems are not the primary focus of the course. The technology portion includes the design and function of particle detectors, particle accelerators, nuclear reactors, nuclear bombs and nuclear waste facilities. Current and future uses of radiation in industry and medicine are also investigated. The society portion of the course is the one where many students concentrate their efforts. The weekly discussions on controversial nuclear topics are always interesting. They provide opportunities to look back at the politics behind weapons development and use, the Cold War, nuclear proliferation, and the atomic energy industry. Discussions during the course will include topics that have made recent headlines; such as food irradiation, nuclear reactors in space, Radon mitigation, the demise of the Super-Conducting Super-Collider, the theft of nuclear secrets, and nuclear test ban treaties.

35 Weeks	AP [®] Physics C	Grades 11, 12
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Prerequisites:

1. Grade of B+ or better in prior full-year, algebra-based Physics class.
2. Physics I, Physics II

Additional Requirements: Students will need to access a number of YouTube videos throughout the course. There is a \$75/year fee for each enrollment in a VHS AP[®] course. This course also requires a lab kit that must be purchased for an additional fee of \$225. The kit allows students to perform modified versions of several AP[®] Physics C labs suggested by the College Board. Students will need to care for kit contents responsibly, follow directions carefully and work independently to suc-

successfully complete these labs. This AP course has a required summer assignment. Students are expected to complete their summer assignment before the course begins and submit their work by the end of Week 1. Students who register on or after September 1st will receive an extension to complete the summer assignment by the end of Week 3.

Course Description: This Advanced Placement Physics Course is equivalent to a full-year introductory college-level course, for scientists and engineers, which introduces the main principles of Mechanics and Electricity & Magnetism. The rigor and pace of this course is consistent with that of many major colleges and universities, and will prepare students for the two-part Advanced Placement Examination in May on 1) Mechanics and 2) Electricity and Magnetism. AP[®] Physics C builds upon prior knowledge of Physics. Students will investigate topics such as Newton's Laws of motion, energy, linear and angular momentum, gravitation, oscillatory motion, electric and magnetic fields, Gauss's Law, circuits and Faraday's Law. The course uses complex mathematical problem solving techniques, including differential and integral calculus, as well as a variety of textbook and multimedia resources, and hands-on and virtual experiments, in order to develop a deeper understanding of physics. Throughout the course, students will engage in collaborative activities such as class discussions, contribute to class data, attend regular "lab meetings", and document their experimental findings in a laboratory notebook. AP practice quizzes and unit exams will help prepare students for the AP examination. Due to the rigor and pace of the content, this course is designed to challenge extremely motivated students who have a strong interest in Physics. The summer assignment is intended to review crucial content associated with prerequisite knowledge for the course, where applicable, as well as to allow students to better understand the rigor associated with the content. The required summer assignment for AP[®] Physics C can be found here: AP Summer Work. Students enrolled in Advanced Placement VHS courses are required to take the AP[®] exam, and to report their AP exam scores to VHS. By enrolling in an AP VHS class, the student authorizes their school administration to report AP[®] exam scores to VHS. Exam results will not affect the student's VHS grade or future enrollment in VHS courses.

15 Weeks	Physics: Mechanics - Academic	Grades 11, 12
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Prerequisites:

1. Physics I, Algebra II/Trig., Pre-calculus (concurrently with mechanics)

Additional Requirements: Household items for completing labs

Course Description: From the top of Mt. Everest to tiny viruses, physics is everywhere! We will explore many aspects of physics in mechanics, which you can then apply to further scientific or engineering study. Our exploration will include a variety of interesting hands-on experiments where you will be able to share and discuss your data and conclusions with your classmates. In addition, we will discuss a connection to our world each week that will range from the latest innovations, to forensic analysis of events that occurred half a century ago. Physics: Mechanics pro-

vides students with a firm foundation in Newtonian mechanics, and will introduce students to areas of mechanics including: vectors, motion, free fall, Newton's Laws of motion, work, energy, rotational motion, and gravity. Online reading, engaging simulations, and lectures are used throughout the course to introduce students to concepts. Students tests forces and motion on ramps, see-saws, and roller coasters with weekly simulations. In addition, students will have the opportunity to engage in weekly hands-on laboratory activities to apply their understanding of physics to a wide range of areas including: chemistry, when they measure motion in molecules as they are absorbed by paper; sports mechanics, when they measure their jump speed, and reaction time, and aeronautics and engineering, when they measure the flight of projectiles and test the lifting power of student-designed helicopters. The course is an outstanding introduction for students who wish to continue further into AP Physics 1, or as a stand-alone course for further study later on. Please join us as we embark on this journey to understand the most fundamental science--PHYSICS!

ENGLISH

15 Weeks	Film and Literature - Academic	Grades 11, 12
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Prerequisite:

1. English 10 Honors

Additional Requirements: Materials used within this course are readily available, and students will be selecting their own materials from a variety of sources.

Course Description: In this course, students will become movie critics, readers of some of the world's finest 20th century novels, and work on unique projects with students around the world. Participant will explore the momentous events of the 20th century as they were depicted in literature and on film. The course focuses on three pivotal changes. 1) WWI and the Russian Revolution; 2) 1920's - WWII; 3) the Cold War. The course will bring students through those periods through the literature of the time.

In addition to reading literary works (from Pasternak's "Dr. Zhivago" to Forsyth's "The Odessa File"), students will also view the film adaptations that portray the lives of the people living during this fascinating time.

