

DELONE CATHOLIC HIGH SCHOOL

2021-22

# COURSE CATALOG

GRADES 9-12

## ADMINISTRATION

Mrs. Donna Tompkins, Interim Principal



140 SOUTH OXFORD AVENUE ~ MCSHERRYSTOWN, PA. 17344  
PH. 717-637-5969 ~ FAX 717-637-0442  
[WWW.DELONECATHOLIC.ORG](http://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)

<b>GRADE 9</b> 7.0 credits	<b>GRADE 10</b> 7.0-7.25 credits
Religion 9 English 9 World History Biology I Prealgebra/Algebra I or II Foreign Language/Elective(s) <b>Grade 9 Semester Courses:</b> Pop Music and Beyond World of Art Research Methodology	Religion 10 English 10 Physical Science/Chemistry Algebra I or II/Geometry Foreign Language/Electives (s) <b>Grade 10 Semester Courses:</b> Basic Computer Applications Health Home and Family Life Science Drivers' Education (PA residents)
<b>GRADE 11</b> 7.0 credits	<b>GRADE 12</b> 6.5 credits
Religion II English II US History or AP® US History Chemistry/Physics/ Earth & Space/Biology II Geometry/Algebra II/ Precalculus/Statistics Foreign Language/Elective(s) Physical Education II	Religion 12 English 12 American Government/Economics Foreign Language/Elective(s) Physical Education 12

**TOTAL CREDITS EARNED =**

**at least 27.5 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 = 25.5

# NCAA-APPROVED CORE COURSES FOR INITIAL ELIGIBILITY

## ENGLISH

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

## MATHEMATICS

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

## SCIENCE

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

## SOCIAL STUDIES

American Government  
AP® US Government and Politics  
AP® Microeconomics  
AP® US History  
Contemporary History  
Contemporary Microeconomic Issues  
Economics  
Holocaust  
Psychology  
Sociology  
US History  
World History

## ADDITIONAL CORE COURSES

French I, II, III, IV and V  
Latin I, II  
Spanish I, II, III, IV and V

# 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 first semester 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 first semester, 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, Delone Catholic and Community. Each student must earn his/her 80 Works of Mercy hours according to the following table:

Church	Delone Catholic	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, altar server, choir member, Extraordinary Minister of Holy Communion, helping with CYO sports, nursery aides, religious education teachers or aides, PAL, parish festivals, bingo, ushers, youth group activities that enhance the parish life, maintenance, etc. Please note that while attending liturgical services (such as Mass or Stations of the Cross) or Adoration of Blessed Sacrament are admirable and encouraged activities, they do not count for Works of Mercy hours.

**Delone Catholic:** tutor, peer educators with the Chastity Formation program, open house tour guide, assembly set-up, school board committee, Music Association carnival, teacher helper, maintenance, manager, trainer, scorekeeper, concession stand, Teens for Tots, etc.

**Community:** hospital volunteer, Christmas gift wrapping, blood donor, Habitat for Humanity, food drive projects, Red Cross helper, public library helper, nursing home volunteer, assisting elderly neighbors or family, scouting activities, camp counselor, political campaign activities, environment clean-up, helping at any parish or public grade school, etc.

# 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 25.5 academic credits.
2. Fails any one of the required academic courses within the senior year;
3. Fails two or more elective courses within the senior year (at the discretion of the Vice Principal);
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 second 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.

# 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
- 77 = Business, Computer & Information Technology
- 78 = Physical Education
- 79 = Family & Consumer Science
- 87 = Art Education
- 88 = Technology Education
- 89 = Music 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 AND 10 SEMESTER 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.

8903	Pop Music and Beyond	Grade 9/10	Required
<p>This fun and educational one-semester course will give students an understanding of the basic building blocks of music and how modern-day songwriters and performers use those building blocks to create students' favorite songs. Concepts and skills covered will include the history of pop music, music in our lives, rhythm, melody, harmony, texture, form, creativity, music technology, playing various instruments and reading and writing notation.</p> <p>This course is especially tailored 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 consider Instrumental Music (8913) or Vocal Music (8923). These courses also fulfill the Music/Art/ Home and FLS requirement.</p>			
8704	World of Art	Grade 9/10	Required
<p>This course is designed to develop a visual vocabulary and understanding of art elements, media and creative processes. Students will use critical thinking and problem solving skills to produce two-dimensional art. Students will become aware of the art forms found in cultures around the world and be introduced to successful artists and well-known masterpieces.</p>			
2003	Research Methodology	Grade 9/10	Required
<p>Research Methodology is a class designed to guide students through the process of research. Students will spend time on exercises and activities that emphasize decision-making skills regarding topics, thesis, sources, format and content. Students will be taught to structure a research paper according to the Modern Language Association (MLA) and American Psychological Association (APA) styles.</p> <p>Students will use nonfiction sources and work to discern valid sources and how to approach scholarly texts. Reading and analyzing nonfiction texts will be core to this course of study.</p> <p>At the conclusion of the class, students will have a greater understanding of the methods of research and will be able to execute the various components of analysis.</p>			

## GRADE 9 AND 10 SEMESTER COURSES (H, H&FLS, D.ED)

7953	Health 10	Grade 9/10	Required
<p>Students will study health and wellness, dating and relationships, pregnancy and parenting, substance abuse, mental health and stress management.</p>			

7963	Home and Family Life Skills	Grade 9/10	Required
<p>A foundation for independent living will be learned through the following content: kitchen basics, safeguarding health, laundry essentials, personal finance and budgeting, basic sewing skills and interior design.</p>			

7803	Driver Education/Study Hall	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. Students will be assigned a study hall during one quarter of this semester.</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** Successful completion of both phases of this course is usually required necessary for reduced insurance premiums.</p>			

7813	Driver Education/Physical Education	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. Students will be assigned physical education during one quarter of this semester.</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** Successful completion of both phases of this course is usually required necessary for reduced insurance premiums.</p>			

## RELIGIOUS STUDIES

1103	Foundations of Faith-A	Year	Grade 9	Required
<p>In Foundations of the Faith class, an overview of the Catholic Faith will be presented. The most fundamental doctrines of the Catholic Church will be discussed. The content of this class is founded on the truth of the Scripture, 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 and His Holy Catholic Church.</p>				
1113	Sacred Scriptures-A	Year	Grade 10	Required
<p>Sacred Scripture is an inspired and infallible record of God's self-revelation to His People, and the gradual unfolding of his plan of salvation. In this class, students will learn Sacred Scripture according to the mind and the teachings of the Church. Emphasis will be placed on the covenants and promises that God made with His People in the Old Testament, and fulfillment of these promises through the New Covenant in Jesus Christ.</p>				
1123	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>				
1133	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>				

1503	Internship	Semester	Grades 11-12	Elective
<p>This is an unpaid internship opportunity which complements a student's career considerations and is pursued under the supervision of the Internship Coordinator. Monthly, in-school seminars explore career and workplace issues. Students will learn about society directly and explore various career options. Internships are at various work site locations and coordinated and approved through the Internship Coordinator in conjunction with the administration.</p>				

1513	Internship	Year	Grades 11-12	Elective
<p>This is an unpaid internship opportunity which complements a student's career considerations and is pursued under the supervision of the Internship Coordinator. Monthly, in-school seminars explore career and workplace issues. Students will learn about society directly and explore various career options. Internships are at various work site locations and coordinated and approved through the Internship Coordinator in conjunction with the administration.</p>				

1603	Instructional Leadership Program	Semester	Grades 11-12	Elective
<p>This course is intended for 11th and 12th grade students contemplating pursuing a college degree in the field of Education or Instructional Support. Students are approved and assigned a teacher to build and apply skills such as communication, organization, collaboration and leadership. Students will have the ability to work alongside school-based staff and provide support in the classroom to their peers. Students will be required to keep a daily journal, provide weekly reflections and submit a final report presentation at the end of the semester. Placement is based on the master schedule and course/teacher availability. An interview is required.</p>				