15 Weeks	Shakespeare in Film - Honors	Grades 11, 12
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Prerequisite:

1. English 10 Honors

Additional Requirements: All books for this course are available online at shakespeare@mit.edu.

Students who desire a traditional textbook should purchase one at their own cost through Amazon.com or a similar website.

Course Description: “‘Tis needful that the most immodest word Be looked upon and learned.” – Henry IV, Part Two

In this class, students will read four Shakespearean plays - Romeo and Juliet, Much Ado About Nothing, Henry V, and Hamlet - and then view a variety of scenes from these plays performed by many popular actors (including Leonardo DiCaprio, Mel Gibson, Emma Thompson and Kenneth Branagh). The focus of the assignments will be discussions and compositions on choices the actors and directors have made and how those different choices lend different meanings to the plays. Some of the topics include: family relationships, love, imagery, life, decisions, tragedy vs. comedy, visual and aural aspects of a film, death and many other common literary themes as well as film technology.

15 Weeks	Twentieth Century Women Authors	Grades 10, 11, 12
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Course Description: This English course will explore literature written by America’s female novelists. We will begin the course with material written at the start of the twentieth century and trace its progression to the new millennium. Through research on the author’s background and critical analysis of the writing, students will chronicle in historical context the changing role of women socially, politically, and economically.

Students who enjoy literature and history are encouraged to sign up for this course. This class does not have a gender bias.

SOCIAL STUDIES

35 Weeks	AP® Psychology	Grades 11, 12
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Additional Requirements: This AP course has a required summer assignment. Students are expected to complete their summer assignment before the course begins and submit their work by the end of Week 1. Students who register on or after September 1st will receive an extension to complete the summer assignment by the end of Week 3. The summer assignment is intended to review crucial content associated with prerequisite knowledge for the course, where applicable, as well as to allow students to better understand the rigor associated with the content. The required summer assignment for AP® Psychology can be found here: AP Summer Work.*Please note: There is a \$75/year fee for each enrollment in a VHS AP® course.

* **Course Description:** The AP® Psychology course is designed around a variety of assignments that promote acquiring a deep understanding of content, as well as developing study and writing skills necessary to be successful on the advanced placement exam. While preparation for the AP® Exam is an important goal of the course, helping students to better understand themselves and the behavior of others is another important aspect of the course. Students should expect weekly reading assignments in the ebook, Meyers' Psychology for AP® in addition to research, writing, group work, and participation in discussions. Tips for completing multiple choice questions and writing the essay part of the exam are part of the instruction for this course. Students will be given numerous opportunities to review and practice for the AP exam throughout the course. Students enrolled in Advanced Placement VHS courses are required to take the AP® exam, and are required to report their AP® examination scores to VHS (note: students who are failing their AP® class are not required to take the exam). Upon receipt of the student's exam score, each score will be recorded by VHS and assigned an anonymous tracking number to ensure student anonymity and confidentiality. By enrolling in an AP® VHS class, the student authorizes their school site coordinator and school administration to report AP® examination scores to VHS. Exam results will not affect the student's VHS grade or future enrollment in VHS courses. The summer assignment is intended to review crucial content associated with prerequisite knowledge for the course, where applicable, as well as to allow students to better understand the rigor associated with the content.

35 Weeks	AP® World History	Grades 10, 11, 12
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Additional Requirements: Powerpoint and the latest version of Adobe Acrobat Reader. To use all of the features of MyHistoryLab and the on-line text, students will need the following plug-ins: Adobe Acrobat Reader and Flash. There is a \$75/year fee for each enrollment in a VHS AP® course.

Course Description: This is a college-level history course designed to meet the needs of highly motivated students who have a strong interest and ability in history. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by full-year introductory college

courses. The student is expected to read and analyze both primary and secondary source materials and to demonstrate ability to interpret and evaluate these sources in essay form. Students will take the Advanced Placement World History exam in May, as preparation for this exam is a major goal of this course. Therefore, the course is content driven with heavy emphasis on written critical analysis. Extensive reading writing and class discussions are integral components of the program. The AP® program in World History is designed develop a greater understanding of human societies. The course covers world history from approximately 8,000 B.C.E. to the present. Students enrolled in Advanced Placement VHS courses are required to take the AP exam, and are required to report their AP examination scores to VHS (note: students who are failing their AP class are not required to take the exam). Upon receipt of the student's exam score, each score will be recorded by VHS and assigned an anonymous tracking number to ensure student anonymity and confidentiality. By enrolling in an AP® VHS class, the student authorizes their school site coordinator and school administration to report AP® examination scores to VHS. Exam results will not affect the student's VHS grade or future enrollment in VHS courses.

15 Weeks	Modern Middle East - Honors	Grades 10, 11, 12
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Additional Requirements: Streaming video access (for YouTube videos), Elluminate access, Windows Media or Real Player, Quicktime, Adobe Reader

Course Description: This course explores the history of the Middle East (focusing primarily on the last century), and examines the relationships within the region and beyond. Topics of study include the development of Islam, the impact of imperialism, the rise of nationalism, the effects of British and French rule, Arab-Israeli relations, and the political and economic impact of oil. Since 9/11, interest in the Middle East and Islamic studies has increased dramatically. In response, media, schools, politics, and pop culture, have all expanded their coverage of the region and its culture. As a student in this course, you are part of a larger movement seeking to better understand the people, ideas, and events of this area. Moreover, you will form your own generalized and nuanced understanding of the Middle East.