1613	Instructional Leadership Program	Year	Grades 11-12	Elective
<p>This course is intended for 11th and 12th grade students contemplating pursuing a college degree in the field of Education or Instructional Support. Students are approved and assigned a teacher to build and apply skills such as communication, organization, collaboration and leadership. Students will have the ability to work alongside school-based staff and provide support in the classroom to their peers. Students will be required to keep a daily journal, provide weekly reflections and submit a final report presentation at the end of the semester. Placement is based on the master schedule and course/teacher availability. An interview is required.</p>				

1153	Mariology - A	Semester I	Grades 11-12	Elective
<p>This 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.</p> <p>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.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> <li>Limited to 20 students.</li> </ol>				

## HUMANITIES

1143	The Holocaust & Its Lessons - A	Semester I/II	Grades 11-12	Elective
<p>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.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> <li>Limited to 25 students.</li> </ol>				

2223	Headlines-A	Semester I/II	Grades 10-12	Elective
<p>In the Headlines course, students will prepare, lead and engage in weekly discussions related to current events. Throughout the course, students will learn to think critically, avoid legal fallacies, confront biases and conduct civil discourse. Students will also learn the skills of news literacy. Students who choose this elective should be prepared for extensive reading, writing and speaking.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>Must have passed a required history course (European Cultures, World History or US History).</li> </ol>				

4123	Speech and Debate-A	Semester	Grades 9-12	Elective
<p>Speech and Debate is a one-semester introductory course that covers a variety of styles of public speaking and formal debate. Students will learn to write, organize, prepare and deliver quality public speeches. Students study how to actively persuade, inspire, inform and engage an audience through the art of public speaking. We begin with a study of the fundamentals of public communication. Students will learn about how to speak articulately and how to argue their points effectively through speech and debate. Each unit will culminate with a performance assignment that requires students to demonstrate their abilities within the classroom setting. Students are not required to, but are strongly encouraged to attend at least one local tournament with the Delone Catholic Speech and Debate Team.</p>				

## ENGLISH

2102	English 9-102	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"> <li>1. Placement test scores.</li> <li>2. Placement writing sample.</li> <li>3. 8th Grade averages in Language Arts.</li> <li>4. 8th Grade English teacher recommendation.</li> </ol>				

2103	English 9-103	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>				

2104	English 9-104	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"> <li>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 (High School Placement Test), writing sample score and any documentation regarding their academic abilities.</li> </ol>				

2112	English 10-102	Year	Grade 10	Required
<p>In Courses 2112, 2113 and 2114, 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 2112, a research paper is required.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. 90 percent average in English 9-H (2102) or 93 percent in English 9-A (2103).</li> <li>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.</li> <li>3. Student is responsible for supplementary reading and extensive writing assignments.</li> <li>4. The English teacher, in consultation with the department chair, will make recommendations to the Vice Principal.</li> </ol>				

2113	English 10-103	Year	Grade 10	Required
<p>In Courses 2112, 2113 and 2114, 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>				

2114	English 10-104	Year	Grade 10	Required
<p>In Courses 2112, 2113 and 2114, 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"> <li>1. Students presently in a fundamental level are considered first.</li> <li>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.</li> </ol>				

2122	English 11-102	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"> <li>1. 90 percent average in English 10-H (2112) or 93 percent in English 10-A (2113).</li> <li>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.</li> <li>3. Student is responsible for supplementary reading and extensive writing assignments.</li> <li>4. The English teacher, in consultation with the department chair, will make recommendations to the Vice Principal.</li> </ol>				

2123	English 11-103	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>				

2132	English 12-104	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>				

Prerequisites:

1. 90 percent average in English II-H (2122) or 93 percent in English II-A (2123).
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 Vice Principal.

2133	English 12-103	Year	Grade 12	Required
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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.

2131	Advanced Placement® English Literature and Composition	Year	Grade 12	Required
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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.

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).

\*\*A satisfactory score of three (3) generally provides the student credit for Freshman English at most colleges and universities.\*\*

Prerequisites:

1. Limited to seniors who have a 93 percent average in English II-H (2122). On rare occasions, a student in English II-A ((2123) 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 be in place to re-evaluate students in AP® at the conclusion of Quarter I.

2503	Introduction to Journalism-A	Semester I/II	Grades 10-12	Elective
<p>This course will introduce students to the writing techniques of major types of stories, including hard news, news 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, <i>Delonews</i>.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. The student must have successfully completed English 9-A (2103) or English 10-A (2113) with a grade of 80 percent or above and have a strong teacher recommendation.</li> <li>2. Limited to 20 students.</li> </ol>				
2513	Creative Writing-A	Semester I/II	Grades 11-12	Elective
<p>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 <i>Insquire</i>.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> <li>1. Student must have successfully completed English 10 and English 11 with an average grade of 80 percent or better.</li> </ol>				
2003	Research Methodology	Semester I/II	Grades 9-10	Required
<p>Research Methodology is a class designed to guide students through the process of research. Students will spend time on exercises and activities that emphasize decision-making skills regarding topics, thesis, sources, format and content. Students will be taught to structure a research paper according to the Modern Language Association (MLA) and American Psychological Association (APA) styles.</p> <p>Students will use nonfiction sources and work to discern valid sources and how to approach scholarly texts. Reading and analyzing nonfiction texts will be core to this course of study.</p> <p>At the conclusion of the class, students will have a greater understanding of the methods of research and will be able to execute the various components of analysis.</p>				

2203	Exploring Nature - Environmental Humanities - A	Semester I/II	Grades 10-12	Elective
<p>This course seeks to examine the human connection to nature through literature, media and nonfiction texts as well as a guided exploration of topics such as environmental justice, nature writing and eco-politics. Students will physically engage with the environment and nature on several occasions, including one large excursion.</p>				

2212	How to Read Film-H	Semester II	Grades 11-12	Elective
<p>In this course, students will study, analyze and learn the language of some of the greatest films of all time. From Alfred Hitchcock to Francis Ford Coppola, films covered may include such films as <i>Casablanca</i>, <i>Mr. Smith Goes to Washington</i>, <i>Psycho</i>, <i>2001: A Space Odyssey</i> and <i>1917</i>. We will also study short films, documentaries, animated shorts and commercials. Students will also read a novel or play and then watch a movie made from it. Required materials include a textbook (TBD) (approximate cost \$20-\$30) and access to Amazon Prime or similar platform.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> <li>1. Tenth or 11th Grade Honors or recommendation from English teacher and interview.</li> </ol>				

# 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.

3103	French I-A	Year	Grades 9-12	Elective
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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.

Prerequisites:

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.

3113	French II-A	Year	Grades 9-12	Elective
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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.

Prerequisites:

1. Successful completion of French I-A (3103) with a minimum passing average of 75 percent or above.
2. Recommendation of the French teacher.

3122	French III-H	Year	Grades 10-12	Elective
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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.

Prerequisites:

1. Successful completion of French II-A (3113).
2. Recommendation of the French teacher.

3132	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"> <li>1. Successful completion of French III-H (3122).</li> <li>2. Recommendation of the French teacher.</li> </ol>				

3203	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"> <li>1. A minimum average of 80 percent in the Junior High Language Arts Program.</li> <li>2. Recommendation of the 8th grade English teacher.</li> </ol>				

3213	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"> <li>1. Successful completion of Spanish I-A (3203) with a minimum average of 75 percent.</li> <li>2. Recommendation of the Spanish I teacher.</li> </ol>				

3222	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"> <li>1. Successful completion of Spanish II-A (3213) with a minimum overall average of 85 percent or an average of 80 percent on all major tests.</li> </ol>				

3223	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"> <li>1. Successful completion of Spanish II-A (3213).</li> <li>2. Recommendation of the Spanish teacher.</li> </ol>				

3232	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"> <li>1. Successful completion of Spanish III-H (3222) with a minimum overall average of 85 percent and/or an average of 80 percent on all major tests.</li> <li>2. Recommendation of the Spanish teacher.</li> </ol>				

3242	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>				

3303	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><b>**Please Note**</b></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>				

3313	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"> <li>1. Successful completion of Latin I (3303) with a recommended minimum overall average of 75 percent.</li> <li>2. Recommendation of the Latin I teacher.</li> </ol>				

## SOCIAL STUDIES

The Social Studies Department reminds all students of the requirements for graduation:

- 1 credit of World History (4402 or 4403 formerly European Cultures)
- 1 credit of US History (4413 or 4581)
- .5 credit of American Government (4573 or 4571)
- .5 credit of Economics (4563 or 4561)

New! Rotating Electives Schedule				
2021-22		2022-23		
Global Justice and Human Rights		Human Geography (formerly World Area Studies)		
History of Popular Culture		Human Relationships (formerly Sociology)		
4203	NEW! Global Justice and Human Rights	Semester	Grade 10-12	Elective

Through rigorous historical analysis combined with the study of human behavior, the Global Justice and Human Rights class will:

- heighten students' understanding of racism, religious intolerance and prejudice;
- increase students' ability to relate history to their own lives, and
- promote greater understanding of their roles and responsibilities as global citizens.