15 Weeks	Peacemaking - Academic	Grades 10, 11, 12
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Additional Requirements: The books for this course are delivered to students as Kindle ebooks. Students will need to download the free Kindle app. If students prefer a physical book, they should buy a copy or get it through their library.

Course Description: Peacemaking is about power. It is about realizing and utilizing your personal power, by recognizing that there are alternatives to violence and to a "win-lose" philosophy of life. Peacemaking is an active process, not a passive exercise. Peacemaking is an interdisciplinary course exploring Peace and Peacemaking in four interrelated ways - the personal, interpersonal, communal and global. Through exploration, evaluation, reflection and discussion we will better understand our own roles and responsibilities as peacemakers. Topics covered will include: service for the sake of peace, forgiveness, understanding, contemplation, philosophies of

non-violence, and peacemakers past and present among the Nobel Peace Prize Laureates. Readings include works by Thich Nhat Hanh, Martin Luther King, The 14th Dalai Lama, Mohandas Gandhi, Simon Wiesenthal and others. Projects will include a Peace Offering and creation of a multimedia project: assembling Pieces of Peace. Discussion will be open and spirited. Learning is a collaborative process.

15 Weeks	Philosophy I - Honors	Grades 10, 11, 12
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In this course, students are invited to participate in an activity that is over 2500 years old and expected to develop their own ideas about philosophical problems, theories and arguments. Students will be challenged to think critically, while taking into consideration what the others had and have to say about those matters. Philosophy enhances the improvement of the analysis of personal convictions, the understanding of the diversity of arguments of others and the awareness of the limited character of our knowledge. In this sense, philosophy is a basic and important part of education and an instrument for making democratic life deeper. Participants in this philosophy course will be challenged to think critically and learn to think with the ideas and points of view of past and contemporary philosophers. Students will write, read and debate extensively, always by means of an argumentative discourse and weekly assignments.

15 Weeks	Constitutional Law - Honors	Grade 12
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Prerequisite:

1. Completion of U.S. Government

Course Description: This class explores the history and development of the United States Constitutional legal system. The primary focus will be on the basic principles of law, the judicial system and judicial/political behavior in U.S. history. Central themes of the course focus on the U.S. Supreme Court's interpretation of law, power, and legal precedent. Students will read and listen to condensed versions of selected Supreme Court cases. Contemporary legal issues, including immigration law, and intellectual property law are also examined.

15 Weeks	Psychology of Crime - Honors	Grades 11, 12
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Students will learn how psychology applies to questions and issues relating to law and the legal system. The course will include all aspects of the legal system including police, the trial and corrections. Topics will include: recovered memories, children as victims and offenders, violence and murder, strategies for interviewing witnesses, expert testimony, and factors influencing the credibility of witnesses, victims and offenders and insanity. Students will also examine the relationship of psychology and law in the educational and work settings. Please note that this course contains an end-of-course proctored exam. Instructions for students to identify an appropriate adult proctor are included in the course lessons.

35 Weeks	AP® Human Geography	Grades 10, 11, 12
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Additional Requirements: There is a \$75/year fee for each enrollment in a VHS AP® course. Technology Requirements: Adobe Acrobat Reader and Flash Microsoft Word or Windows Wordpad Windows Media Player External headset and microphone High speed internet connection. This AP course has a required summer assignment. Students are expected to complete their summer assignment before the course begins and submit their work by the end of Week 1. Students who register on or after September 1st will receive an extension to complete the summer assignment by the end of Week 3.

Course Description: The AP® Human Geography course, designed to meet the needs of highly motivated students, is organized around the major themes of human interactions within a shared world that considers the questions, where and why. Where do people live and why or how do cultures influence human behavior? Students will study the elements of sociology, anthropology, religion, politics, economics, and psychology that help students understand how to make sense of others and themselves in a locality, region and the world. The course is offered at a college level class and will require rigorous work and effort. Students should expect to complete a variety of readings, writings, and practice exams as well as to participate in many discussions and activities. It is expected that students will take the Advanced Placement Human Geography exam in May, as preparation for this exam is one of the major goals of the course. The course will introduce students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students will employ spatial concepts and landscape analysis to examine human social organization and its environmental consequences. They will also learn about the methods and tools geographers use in their science and practice. The seven topics include Geography: Its Nature and Perspectives, Population, Cultural Patterns and Processes, Political Organization of Space, Agriculture and Rural Land Use, Industrialization and Economic Development and Cities and Urban Land Use. A significant outcome of the course is students' awareness of the relevance of academic geography to everyday life and decision making. This combination of the academic and the applied gives students a sophisticated view of the world and an understanding of the manifold applications of what they have learned in the course. Students enrolled in Advanced Placement VHS courses are required to take the AP® exam, and to report their AP® exam scores to VHS. By enrolling in an AP® VHS class, the student authorizes their school administration to report AP® exam scores to VHS. Exam results will not affect the student's VHS grade or future enrollment in VHS courses.

15 Weeks	World Religions - Academic	Grades 9, 10, 11, 12
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Humans are social beings and religion is an essential part of our human culture. The study of the world's religions, through the social studies lens, offers us an opportunity to examine how cultures around the world and over time have struggled to find meaning and purpose in life and how this understanding informs their lives.

Developing literacy about other religions helps to foster tolerance and understanding in our diverse world. This semester course will look at some of the world's major religions: Hinduism, Buddhism, Judaism, Christianity and Islam. Each will be examined without acknowledging the superiority of any one over the others. The course will begin with an overview of how religion is constructed and world views formed. Later, the history of each of the mentioned religions will be looked at, as well as its beliefs and practices. If you want to understand better how different religions deal with issues such as: the relationship of man with God, the relationship of man with other mankind and man with the world, and life after death; then this is the course for you. This course will require extensive reading, interaction with your classmates, tests and a final investigative project.

15 Weeks	Criminology - Academic	Grades 11, 12
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Prerequisite:

1. Students must be mature enough to handle subject matter that can be upsetting in nature.

Course Description: How could somebody commit such an unspeakable act, or how could someone who seemingly has everything throw it all away doing something illegal? Does a person's environment increase the likelihood of becoming a criminal or is criminality an inherited trait? Criminology will explore the reasons why people commit crimes. This course first will examine why laws were created and how they evolve over time in response to society's needs. Then, the focus will move to the theoretical perspectives of criminal behavior, including biological, psychological and sociological theories. Students will delve into the minds of serial killers, thieves, drug dealers, and even corporate criminals while examining notable and notorious criminals. Finally, the class will explore the treatment of criminals by the correctional system. Students will be asked to design a policy statement for crime prevention and treatment programs for criminals. Some of the issues we'll discuss are: three main types of crime, Prevalence of crime, connection between drugs and crime, indicators of danger, predicting criminal behavior, and competency standards. *Please note that some of the subject matter in this course can be upsetting because the nature of crime can be violent. If your sensibilities are easily upset, a different course might be more suitable.

Prerequisite:

1. This AP course has a required summer assignment. Students are expected to complete their summer assignment before the course begins and submit their work by the end of Week 1. Students who register on or after September 1st will receive an extension to complete the summer assignment by the end of Week 3. The summer assignment is intended to review crucial content associated with pre-requisite knowledge for the course, where applicable, as well as to allow students to better understand the rigor associated with the content.

Course Description: AP® European History is a rigorous academic course that is structured around the investigation of five course themes from 1450 to the present. It prepares students for the demands of a college education by emphasizing the development of nine specific historical thinking skills while providing extensive experience in college level reading, writing and responsibility for learning. The challenging and stimulating curriculum of AP European History requires much more time than other high school courses. Solid reading and writing skills, along with a willingness to devote considerable hours to homework and study, are necessary to succeed. This course promotes effective time management and organization skills and is structured specifically to meet new criteria set forth by the College Board.

During this full-year course, students will investigate the broad themes of interaction between Europe and the World, Poverty and Prosperity, Objective Knowledge and Subjective Visions, States and Other Institutions of Power, and the Individual and Society, while making crucial connections across four different chronological periods ranging from 1450 to the present. In addition, the course is focused toward 19 key concepts, which enable students to better understand, organize, and prioritize historical developments within a chronological framework. As students learn to analytically examine historical facts and evidence, they will gain deeper conceptual understandings of critical developments in European history and will understand issues from multiple perspectives.

This course specifically encourages the development of students' skills in the categories of chronological reasoning, comparison and contextualization, construction of evidence-based arguments, and interpretation and synthesis of historical narratives, all competencies essential for college and career success.

Throughout the course, AP European History students can expect to:

1. Watch or listen to traditional history lectures produced by the teacher or offered by colleges and universities online.
2. Participate in class discussions of primary documents, course themes, and key events in threaded discussions.
3. Use historical facts and evidence to debate key issues or role-play historic figures through student audio recordings.
4. Demonstrate historical thinking skills through essays designed to meet the requirements outlined by the College Board for Advanced Placement

exams.

5. Collaborate with other students in research groups using Web 2.0 information tools.
6. Utilize supplement traditional textbook reading with historical journals and primary documents.

Students enrolled in Advanced Placement VHS courses are expected to take the AP® exam, and to report their AP® exam scores to VHS. By enrolling in an AP® VHS class, the student authorizes their school administration to report AP® exam scores to VHS. Exam results will not affect the student's VHS grade or future enrollment in VHS courses.

FOREIGN LANGUAGE

35 Weeks	AP® French Language and Culture	Grades 11, 12
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Prerequisite:

1. Students must have completed all French offerings at DCHS.

Additional Requirements: Students will need access to Power Point, Quick Time, and Real Player. This course requires students to have access to a computer with headphones, microphone, and software to record voice and save in WAV format. Students must also be able to download MP3 files to school computers. Instructions will be provided for Sound Recorder, used in Windows. Audio recording requires Adobe Flash 10.1 or later. Other software may be substituted, as long as it has the ability to record up to 2 minutes of voice in the WAV format. This AP course has a required summer assignment. Students are expected to complete their summer assignment before the course begins and submit their work by the end of Week 1. Students who register on or after September 1st will receive an extension to complete the summer assignment by the end of Week 3. There is a \$75/year fee for each enrollment in a VHS AP® course.