This course will begin with a deep exploration of the Universal Declaration of Human Rights, from the history of its creation to its legacy in today's global community. Students will then be lead through a series of inquiries into historical injustices and violations of human rights around the world. The course will culminate with students becoming "upstanders" against a current global injustice by designing a project to educate others, support victims and advocate for change.

Prerequisites:

1. Students must have passed a required history course (European Cultures, World History or US History).

4223	NEW! History of Popular Culture	Semester	Grade 10-12	Elective
<p>This course introduces students to the varieties of popular culture in the United States, including literature, live entertainment, radio, movies and television and will examine the impact that changing technology and attitudes have had throughout U.S. history. Students will analyze and predict how society affects pop culture and the way pop culture impacts society. Each unit will include a brief overview of the significant historical developments of the time period. We will examine the popular culture developments that coincided with historic events. Some focus areas for study will be mass media, music, literature, film, radio, tv, sports, fashion and advertising. This class will give an opportunity for students to investigate a variety of different pop culture influences that have become part of the American identity.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. Students must have passed a required history course (European Cultures, World History or US History).</li> </ol>				

4213	RETURNING! Criminal Justice	Semester	Grade 11-12	Elective
<p>Criminal Justice examines the contemporary American legal system, including law enforcement agencies and the courts, and its root in the U.S. Constitution. Additionally, students will explore criminal and legal theory to give students the tools to reflect on the content of this course.</p> <p>The course is designed to provide students with an understanding of their legal rights and responsibilities, a knowledge of everyday legal problems and the ability to analyze and evaluate legal disputes. Guest speakers from the legal community are invited to share with the students the realities of today's criminal justice system.</p> <p>This course is recommended for any student who aspires to a career in law enforcement and/or is interested in expanding his/her knowledge and understanding of the criminal justice system.</p>				

4201	NEW! Advanced Placement® European History	Year	Grade 10-12	Elective
<p>The Advanced Placement® course in European History is designed to provide students with analytical skills and factual knowledge necessary to deal critically with European 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 and writing assignments will help students develop the skills necessary to arrive at conclusions on the basis of informed judgements . The course surveys the significant events, individuals, developments and processes from approximately 1450 to the present.</p> <p>The areas of concentration include: Renaissance and Exploration, Absolutism and Constitutionalism, Scientific, Philosophical and Political Developments, Conflict, Crisis and Reaction in the Late 18th Century, Industrialization and Its Effects, 19th -Century Perspectives and Political Developments, 20th-Century Global Conflicts and the Cold War and Contemporary Europe.</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 nation Advanced Placement® exam in the spring at their own expenses (approximately \$90).</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. An 85 percent or above average in World History - H (4402) or a 90 percent or above average in World History - A (4403).</li> <li>2. Personal interview with the teacher.</li> <li>3. Access to a computer with Internet service (summer included).</li> </ol>				

4402	World History-H	Year	Grade 9	Required
<p>This honors-level course satisfies the World History requirement and prepares students to take an elective course in Advanced Placement® European History sophomore year. World History presents an examination of developments in politics, society, culture and economics of global societies since 1750. Stories of individuals and nations that have shaped world history are highlighted. This course fosters the skills of historical thinking, reading and writing. Major debates among historians that consider multiple perspectives are also evaluated. Students are required to complete a research project.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. Placement test scores.</li> <li>2. Placement writing sample.</li> <li>3. Eighth grade average in Language Arts and Social Studies</li> <li>4. Eighth grade Social Studies Teacher Recommendation.</li> </ol>				
4403	World History-A	Year	Grade 9	Required
<p>World History presents an examination of developments in politics, society, culture and economics of global societies since 1750. Stories of individuals and nations that have shaped world history are highlighted. This course fosters the skills of historical thinking, reading and writing. Major debates among historians that consider multiple perspectives are also evaluated. Students are required to complete a research project.</p>				
4413	US History-A	Year	Grade 11	Required
<p>US History brings together America’s past, present and future. Themes may include the following:</p> <ul style="list-style-type: none"> <li>● The Role of Government</li> <li>● Stratification of American Society</li> <li>● Insurrection in America</li> <li>● American Expansion</li> <li>● Mobilization of America</li> </ul> <p>Throughout the course, students are challenged to form and defend answers to essential questions with thoughtful historical analysis. Students learn to critically examine primary and secondary sources and to practice a variety of methods to communicate their ideas. Students will complete a research project.</p>				

4573	American Government-A	Semester	Grade 12	Required
<p>American Government introduces the student to the real world of government decision making on national, state and local levels. The student will examine and analyze each of the foundations of democracy, the powers of each branch of federal government and the skills of citizenship. Special attention will be given to developing collective problem-solving skills and to exploring personal political identity.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"><li>1. Must be taken with Economics.</li></ol>				

4571	Advanced Placement® United States Government and Politics	Year	Grade 12	Required
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This course can be taken in lieu of American Government-A (4573).

This Advance Placement (AP®) course in U.S. Government and Politics is rooted in study of the Constitution, foundational writings such as the Federalist Papers, and crucial Supreme Court decisions that have continue to impact American society. Students will evaluate the claims of political thinkers, both past and present, by examining both the evidence and arguments they use about key American ideals like freedom, equality and justice. Additionally, students will review data reflecting issues in present-day society and establish claims based on that data. Finally, students will study an aspect of their own communities and develop a project that is either research or civic focused.

After completing this course, students will be able to:

- Articulate the importance of the Constitution and other foundational documents, both politically and culturally;
- Analyze political arguments using the Constitution, U.S. Supreme Court decisions and related documents;
- Interpret political data both historical and contemporary, and
- Make political arguments based on two or more sources of evidence.

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.

AP® U.S. Government and Politics is equivalent to a one-semester introductory college course in U.S. government.

Prerequisites:

1. An 87 percent or above average in US History-H (4412) or 93 percent or above average in US History-A (4413).
2. A personal interview with the teacher.
3. A writing sample approved by the AP Government and Politics teachers.
4. Must be taken with Economics.

4563	Economics-A	Semester	Grade 12	Required
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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.

4561	Advanced Placement® Microeconomics	Semester	Grade 12	Required
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This course may be taken in lieu of Economics-A (4563).

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.

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 *Naked Economics: Undressing the Dismal Science* by Charles Wheelan in order to complete the pre-course reading assignment.

Prerequisites:

1. An 85 percent or above average in US History-H (4412) or 90 percent or above average in US History-A (4413).
2. A personal interview with the teacher.
3. Access to a computer with internet service (summer included).
4. A maximum enrollment of 20 students per section.

4581	Advanced Placement® US 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"> <li>1. A 93 percent or above average in World History-A (4403).</li> <li>2. A writing sample approved by the AP® US History teacher.</li> <li>3. Personal interview with the AP® US History teacher.</li> </ol>				
4533	Psychology-A	Semester	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>				

# SCIENCE

**\*\*Please Note:** For all science course prerequisites that include minimum average requirements, having the minimum average required does not guarantee acceptance into the 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.

5103	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>				
5104	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"> <li>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.</li> </ol>				
5212	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 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"> <li>1. A minimum average of 87 percent in a higher level of math.</li> <li>2. A minimum average of 90 percent in Algebra I-A (6113).</li> <li>3. A minimum average of 90 percent in Biology I-A (5103).</li> </ol>				

5213	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"> <li>1. A minimum average of 80 percent in Algebra I-A (6113) or higher level of math.</li> <li>2. A minimum average of 75 percent in Biology I-A (5103) or a minimum average of 80 percent in Biology I-F (5104).</li> </ol>				

5214	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 (6004) or Algebra I-F (6114) who do not meet the prerequisite criteria for Physical Science-A (5213) should register for this course.</p>				

5112	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"> <li>1. A minimum average of 90 percent in Biology I-A (5103).</li> <li>2. A personal interview with the Department Chairperson.</li> <li>3. Students must have taken Chemistry I or be taking it concurrently.</li> <li>4. If numbers do not warrant offering both Academic and Honors levels, both levels will be combined in to one class.</li> </ol>				

5113	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 but do not meet the prerequisites requirement for the honors level.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. A minimum average of 80 percent in Biology I-A (5103) or a minimum average of 90 percent in Biology I-F (5104).</li> <li>2. A personal interview with the Department Chairperson.</li> <li>3. It is recommended that students have taken Chemistry I or be taking it concurrently.</li> <li>4. If numbers do not warrant offering both Academic and Honors levels, both levels will be combined in to one class.</li> </ol>				

5312	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 materials are required. This course is recommended for any student planning a career in medicine or other science-related fields.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. A minimum average of 87 percent in Physical Science-H (5212) or a minimum average of 90 percent in Physical Science-A (5213).</li> <li>2. A minimum average of 92 percent in Algebra I-A (6113) or a minimum of 87 percent in a higher level math class.</li> </ol> <p><b>**Please Note**</b></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 (6113) 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>				

5313	Chemistry I-A	Year	Grades 11-12	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 planning a career in a science-related field.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. A minimum average of 80 percent in Physical Science-A (5213).</li> <li>2. A minimum average of 80 percent in Algebra II-A (6323), or be concurrently taking Algebra II A (6323), or a higher level math or be concurrently taking Algebra II-A (6323).</li> <li>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.</li> </ol>				

5314	Practical Chemistry-F	Year	Grades 11-12	Elective
<p>This course is offered to juniors or seniors who have not taken Chemistry, but 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.

5322	Chemistry II-H	Year	Grades 11-12	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 planning a career in medicine or other science-related fields.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. A minimum average of 87 percent in Chemistry I-H (5312) or a minimum average of 90 percent in Chemistry I-A (5313).</li> <li>2. Must have passed Algebra II-A (6323), Algebra II/Trigonometry-H (6322) or Precalculus-H (6422) or be concurrently taking Statistics-H (6712), Precalculus-H or Calculus-H (6522).</li> <li>3. A personal interview with the Chemistry teacher</li> <li>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.</li> </ol>				

5323	Chemistry II-A	Year	Grades 11-12	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 planning a career in medicine or other science-related fields, but does not meet the prerequisite requirements for the honors level.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. A minimum average of 80 percent in Chemistry I-H (5312) or a minimum average of 85 percent in Chemistry I-A (5313)</li> <li>2. Must have passed Algebra II-A (6323), Algebra II/Trigonometry-H (6322), or Precalculus-H (6422) or be concurrently taking Statistics-H (6712), Trigonometry-H Algebra III (6353), Precalculus-H or Calculus-H (6522).</li> <li>3. A personal interview with the Chemistry teacher.</li> <li>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.</li> </ol>				

5412	Physics I-H	Year	Grades 11-12	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 (5422). Recommended for students planning a career in engineering or a science-related field.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. A minimum average of 87 percent in Physical Science-H (5212) or a minimum average of 90 percent in Physical Science-A (5213).</li> <li>2. Student must have passed Precalculus-H (6422) with a minimum average of 87 percent or be currently taking Precalculus-H (6422) or,</li> <li>3. Student must have passed Algebra II/Trigonometry-H (6322) with a minimum average of 87 percent and be currently taking Precalculus-H (6522).</li> </ol>				

5413	Physics I-A	Year	Grades 11-12	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, but do not meet the prerequisite requirements for the honors level.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. A minimum average of 80 percent in Physical Science-A (5213).</li> <li>2. Students must have passed Algebra I-A (6113) with a minimum of 80 percent and have passed or be currently taking Algebra II-A (6323).</li> <li>3. Those currently taking Algebra II-A (6323) must have had an 80 percent average in Algebra I-A (6113).</li> </ol>				

5414	Conceptual Physics-F	Year	Grades 11-12	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.

5422	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"> <li>1. A minimum average of 85 percent in Physics I-H (5412) or a minimum average of 90 percent in Physics I-A (5423).</li> <li>2. Must have passed Precalculus-H with at least an 87 percent average or be currently taking Precalculus (6422) or Calculus-H (6522).</li> <li>3. A personal interview with the Physics teacher.</li> </ol>				

5423	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, but do not meet the prerequisite requirements for the honors level.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. A minimum average of 80 percent in Physics I-H (5412) or a minimum average of 85 percent in Physics I-A (5413)</li> <li>2. A minimum average of 85 in Algebra II-A (6323) or a minimum average of 80 in Algebra II/Trigonometry-H (6322) or be concurrently taking Algebra III-A (6353), Trigonometry-H (6452), Statistics-H (6712), Precalculus-H (6422), or Calculus-H (6522).</li> <li>3. A personal interview with the Physics teacher.</li> </ol>				

5513	Earth and Space Science-A	Year	Grades 11-12	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>				

5523	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"> <li>1. A minimum average of 90 percent in Biology I-F (5104) or 85 percent in Biology I-A (5103).</li> <li>2. Personal interview with the Department Chairperson.</li> <li>3. Chemistry I, taken previously or concurrently, is recommended.</li> </ol>				

5522	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"> <li>1. A minimum average of 87 percent in Biology I-A (5103).</li> <li>2. A personal interview with Department Chair (if necessary).</li> <li>3. Chemistry I, taken previously or concurrently, is required.</li> <li>4. It is recommended that students be taking or have passed Latin I-A (3303).</li> </ol>				

# 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. In order to move up a level (from Fundamental to Academic or Academic to Honors or AP), you will be required to pass the midterm and final of any prerequisite course and complete an interview and a memorandum of understanding.

6004	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 (6114) or Algebra I-A (6113).</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> <li>1. Placement test scores, 8th grade teacher recommendation, 8th grade math scores and Math Department evaluation.</li> </ol>				

6113	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"> <li>1. For Grade 9: Placement test scores, 8th grade teacher recommendation, 8th grade math scores and Math Department evaluation.</li> <li>2. For Grade 10: A minimum average of 95 percent in Pre-Algebra F (6004) and teacher recommendation.</li> </ol>				

6114	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 (6113), 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"> <li>1. For Grade 9: Placement test scores, 8th grade teacher recommendation, 8th grade math scores and Math Department evaluation.</li> <li>2. For Grade 10: Pre-Algebra F (6004) and teacher recommendation.</li> </ol>				

6322	Algebra II/Trigonometry-H	Year	Grades 9-10	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"> <li>1. Placement test scores, 8th grade teacher recommendation, 8th grade math scores and Math Department evaluation.</li> <li>2. A minimum average of 87 percent earned in a full-year Algebra I course.</li> <li>3. A minimum grade of 75 percent earned on the Algebra II Trigonometry placement test.</li> </ol> <p>Prerequisites for Grade 10:</p> <ol style="list-style-type: none"> <li>1. Teacher recommendation.</li> <li>2. Completed Algebra I-A (6113) with a minimum average of 95 percent.</li> <li>3. A minimum grade of 78 percent earned on the Algebra II/Trigonometry placement test.</li> <li>4. Students who qualify for Algebra II/Trigonometry for Grade 10 can take Geometry concurrently.</li> </ol>				