Course Description: The AP® French Language and Culture course is designed to promote proficiency in French and to enable students to explore culture in contemporary and historical contexts. The course focuses on interpersonal, interpretive and presentational communication, encourages cultural awareness, and incorporates the six themes of global challenges, science and technology, contemporary life, personal and public identities, families and communities and beauty and aesthetics. By using these six course themes outlined in the AP® curriculum, students will increase their cultural knowledge and experience with the Francophone world through a comparison with their own cultural experience. Instructional content will include the arts, current events, literature, sports, and more. In addition to textbooks, materials will include websites, podcasts, films, newspapers, magazines, and literature. The course helps develop language skills that can be applied beyond the French course in further French study and everyday life. AP® French will enable advanced French students to improve writing skills and problem-solving techniques in preparation for the AP® French Language Exam. Students will explore the French-speaking world through a variety of perspectives based on authentic and up-to-date materials and the use of French media like TV5 Monde, while gaining a better understanding of themselves. A variety of assignments and activities will be included. For example, students would read and discuss poetry, create their own poetry and showcase their poems in a class magazine. Another example is that students might participate in an online mock trial after researching France's role in the slave trade and which key figures were involved. They would assume the roles of those figures who lived during that specific time period. Also, students will read an important work of classic or contemporary literature, write an essay that focuses on a specific theme or aspect and then participate in a discussion that addresses comprehension, stylistic techniques and relevant historical or situational background. Current events in French

society, politics, culture, education, etc. would also drive assignments and activities regarding discussions, debates, written work and research that encourage students to consider their own views, in oral and written formats as well as those of their peers. Students enrolled in Advanced Placement VHS courses are required to take the AP® exam, and to report their AP® exam scores to VHS. By enrolling in an AP® VHS class, the student authorizes their school administration to report AP® exam scores to VHS. Exam results will not affect the student's VHS grade or future enrollment in VHS courses.

35 Weeks	AP® Spanish Language and Culture	Grades 11, 12
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Prerequisite:

1. Students must have completed all French course offerings at DCHS.

Additional Requirements: Students will need access to Power Point, Quick Time, and Real Player. This course requires students to have access to a computer with headphone, microphone, and software to record voice and save in WAV format. Instructions are provided for Sound Recorder, used in the D2L course. Other software may be substituted, as long as it has the ability to record up to 2 minutes of voice in the WAV format. This AP course has a required summer assignment. Students are expected to complete their summer assignment before the course begins and submit their work by the end of Week 1. Students who register on or after September 1st will receive an extension to complete the summer assignment by the end of Week 3.

Course Description: AP® Spanish Language is intended for highly motivated students who wish to develop proficiency and integrate their language skills, providing frequent opportunities for students to use authentic materials and sources. Not only will they be prepared for the AP® Spanish Language exam in May, but they will also gain an insight into the cultural aspects of Spain and other Spanish-speaking countries. Students will be exposed to many different forms of written and spoken Spanish through the study of poems, short stories, newspaper articles, along with radio and television broadcasts. The course will: Encourage a thematic approach to teaching. Students participate in activities that integrate language, literature, and culture; make connections to other disciplines; and compare aspects of the target culture with other cultures. Articulate clear learning objectives. Clearly articulated learning objectives provide information on the knowledge and skills students should demonstrate to succeed on the exam. Reflect college-level expectations. The College Board collaborates with language educators from leading colleges, universities, and secondary schools to ensure that the course reflects rigorous college standards. Students enrolled in Advanced Placement VHS courses are required to take the AP® exam, and are required to report their AP® examination scores to VHS . Upon receipt of the student's exam score, each score will be recorded by VHS and assigned an anonymous tracking number to ensure student anonymity and confidentiality. By enrolling in an AP® VHS class, the student authorizes their school site coordinator and school administration to report AP® examination scores to VHS. Exam results will not affect the student's VHS grade or future enrollment in VHS courses.

15 Weeks	Mandarin Chinese Language and Culture - Academic	Grades 11, 12
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Prerequisite:

1. Completion of two years of a language at DCHS.

Additional Requirements: Students will need access to Power Point, Quick Time, and Real Player. This course requires students to have access to a computer with headphones, microphone, and software to record voice and save in WAV format. Students must also be able to download MP3 files to school computers. Instructions will be provided for Sound Recorder, used in Windows. Other software may be substituted, as long as it has the ability to record up to 2 minutes of voice in the WAV format. Students will also need to have the Chinese language bar installed and activated. This is a free function of Windows XP.

Course Description: Mandarin Chinese Language and Culture introduces the essential elements of Chinese language for the novice who has had minimal exposure to the Chinese language and culture. Upon completion, the student will understand the basics of Chinese grammar, the origins of Chinese characters and their pronunciation. The course will also introduce the student to a broad range of topics in Chinese culture. Upon completion, the student will have an understanding of what makes Chinese culture unique, as well as differences and similarities between Chinese culture and the student's native culture.

15 Weeks	Russian Language and Culture - Academic	Grades 11, 12
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Prerequisite:

1. Completion of two years of a language at DCHS.

Additional Requirements: Students will need access to Power Point and RealPlayer, as well as Internet, including YouTube website. This course requires students to have access to a computer with headphones, microphone, and software to record voice and save in WAV format. Students will also need to have the Russian language bar installed and activated. This is a free function of Windows XP.

Course Description: Join a 15-week-long journey across the globe and time to learn the basics of Russian language and culture. Students will learn survival Russian: from simple greetings and introductions to the ability to sustain a simple conversation in certain situations. Knowledge of Russian culture and its traditions will help participants not only communicate better in Russian, but also avoid cultural misunderstandings. The class will explore the culture, past and present: art, music, literature, traditions, holidays, history, and the people. Students will take a virtual tour of the Hermitage State Museum in St. Petersburg, listen to Russian songs, watch Mariinsky Theater Ballet performances, enjoy Russian rock and watch excerpts from Russian movies and cartoons. Throughout the course, students will be introduced to the richness of Russian culture and language. They will communicate in elementary Russian, form and share opinions and attitudes about Russia and its culture, and compare and analyze the differences and similarities between English and Russian languages.

ARTS

35 Weeks	AP [®] Art History	Grades 10, 11, 12
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Additional Requirements: Access to Adobe Reader, Java, and Quicktime, audio capabilities, access to a printer and digital camera, microphone recording capability preferred but not required. This course may not be appropriate for students with specific accessibility limitations as written. Access to Adobe Reader, Java, and Quicktime, audio capabilities, access to a printer and digital camera, microphone recording capability preferred but not required. There is a \$75/year fee for each enrollment in a VHS AP[®] course. This AP course has a required summer assignment. Students are expected to complete their summer assignment before the course begins and submit their work by the end of Week 1. Students who register on or after September 1st will receive an extension to complete the summer assignment by the end of Week 3.

Course Description: “The function of the art is not only to show life as it is, but to show life as it should be.” -W.E.B. DuBois What is art? How is it made? What inspires art styles and revolutions? How can we respond and describe our own reactions to art? The visual language of human beings speaks more directly and immediately through the ages than any other form of human communication. Exploring the world through the study of art and architecture enables us to understand our times as well as those that have come before all over the globe. Advanced Placement[®] Art History builds the visual literacy and critical thinking skills needed to effectively analyze art across time and place. The framework of the AP[®] Art History course encourages students to develop deep understanding of representative art works from diverse cultures, including the fundamental knowledge that places these works in context and articulates the relationships among them. The curriculum conveys the big ideas and essential questions at the center of an investigation into the world art and art production. Clear learning objectives that represent the art historical skills valued by art historians and higher education faculty will inform class assignments. Students will acquire a comprehensive knowledge of historically significant artists, movements, aesthetic theories and practices, ranging from the prehistoric times to the significant contributions in the 21st Century. Art production of all cultures will be studied in relative proportion to their representation on the Art History Advanced Placement Exam. Students will see the development of trends, movements, and events in art, how they reflected and affected the times in which they occurred, gaining insight into typically misunderstood topics pertaining to the visual arts. Students will research and write knowledgeably on a number of art history topics, reflecting and synthesizing their own theories on the many works they will see in virtual museums and collections. They will be expected, through carefully structured assignments, to exhibit an extensive scholarship in conjunction with these experiences. Students enrolled in Advanced Placement VHS courses are required to take the AP exam, and to report their AP exam scores to VHS. By enrolling in an AP[®] VHS class, the student authorizes their school administration to report AP[®] exam scores to VHS. Exam results will not affect the student's VHS grade or future enrollment in VHS courses.

15 Weeks	Art History - Honors	Grades 10, 11, 12
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Additional Requirements: Access to a scanner, Windows Media Player or an equivalent program, and ability to attach images. It is strongly recommended that students have access to a digital camera.

Course Description: Why do Impressionists seem so mundane now but were so shocking in their day? Why did Pollock toss and drip all that paint around and get paid a lot of money for it? What was all the hoopla at the Brooklyn Museum a few years ago? This course is designed to emulate a college level 'survey' course in Art History that will answer these questions and raise a few more. It begins in the Renaissance in Western Europe, because 1500 was an important moment for Western culture, and finishes off the second half of the millennium. Students will visit virtual museums all over the world, and look at the connections among various types of art that have been created for the past 500 years. This course aims to expand the student's understanding and love of history and visual art. As in any art history course, images of the nude human figure will be viewed and discussed. Some controversial topics will be raised during the course, particularly when discussing censorship and contemporary art. **This course may not be appropriate for students with specific accessibility limitations as written.

15 Weeks	History of Photography - Honors	Grades 10, 11, 12
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Additional Requirements: Access to a scanner is required. Students do not need to have a camera or a darkroom.

Course Description: This course will explore the use of photography as a record of visual history - not just the use of photography for documentation, but also as a reflection of technological developments, social trends, and as a means of personal expression. Students will examine the works of famous photographers, from its beginnings in the 19th century to contemporary times, and will develop an aesthetic vocabulary. In addition, they will have opportunities to exchange ideas and explore subject matter through class discussion forums and teamwork. They will also create studio assignments in order to gain an appreciation for how photography can be used as a means of personal expression.

15 Weeks	Creating Art History - Academic	Grades 9, 10, 11, 12
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Additional Requirements: Students must have access to scanner or digital camera. Students will also need these items for completing projects: a sketchbook, watercolor set, drawing pencils, three pieces of watercolor paper, one piece compressed charcoal.

Students may be required to download (free) software from the Internet.

Course Description: This is a practical course. Students will learn Art History by both looking at art and creating their own art. The virtual learning space is an artist's studio. This studio will be the workplace to share insights, collections, inspirations, and to critique each other's work.

This is a thematic approach to Art history, rather than chronological. Ideas within the themes of self-portrait, conflict, simplicity, storytelling, and the natural world will be explored. Students will collect and create art that communicates their own ideas of each theme. After traveling to online art museums and artists' studios and creating a drawing, painting, ink wash and a handmade book, students will design their own exhibits.

This is a combination of traditional and modern methods. Traditional (drawing, painting) and modern (image manipulation) media will be employed. Students will sketch, paint, draw, and collage into pages of a sketchbook. These pages will be scanned or photographed with a digital camera and displayed for the class. Technology will transform art, ideas, comments, critiques, sketches, and collections into an interactive and collaborative Art History.