6323	Algebra II - A	Year	Grades 9-10	Required
<p>This course is normally the next course taken after Algebra I - A (6113). It includes 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.</p> <p>Prerequisites for Grade 9:</p> <ol style="list-style-type: none"> <li>1. Placement test scores, 8th grade teacher recommendation, 8th grade math scores and Math Department evaluation.</li> <li>2. A minimum average of 87 percent earned in a full-year Algebra I course.</li> </ol> <p>Prerequisites for Grade 10:</p> <ol style="list-style-type: none"> <li>1. A minimum average of 75 percent in Algebra I-A (6113) or a minimum average of 95 percent in Algebra I-F (6114) as well as teacher recommendation.</li> <li>2. To be eligible to take Algebra II-A (6323) and Geometry-A (5223) concurrently, a student must earn a 93 in Algebra I-A (6113) and earn a 70 or above on the Algebra I-A midterm and final as well as on the Algebra II Trigonometry placement test.</li> </ol>				

6124	Algebra II-F	Year	Grade 10-12	Required
<p>This course is normally the next course taken after Algebra I-F (6114). 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.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> <li>1. Completion of Algebra I-F (6114) or completion of Algebra I -A (6113) with a grade between 70-74.</li> </ol>				

6223	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>Students who qualify can take Geometry and Algebra II/Trigonometry (6322) or Algebra II-A (6323) concurrently in Grade 10.</p> <p>Geometry and Statistics-H (6712) may only be taken concurrently if the average in Algebra II/Trigonometry-H (6322) was 90 percent or above or in Algebra II-A (6323) was 93 percent or above. Geometry and AP® Statistics (6721) may be taken concurrently if the average in Algebra II/Trigonometry (6322) 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"> <li>1. Satisfactory completion of Algebra II Trigonometry-H (6322) or a minimum grade of 75 percent in Algebra II-A (6323) or taking one of these concurrently as outlined above or a minimum grade of 95 percent in Algebra II-F (6124) and teacher recommendation.</li> </ol>				

6224	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 (6223). Hands-on activities and manipulations are used to enhance tactile learning.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> <li>1. Completion of Algebra II-F (6124) or completion of Algebra II-A (6323) with a grade between 70-74 and teacher recommendation.</li> </ol>				

6353	Algebra III-A	Semester I/II	Grades II-12	Elective
<p>This course is review and extension 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. <b>When possible, rather than a textbook and traditional teacher lessons, an online program that provides instruction and practice is used.</b></p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. Satisfactory completion of Algebra II-A (6323) or minimum average of 75 percent in Algebra II-F (6124).</li> <li>2. Completion of Geometry.</li> <li>3. Teacher recommendation.</li> <li>4. Students who have been enrolled in any Honors math classes for any period of time are not normally permitted in this course, unless they have not qualified for any other course except Trigonometry- H (6452).</li> </ol>				

6452	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 trigonometric functions and their relationships within the unit cycle, inverse trigonometric functions, graphs of trigonometric functions, solving and applying trigonometric equations, triangle trigonometry, the law of sines and cosines and trigonometric identities. 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: Grade 10 or 11 (in order to double with Geometry-A (6223) to prepare for Precalculus-H (6422)).</p> <ol style="list-style-type: none"> <li>1. A grade of 85 or higher in Algebra II- A (6323) or 80 percent or higher in Algebra II/Trigonometry-H (6322).</li> <li>2. Concurrently taking Geometry-A (6223).</li> <li>3. Teacher recommendation.</li> </ol> <p>Grade 11 or 12 (after Geometry-A (6223)):</p> <ol style="list-style-type: none"> <li>1. A grade of 85 or higher in Algebra II- A (6323) or 70 percent or higher in Algebra II/Trigonometry-H (6322).</li> <li>2. Completion of Geometry-A (6223).</li> <li>3. Teacher recommendation.</li> </ol>				

6713	Statistics-A	Year	Grades 11-12	Required/ 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 Statistics-H (6712) and/or AP<sup>®</sup> Statistics (6721). If offered as a separate class than Statistics-H (6712), 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"> <li>1. Grade in highest level of the following most recently taken: 92 or higher in Algebra II-F (6124), 80 - 86 in Algebra II-A (6323), 70-79 in Algebra II/Trigonometry-H (6322), 70-79 in Algebra III-A (6353) and/or Trigonometry-H (6452) or 70-76 in Precalculus-H (6422). (Note: Students with a grade between 87-92 in Algebra II-A (6323) can decide in consultation with their Algebra II teacher, guidance counselor and parents whether to take Statistics-A or Statistics-H (6712).</li> <li>2. Completion of Geometry.</li> <li>3. Teacher recommendation.</li> <li>4. Completion of an interview and memorandum of understanding.</li> </ol>				

6712	Statistics-H	Year	Grades 10-12	Required/ 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>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. Grade in highest level of the following previously taken: 87 percent or higher in Algebra-II-A (6323), 80 percent or higher in Algebra II/Trigonometry-H (6322), Algebra III-A (6353) and/or Trigonometry-H (6452) or 77 percent or higher in Precalculus-H (6422).</li> <li>2. Teacher recommendation. (Note: Students with a grade between 87-92 in Algebra II teacher, guidance counselor and parents whether to take Statistics-A (6713) or Statistics-H).</li> <li>3. Precalculus-H (6422) and Statistics-H (6712) may only be taken concurrently if the average in Algebra II/Trigonometry-H (6322) was 90 percent or above or averages in each of Algebra II-A (6323), Geometry-A (6223) and Trigonometry-H (6452) of 93 percent or higher.</li> <li>4. Prior completion of Geometry-A (6223) OR Geometry-A (6223) and Statistics-H (6712) may be taken concurrently but only if the average in Algebra II/Trigonometry -H (6322) was 90 percent or above or if the average in Algebra II-A (6323) is 93 percent or higher.</li> <li>5. Completion of an interview and memorandum of understanding.</li> </ol>				

6721	Advanced Placement® Statistics	Year	Grades 10-12	Required/ 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"> <li>1. A grade of 93 percent or higher in Algebra II-A (6323), 85 percent or higher in Algebra II/Trigonometry-H (6322) or in Algebra III-A (6353) and in Trigonometry-H (6452) or 83 percent or higher in Precalculus-H (6422).</li> <li>2. Teacher recommendation.</li> <li>3. AP Statistics (6721) and Precalculus (6422) may be taken concurrently if the average in Algebra II/Trigonometry-H (6322) is/was 94 percent or higher.</li> <li>4. Prior completion of Geometry-A (6223) OR AP Statistics-H (6721) and Geometry-A (6223) may be taken concurrently but only if the average in Algebra II/Trigonometry-H (6322) is/was 94 percent or higher.</li> <li>5. Completion of an interview and memorandum of understanding.</li> </ol>				

6422	Precalculus-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"> <li>1. A grade of 87 percent or higher in Algebra II/Trigonometry-H (6322) or an 80 percent in Algebra II/Trigonometry-H (6322) along with completion of Trigonometry-H (6452), or 93 percent in Algebra II-A (6323), 85 percent in both Algebra III-A (6353) and Trigonometry-H (6452) or 85 percent in Algebra II-A (6323) with completion of Trigonometry-H (6452).</li> <li>2. A grade of 85 percent or higher in Geometry- A (6223).</li> <li>3. Teacher recommendation.</li> <li>4. Completion of summer assignment.</li> <li>5. Precalculus-H and AP® Statistics (6721) or Virtual High School Math and Modern Logic may only be taken concurrently if the average in Algebra II/Trigonometry-H (6322) was 94 percent or above.</li> <li>6. Precalculus and Statistics-H (6712) or Virtual High School Math and Modern Logic may only be taken concurrently if the average in Algebra II/Trigonometry-H (6322) was 90 percent or above or averages in each of Algebra II-A (6323), Geometry-A (6223) and Trigonometry-H (6452) of 93 or higher.</li> </ol>				