TECHNOLOGY EDUCATION

15 Weeks	CAD - Academic	Grades 10, 11, 12
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Prerequisite:

1. Recommended: Intermediate level of Windows OS navigation.

Course Description: CAD introduces students to the world of engineering drawings. CAD students will learn how to create 3D drawings of mechanical objects, layer these drawings with dimensions and annotations, and extend the representation of 3D models and assemblies through presentation and animation tools. Students will also use the design process to convert their original ideas and solutions into new 3D models and working drawings, without the use of step-by-step instructions. All drawings are prepared to the standards of the industry.

Students will create 3D models, assemblies, formal 3-view drawings with dimensions, plus presentations and animations. Each week, students will be introduced to a new set of drawing skills. Students will use the free educational version of Autodesk Inventor 2015, a respected industry-level CAD software program.

*Please note this course contains a final exam.

15 Weeks	Engineering Principles - Academic	Grades 10, 11, 12
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Prerequisite:

1. Algebra skills (formula solving, substitution, and evaluation,) basic geometry knowledge (shapes, areas, visualization of cross-sections)

Course Description: Why don't buildings and bridges fall down more often? Because there are people who have the skills to put together the right materials in the right shape to make them stay up –sometimes even during large earthquakes, tornadoes, and hurricanes. Have you ever looked at impressive structures like large bridges or skyscrapers and wondered why they don't fall down more often? Perhaps you are the kind of person who assumes that structures are all pretty safe. But even a quick look at the history of buildings will show you that they don't always work. What made the Tacoma Narrows Bridge fall apart in a tame wind in 1940? Why do buildings in Los Angeles survive large earthquakes, while others in other parts of the world (such as in Bam, Iran, 2003) are flattened? This course will introduce students to the engineering world that helps to understand these questions, and to lead some people into the professions related to structural engineering.

MATHEMATICS

15 Weeks	Mathematics of Electricity - Academic	Grades 10, 11, 12
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Prerequisite:

1. Pre-Algebra

Course Description: This 15-week semester-long mathematics course was designed to develop pre-algebra and higher level mathematics skills using real-world electrical power industry activities and problems. This course will introduce high school

15 Weeks	Math and Modern Logic - Honors	Grades 10, 11, 12
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Prerequisite:

1. Completed or currently enrolled in Pre-Calculus

Course Description: The focus of this course is the development of sound reasoning abilities through the study and application of the tools of logical analysis. Students taking this course will learn the tools of logical argument analysis, how to mathematically model and evaluate syllogistic forms of arguments, and how to represent arguments in symbolic form. They will learn the tools necessary to establish the validity of an argument and the fundamentals of inductive analysis. This course is designed for students who enjoy mathematics with a philosophical twist and are planning on pursuing careers in mathematics, the sciences, or engineering.

35 Weeks	AP [®] Calculus BC	Grades 10, 11, 12
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Prerequisites:

1. In addition to the enrollment fee, this course has an AP[®] fee of \$75.
2. Students must have access to a graphing calculator (preferably a TI-83/TI-84).
3. The required summer assignment for AP[®] Calculus

The Advanced Placement Calculus BC course is equivalent to both the Calculus I and Calculus II college-level courses. The rigor and pace of this course is consistent with calculus offerings at many colleges and universities and will prepare students for the Advanced Placement Exam. Upon successful completion of the exam, students may receive college credit and will be well-prepared for additional advanced mathematics coursework.

AP[®] Calculus BC builds upon prior knowledge in previous mathematics coursework. Students will explore topics within four big ideas covered in this course: (1) limits, (2) derivatives, (3) integrals and (4) series. This course allows students to gain conceptual understanding through discussions, group activities and investigations. Students will learn how to use the graphing calculator to help solve problems, experiment, interpret results and support conclusions. In order to prepare for the exam, students will complete weekly AP[®] practice quizzes and unit exams that will conform to the constraints of the AP[®] exam.

MUSIC

35 Weeks	AP [®] Music Theory	Grade 12
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Prerequisite:

1. Proficiency in playing major and minor scales, reading basic tonal melodies, and using proper technique on one or more musical instruments (vocal, orchestral, band).

Strongly Recommended: At least one semester of practice writing traditional music notation with proper technique. At least one semester of keyboard instruction, including scales and triad formation. This course has additional fees.

Additional Requirements Hardware used: internal/external speakers or headphones; internal/external microphone. Software used: Teoria.com web-based ear training exercises, Noteflight.com web-based music notation environment. Specific URLs accessed: multiple addresses at domains “noteflight.com,” “macgamut.com,” and “screencast-o-matic.com” There is a \$75/year fee for each enrollment in a VHS AP[®] course. There is also a \$75 music lab fee. **Course Description:** This course is designed to give the student an understanding of music theory, sight reading, and aural skills that is equivalent to that of a first-year college music student. It is also designed with the explicit purpose of preparing the student for the AP[®]; Exam in Music Theory. The course content and presentation will adhere to the guidelines

set forth by the College Board in the Music Theory Course Description. The course will cover: the fundamentals of traditional melodic and harmonic composition through the early twentieth century; multiple techniques for melodic, harmonic, and formal analysis; an introduction to two- and four-voice counterpoint; an introduction to jazz, blues, and non-Western techniques; and the basics of orchestration. In addition, students will be trained to sight-read melodies in major and minor keys, with limited chromatic alteration. They will also perform listening exercises for the purposes of memorizing and notating specific intervals, scales, chords, rhythms, melodies, and progressions.

15 Weeks	Fundamentals of Music Composition - Academic	Grades 9, 10, 11, 12
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Prerequisite:

1. Proficiency in reading basic tonal melodies in treble and bass clefs.

Recommended: At least one semester of applied musical instruction, including scales, technique, and triad formation (where applicable).

Course Description: This course is designed to give students a good understanding and working knowledge of the fundamental components of music, and to lead them through the process of creating their own compositions. The course will focus on music composed in the Western tonal style. Students will practice techniques in creating effective melodies, supporting harmonies, rhythmic patterns, and phrases.

Students will make step-by-step progress on a number of original composition projects. With the instructor's guidance, students will work as a class to provide ongoing feedback for each young composer. The support of the full class will aid individual students as they work to revise and complete their music.

15 Weeks	Music Listening and Critique - Academic	Grades 11, 12
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Additional Requirements: The books for this course are delivered to students as Kindle ebooks. Students will need to download the free Kindle app. If students prefer a physical book, they should buy a copy or get it through their library. Schools must install and allow student access to the resources listed here, in order for a student to participate in the course. Please see software manufacturers' websites for further information and system requirements. In addition to VHS system requirements: Hardware used: internal/external speakers or headphones, specific URLs accessed: multiple addresses at domain "npr.org"

Course Description: This course takes students into the world of music as a listener and a writer. Students will explore how to listen to music, how to write about what they are hearing, and how to analyze and appreciate different styles of music. Students will be given the opportunity to listen to a wide variety of music from four stylistic areas: World Music, Jazz, Classical, and Popular Music. They will listen to many examples each week, to compare and contrast the different styles they hear. Critique will take place in formal essays, and in class discussions with the support

of peers. Resources will include interviews with various musical artists, reviews by music critics, and advice from famous composers on the “technique” of listening to music. These resources will help students to develop a common vocabulary to use when discussing and comparing each piece of music. This course will help students understand the nature of music through listening. It is not required that students read music in order to participate in this course. Literate musicians will find it enjoyable to take the time to sit back and listen actively to a wide variety of musicians. Garage band enthusiasts and students that are looking to explore new styles will find a great opportunity to explore some new musical territory.

COMPUTER SCIENCE AND TECHNOLOGY

15 Weeks	Introduction to Computer Science Principles	Grades 10, 11, 12
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Introduction to Computer Science Principles will provide students with a survey exploration of the world of computer science and its technologies. Students will investigate the structure and function of computational systems and explore the domains and applications of the computer science field, from programming to digital media, the internet, networking, big data and cybersecurity.

Course Description: Students will begin by exploring computational systems, including hardware, software and data interpretation. They will investigate hardware and software technologies that make computers into useful tools, and consider advancements and impacts of new technology on society. Students will then study connectivity and communication on the Internet and the World Wide Web, to understand the importance and purpose of these resources and their many uses. Students will gain basic understanding of computer networking, big data and digital media, learning about implementation and functionality across these domains. Students will also investigate security concerns such as individual identity theft, mail and network hacking, virus attacks and defensive measures.

This course also features an introduction to computer programming using Scratch as a primary tool for developing interactive games, menu systems and animations. Through this experience, students will develop a general understanding of logical problem solving and algorithmic development in this friendly, object-oriented programming environment.

Throughout the course, students will be presented with a variety of challenges to address, in an effort to uncover the approach and use of technology to solve problems. Through discussion and evaluation, students will gain understanding and a true appreciation for ethical dilemmas and proper conduct in the computer science field. In the final weeks, students will explore the vast opportunities and associated skills for future careers in technology.

35 Weeks	AP [®] Computer Science	Grades 11, 12
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Prerequisite:

1. Algebra II

Advanced Placement (AP[®]) Computer Science A is designed to prepare students for the College Board's AP[®] Computer Science A Exam. The course curriculum covers the topics and activities of a first-year computer science course at the undergraduate level. It is designed to be engaging and motivating for the high school student.

Course Description: AP[®] Computer Science is a course designed to awaken and support students' problem solving skills. The course will introduce the Java programming language while emphasizing universal language techniques like syntax, semantics and readability. Students will gain mastery in programming concepts by using a subset of Java features that are covered when needed throughout the course content. This allows the student to understand and master important concepts that will apply to programming problems in many additional languages.

Students in AP[®] Computer Science will begin by encountering situations that involve solving problems with the use of primitive data types, methods, and control statements. Later, this inquiry will evolve into the use of Object Oriented Programming (OOP), which is today's most common and practical way to develop software.

Throughout the course, students will also grow to understand how computers process information. This understanding will deepen as students apply concepts like string manipulation, the behavior of elements in arrays and lists, and the use of external data to interact with algorithms.

The College Board's AP[®] Computer Science curriculum presents three hands-on laboratory practice sets that will help students synthesize course concepts. These labs will expand and secure their knowledge of programming and prepare them thoroughly for the AP[®] Computer Science exam.

Students enrolled in Advanced Placement VHS courses are expected to take the AP[®] exam, and are required to report their AP[®] examination scores to VHS (note: students who are failing their AP[®] class are not required to take the exam). Upon receipt of the student's exam score, each score will be recorded by VHS and assigned an anonymous tracking number to ensure student anonymity and confidentiality. By enrolling in an AP[®] VHS class, the student authorizes their school site coordinator and school administration to report AP[®] examination scores to VHS. Exam results will not affect the student's VHS grade or future enrollment in VHS courses.