6522	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<sup>®</sup> Calculus (6521), the pace of this class will be more deliberate. Taking the AP<sup>®</sup> 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"> <li>1. Precalculus-H (6422) with a minimum average of 87 percent.</li> <li>2. Teacher recommendation.</li> <li>3. Completion of summer assignment.</li> </ol>				

6521	Advanced Placement <sup>®</sup> Calculus	Year	Grade 12	Elective
<p>This is an Advanced Placement<sup>®</sup> (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"> <li>1. Precalculus-H (6422) with a minimum average of 92 percent.</li> <li>2. Teacher recommendation.</li> <li>3. Completion of summer assignment.</li> </ol>				

6362	College Algebra (A “College in the Classroom” Course)	Semester (1 credit)	Grade 11-12	Elective
<p>This course covers the fundamental algebraic operations, exponents and radicals, systems of equations, higher degree equations, logarithms, matrices, and inequalities.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. Minimum average of 85 in Algebra II-A (6323), Algebra II-F (6124) or Algebra II Trigonometry-H (6322)</li> <li>2. Completion of Geometry.</li> <li>3. Teacher recommendation.</li> <li>4. Application to Harrisburg Area Community College and satisfactory completion of HACC’s prerequisites (regardless of whether or not you choose to participate in dual enrollment)</li> <li>5. Interview with Mathematics Department Chairperson (Mrs. Sneeringer - Room 19)</li> <li>6. Review and signature of the <a href="#">College in the Classroom Q&amp;A</a> (must be complete and submitted on the day your course selection sheet is signed by your teacher)</li> </ol> <p>There will be a fee for the textbook and/or the companion website.</p>				

6462	College Trigonometry (A “College in the Classroom Course)	Semester (1 credit)	Grade 11-12	Elective
<p>This course examines trigonometric functions, relationships, and graphs. This course includes identities and trigonometric equations. In addition, complex numbers and DeMoivre’s theorem are included.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. A grade of 85 percent of higher in Algebra II-A (6323) or Algebra II/ Trigonometry-H (6322)</li> <li>2. Satisfactory completion of Geometry-A (6223)</li> <li>3. Teacher recommendation</li> <li>4. Application to Harrisburg Area Community College and satisfactory completion of HACC’s prerequisites (regardless of whether or not you choose to participate in dual enrollment)</li> <li>5. Interview with Mathematics Department Chairperson (Mrs. Sneeringer - Room 19)</li> <li>6. Review and signature of the <a href="#">College in the Classroom Q&amp;A</a> (must be complete and submitted on the day your course selection sheet is signed by your teacher)</li> </ol> <p>There will be a fee for the textbook and/or the companion website.</p>				

# BUSINESS

7703	Accounting I-A	Year	Grades 11-12	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.

7713	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 (7703) with at least a final average of 88 percent.
2. Teacher recommendation.

7623	Foundations in Personal Finance-A	Semester	Grades 11-12	Elective
<p>This course is designed to help students understand the impact of individual choices on personal and occupational goals as well as future earnings potential. Topics covered include income, money management, spending and credit as well as saving, investing, retirement and charitable giving. Students will design personal and household budgets, simulate the use of checking and savings accounts, demonstrate knowledge of finance, debt and credit management and understand insurance and taxes. This course will provide a foundational understanding for making informed personal financial decisions and how they impact career paths and personal relationships.</p>				

7733	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"> <li>● Historical development of business in America, including globalization</li> <li>● One's role as a consumer, including one's rights and responsibilities</li> <li>● The free enterprise system</li> <li>● The legal and ethical environment of business</li> <li>● The functions of business</li> <li>● The social responsibility and ethics of business</li> <li>● Marketing research, production and distribution of goods and services</li> <li>● The psychology of advertising</li> <li>● Getting a Job-cover letters, resumes, applications, interviews, and thank you notes</li> <li>● Managing one's self on the job.</li> </ul>				

## COMPUTER AND INFORMATION TECHNOLOGY

7753	Basic Computer Applications	Semester I/II	Grade 10-12	Required
<p>This course may be included in the freshmen elective choices and, if successfully completed, will satisfy the sophomore mandatory requirement.</p> <p><b>Word 2016</b> will introduce the student to the techniques for properly creating research papers using the various research styles available in the Office Suite, business and personal business letters, brochures, tables, resumes, emails and hyperlinks. <b>Excel 2016</b> will introduce the student to the power of spreadsheets using functions, formulas, themes, graphics and charts. <b>PowerPoint 2016</b> will introduce the student to slide shows and their use for creating exciting and interactive presentations, depending on available time. <b>Access 2016</b> is a database application to also manage data. In Access, you will create a collection of objects - tables, forms, data access pages, queries and reports - that you use to manage and present data.</p>				

7711	Advanced Placement® Computer Science Principles	Year	Grades 9-12	Elective
<p>AP® Computer Science Principles introduces the student to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. The course covers a broad range of foundational topics such as programming, algorithms, the Internet, big data, digital privacy and security and the society impacts of computing.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> <li>1. Algebra I (6113).</li> </ol>				

7743	Computer Programming-A	Year	Grades 11-12	Elective
<p>An introductory programming course using Visual Studio. 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"> <li>1. A minimum average of 85 percent in Algebra II-A (6323) or Algebra II-F (6124).</li> <li>2. Teacher interview required.</li> <li>3. Other students considered on an individual basis with teacher approval.</li> <li>4. Limited to 21 students per section.</li> </ol>				

## FAMILY AND CONSUMER SCIENCE

7904	Culinary Arts I	Semester I/II	Grades 9-11	Elective
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Students will learn the basics of food preparation and skills that will increase their success in the kitchen, specifically the proper use of equipment, knowledge and understanding of functions of ingredients and consumer skills. Units of study include food and kitchen safety and sanitation, knife skills, building blocks for a healthy diet, vegetables, fruits and poultry. Food lab opportunities offered in this course promote mastery of basic cooking skills, time management, teamwork and the ability to follow directions.

7943	Culinary Arts II	Semester	Grades 10-12	Elective
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Students will build upon the knowledge of functions of ingredients and consumer skills in this course. Following a review of food and kitchen safety and sanitation, units of study will include yeast breads, quick breads, casseroles, soups, candies, cookies, pies and cakes. Food lab opportunities offered in this course promote further mastery of cooking skills, time management, teamwork and the ability to follow directions.

Prerequisites:

1. Successful completion of Culinary Arts I (7904).

7913	International Cuisine	Semester	Grades 10-12	Elective
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Explore the diversity of culinary origins, food staples and cultural traditions throughout Mexico, South America, Europe, Middle East, Africa, Asia and Southeast Asia. Food lab opportunities offered in this course promote further mastery of cooking skills, time management, teamwork and the ability to follow directions.

Prerequisite:

1. Successful completion of Culinary Arts I (7904).

7924	Fashion Design and Construction I	Semester I/II	Grades 9-11	Elective
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Students will explore the foundations of the fashion industry as they develop basic skills in sewing machine operation and apparel preparation and construction. Students will complete the following projects: standard pillow, crazy nine patch pillow and pajama pants while also learning basic seam construction techniques. Learned sewing techniques will provide a foundation for design skills and advanced construction learned in Fashion Design and Construction II.

7923	Fashion Design and Construction II	Semester II	Grades 10-12	Elective
<p>Develop fashion design skills relating to consumer decisions and textiles. Content focuses on the impact of fibers and textiles, elements of design and principles of design when selecting, preparing and altering apparel items. Students are responsible for purchasing supplies to produce at least two apparel items.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. Successful completion of Fashion Design and Construction I (7924).</li> </ol>				

7903	Child Growth and Family Development-A	Semester	Grades 11-12	Elective
<p>In this comprehensive study of hereditary and environmental influences in child growth and development, students will analyze developmental theories, types of development, impact of play on development and childhood literacy.</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
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.

	Engineering Design-A	Semester I/II	Grades 9-12	Elective
<p>Are you ready to design for the future? Students are introduced to the engineering design process, applying math, science and engineering standards to identify and design solutions to a variety of real problems. Students work both individually and in collaborative teams to develop and document design solutions using engineering notebooks and 3D modeling software.</p>				

8823	Engineering Concepts-A	Semester I/II	Grades 10-12	Elective
<p>Engineering Concepts is a high school-level course of engineering. The course exposes students to some of the major concepts that they will encounter in a post-secondary engineering course of study. Students have the opportunity to investigate engineering and high tech careers. Engineering Concepts gives students the opportunity to develop skills and understanding of course concepts through activity, project and problem-based learning. Used in combination with a taming approach, this learning challenges students to continually hone their interpersonal skills, creative abilities and problem-solving skills based upon engineering concepts. It also allows students to develop strategies to enable and direct their own learning, which is the ultimate goal of education. Working in teams, students explore hands-on activities and projects to learn the characteristics of engineering fields. In addition, students use 3D design software to help them design solutions to solve major course projects. Students learn about documenting their project, solving problems and communicating their solutions to their peers and members of the professional community of engineering. This course applies and concurrently develops secondary level knowledge and skills in mathematics, science and technology.</p> <p>Prerequisite:</p> <ol style="list-style-type: none"> <li>1. Engineering Design (8804)</li> </ol>				

8873	Architectural Design I-A	Semester I	Grades 11-12	Elective
<p>Architectural Design is a course in which the student will express themselves visually and be able to showcase their creativity. Instruction will be given in the following areas: elements of design, architectural history, technical drafting, sketching and computer design. The course will give the students confidence in organizing ideas and the ability to work ideas into new and useful creations. The last project includes building a prototype of their designs.</p>				

8883	Architectural Design II-A	Semester II	Grades 11-12	Elective
<p>Architectural Design is a course in which the student will express themselves visually and be able to showcase their creativity. Instruction will be given in the following areas: elements of design, architectural history, technical drafting, sketching and computer design. The course will give the students confidence in organizing ideas and the ability to work ideas into new and useful creations. The last project includes building a prototype of their designs.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. Architectural Design I (8873)</li> </ol>				

8814	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.</p>				

8603	Residential Design and Construction I - A	Semester	Grades 9-12	Elective
8613	Residential Design and Construction II - A	Semester	Grades 10-12	Elective
8623	Residential Design and Construction III - A	Semester	Grades 11-12	Elective
8633	Residential Design and Construction IV - A	Semester	Grade 12	Elective

Residential Design and Construction brings together the core aspects of the school's technology curriculum into on cohesive and comprehensive package. For people interested in embarking on a career in building trades or those seeking deeper involvement in the creation of their own dream home, this course provides the appropriate skills and knowledge through a mix of challenges, site visits and hands-on experiential project work. Students learn about blueprint reading, work-site safety, construction math and the safe use of hand and power tools. The course begins inside the shop with safety, intro to construction math, intro to construction drawing, power tools, hand tools, communication skills and teamwork. Then we move to rough carpentry and framing in the context of new construction. Students will learn the basics of a structure's anatomy, blueprint reading, floor, wall and roof layout and framing methodology and much more as they help build a small structure. They will complete the series covering areas in plumbing, electricity and maintenance. Along the way, they will gain comfort with a variety of hand and power tools, visit hardware stores and lumber yards (if allowed by current regulations) and learn the terminology of the trade.

## ART EDUCATION

8703	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.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. A genuine interest in pursuing additional art classes at Delone Catholic High School.</li> <li>2. An average of 80 percent or above in World of Art (8704).</li> </ol>				
2403	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 deadlines.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. 90 percent or higher in present English course or Art class.</li> <li>2. Writing sample.</li> <li>3. Teacher recommendation.</li> <li>4. Limited to 15 students.</li> </ol>				

8123	Digital Art and Photography-A	Semester	Grades 10-12	Elective
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This course provides students with a basic understanding of digital photography as an art form. A digital camera and computer software replace the darkroom and are used to capture and manipulate photographic images to create digital art pieces.

Digital artists will increase their understanding of both traditional and contemporary photographic techniques. Photographic composition and expression of meaning in personal artwork are stressed. Students create digital portfolios to store photographs and display art projects. Upon completion of this course, students will: understand, practice and apply knowledge of general digital camera functions; use software to edit, manipulate, save and store graphic images; understand digital media in relationship with creative expression; recognize basic design principles and apply these concepts to digital works of art; and apply concepts used to create digital graphics.

Prerequisites:

1. 80 percent or above in World of Art (8704).
2. 80 percent or above in Intro to Art (8703).

8713	Two-Dimensional Design-A	Year	Grades 11-12	Elective
<p>In addition to drawing and painting, students will engage in illustration, color theory and mixed media projects. Still life, landscapes and portraits will be explored with a focus on observation skills. Students may 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.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. Students must possess a serious commitment to art at Delone Catholic.</li> <li>2. An average of 85 percent or above in Introduction to Art-A (8703) or Introduction to Design-A (8763).</li> </ol>				

8723	Three-Dimensional Design I-A	Year	Grades 11-12	Elective
<p>Students will explore three-dimensional art production in paper, clay, balsa and wire with a focus on form and design. 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.</p> <p>Prerequisites:</p> <ol style="list-style-type: none"> <li>1. Students must possess a serious commitment to art at Delone Catholic.</li> <li>2. An average of 85 percent or above in Introduction To Art-A (8703) or Introduction to Design-A (8763) or Two-Dimensional Design (8713).</li> </ol>				

8792	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</p>				
<p>Prerequisites:</p>				
<ol style="list-style-type: none"> <li data-bbox="133 589 516 617">1. Interview with the art instructor.</li> <li data-bbox="133 621 923 678">2. An average of 90 percent or above in Introduction to Art-A (8703) or Introduction to Design-A (8763).</li> <li data-bbox="133 683 976 740">3. Must have completed or be currently enrolled in either Two-Dimensional Design-A (8713) or Three-Dimensional Design I-A (8723).</li> <li data-bbox="133 745 516 773">4. Approval of the Vice Principal.</li> <li data-bbox="133 777 918 805">5. Students must commit to self-guided study and adhere to deadlines.</li> </ol>				

# MUSIC EDUCATION

Any of these courses can be taken to fulfill the Music/Art/Home and FLS requirement.

8912	Instrumental Music-H	Year	Grades 11- 12	Elective
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## Prerequisites:

1. Take regular private lessons on their instruments with a qualified instructor throughout the school year.
2. Try out for District Band (if one plays an instrument used in that festival).
3. Participate in at least one Delone Catholic extra-curricular instrumental performance group such as marching band, jazz band or flute choir.
4. 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.
5. Complete occasional extra homework assignments as prescribed by the music instructor.
6. Complete all the requirements placed upon the academic level instrumental music students (Course 8913)

## **\*\*Please Note\*\***

If, after registering for the honors level class (8912), 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.

8913	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.

8963	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.

8962	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"> <li>1. Successful completion of Music Theory I-A (8963).</li> <li>2. Teacher approval.</li> </ol>				

8923	Vocal Music-A	Semester I/II	Grades 9-12	Elective
<p>Vocal Music is offered to any student who would like more vocal training and experience than is possible during the chorus activity period alone. Vocal Music is a one-semester class, but it can be taken both semesters if desired. Students receive one-half (.5) credit every time they take the class during their high school career. Students who enroll in this for one semester are encouraged, but not required, to take the chorus activity period during the other semester. 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 Vocal Music are required to participate in a mandatory rehearsal and one or two concerts outside of school hours, as well as several in-school assemblies, including liturgies.</p>				

# PHYSICAL EDUCATION

Physical Education is a course that requires students to participate on a daily basis. Regular physical activity stimulates the development of cardiovascular function, muscular strength and endurance. There will be students of all size, weight and strength so safety is stressed at all times. All Physical Education classes are co-educational. Activities will be chosen based on gym availability, the amount of students in the class and the available equipment. A regulation Delone Catholic Physical Education uniform must be purchased in the school bookstore.

Requirement for each level of Physical Education:

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

7845	Physical Education 9/10	Semester	Grade 9/10	Required
Physical Education 9/10 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.				

7855	Physical Education 11/12	Semester	Grade 11/12	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

5092	Environmental Science - H	Grades 11, 12	15 Weeks
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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.

Prerequisites:

1. Biology I, Chemistry I

5091	AP® Environmental Science	Grades 11, 12	35 Weeks
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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.

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 students 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.

5042	Astronomy Principles - H	Grades 11, 12	15 Weeks
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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.

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

5093	<b>Environmental Science - A</b>	Grades 11, 12	15 Weeks
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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.

Prerequisites:

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

Additional Requirements:

Digital camera and assorted materials for labs

5053	<b>Meteorology - A</b>	Grades 11, 12	15 Weeks
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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.

Prerequisites:

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

5032	<b>Climate Science - H</b>	Grades 11, 12	15 Weeks
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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.

Prerequisites:

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

5012	<b>Oceanography - H</b>	Grades 11, 12	15 Weeks
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“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.

Prerequisites:

1. It is strongly recommended that students have a working knowledge of basic Algebra, Geometry and Trigonometry.
2. Chemistry I.
3. 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.

5082	<b>Animal Behavior and Zoology - H</b>	Grades 11, 12	15 Weeks
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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.

Prerequisites:

1. Biology I-A, Chemistry I

5022	<b>Biochemistry - H</b>	Grades 11, 12	15 Weeks
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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.

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.

5083	<b>Biotechnology - A</b>	Grades 11, 12	15 Weeks
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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.

Prerequisite:

1. Introductory high school biology

Additional Requirements:

DNA Software download (free)

5052	<b>Genes and Disease - H</b>	Grades 11, 12	15 Weeks
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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.

Prerequisite:

1. Biology I-A

5072	Preveterinary Medicine - H	Grades 10, 11, 12	15 Weeks
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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.

Prerequisites:

1. Biology I and Chemistry I

5011	AP® Biology	Grades 11, 12	35 Weeks
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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.

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.

5073	Epidemics - A	Grades 11, 12	15 Weeks
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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.

Prerequisite:

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

5071	AP® Chemistry	Grades 11, 12	35 Weeks
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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, stoichiom-

etry, 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.

**Prerequisites:**

1. One full year of high school Chemistry I-H, one full year of high school Algebra 2, and student must be taking Precalculus 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 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.

5031	AP® Physics 1	Grades 11, 12	35 Weeks
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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 I 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.

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.

5063	Forensic Science - A	Grades 11, 12	15 Weeks
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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 admissible 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!

Prerequisites:

1. Successful completion of a full year (or equivalent) of biology. Please note this course contains a final exam that will require the student to identify in advance an appropriate location as well as an adult proctor for the exam.

5033	Nuclear Science - A	Grades 11, 12	15 Weeks
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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. A final student-created project will allow students to demonstrate their understanding of the need for collaboration between scientists, environmental advocates, engineers, public officials, and the general public in developing and implementing plans to address a number of current issues in nuclear science.

Prerequisites:

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

# ENGLISH

2012	Shakespeare in Film - H	Grades 11, 12	15 Weeks (Spring Only)
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“Suit the action to the word, the word to the action, with this special observance, that you o’erstep not the modesty of nature.” - Hamlet, III.ii

Here, Hamlet gives direction to his actors - and in this class you’ll get to do the same!

In this class, students explore how the world of film has interpreted and adapted some of Shakespeare’s classic works. They will become familiar with film terminology and will use it to help them analyze and compare various cinematic interpretations of Shakespeare’s plays. Students will read and watch film clips of three Shakespearean plays - Romeo and Juliet, Twelfth Night, and Macbeth. They will take part in weekly discussions and analysis of texts and cinematic interpretations of the plays, as well as complete a close study of key speeches from Henry V and Hamlet. In doing so, students will explore what the Bard has to offer us today with his words and wisdom.

Throughout the course, students will closely examine verse from the plays to interpret meaning, discuss thematic ideas with their peers, and work collaboratively to analyze and share opinions about film technique and adaptations. At the end of the course, students will imagine themselves into the role of director, making artistic choices to communicate their interpretation of a scene from another of Shakespeare’s plays.

Please note: Shakespeare’s plays contain many topics and events that could be emotional triggers for readers; film versions of his plays often highlight or make more explicit these topics and events. Challenging topics and events that will be encountered in this course include: suicide, murder, excessive violence, and rape. Efforts will be made throughout the course to discuss these topics openly and honestly. All students will need to obtain permission to watch R-rated films.

Prerequisite:

1. English 10 - Honors

Additional Requirements:

All books for this course are available online at [Shakespeare@mit.edu](mailto:Shakespeare@mit.edu).

Students who desire a traditional textbook should purchase one at their own cost through [Amazon.com](http://Amazon.com) or a similar website.

2023	Twentieth Century Women Authors	Grades 10, 11, 12	15 Weeks
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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

4061	AP® Psychology	Grades 11, 12	35 Weeks
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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.

## 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.

4051	AP® World History	Grades 10, 11, 12	35 Weeks
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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.

**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.

4022	Modern Middle East - H	Grades 10, 11, 12	15 Weeks
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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.

**Additional Requirements:**

Streaming video access (for YouTube videos), Elluminate access, Windows Media or Real Player, Quicktime, Adobe Reader

4053	<b>Peacemaking - A</b>	Grades 10, 11, 12	15 Weeks
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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.

**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.

4052	<b>Constitutional Law - H</b>	Grade 12	15 Weeks
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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.

**Prerequisite:**

1. Completion of U.S. Government

4042	<b>Psychology of Crime - H</b>	Grades 11, 12	15 Weeks
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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.

4071	AP® Human Geography	Grades 10, 11, 12	35 Weeks
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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.

#### 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.

4023	<b>World Religions - A</b>	Grades 9, 10, 11, 12	15 Weeks
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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.

4073	<b>Practical Law - A</b>	Grades 11, 12	15 Weeks
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This course explores practical and controversial topics of law which affect young people in the United States. Topics include: the foundation of law in America; the United States Constitution; how the criminal justice system works and participation in a mock trial; timely and relevant issues in criminal law; the juvenile justice system of various states; employment, consumer and family law; the civil rights protections that residents of the United States enjoy, and what happens when these rights are infringed upon.

Note: Some controversial issues are of a mature nature and may not be suitable for all students.

# FOREIGN LANGUAGE

3041	AP® French Language and Culture	Grades 11, 12	35 Weeks
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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.

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.

3031	AP® Spanish Language and Culture	Grades 11, 12	35 Weeks
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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.

Prerequisite:

1. Students must have completed all Spanish 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.

3053	Mandarin Chinese Language and Culture - A	Grades 11, 12	15 Weeks
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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.

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.

3013	Russian Language and Culture - A	Grades 11, 12	15 Weeks
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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.

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.

3023	American Sign Language	Grades , 10, 11, 12	35 Weeks
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“Sign languages are some of the most expressive and unique of all the World Languages. In this introductory course, you will embark on an exciting journey that will provide you with not only a basic level of proficiency in the most widely used sign language, American Sign Language (ASL); this course will also open a profound window of understanding into the world of Deaf culture and history. Regardless of whether you are already in some way connected to that culture, or whether you have had little-to-no contact with Deaf people, you will deepen your appreciation for this rich and dynamic community.

Through selected readings, visual recordings, and interactive activities online, students will receive instruction in production, comprehension, vocabulary, and grammar to build skills in ASL. In order to demonstrate ability in signing skills, students will sometimes be asked to record videos of themselves signing to submit to their instructors. Students will also build their knowledge and understanding about Deaf culture and history. This course adheres to the World Readiness Standards for Language Learning to ensure that students develop competence to communicate effectively and interact with cultural understanding of the Deaf community.”

Additional Requirements:

\*Due to the nature of an online ASL course, for assessment purposes, students must have access to a device that will enable them to record and upload videos of themselves demonstrating their ability to sign.

3033	Latin III - A	Grades , 10, 11, 12	35 Weeks
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Latin III is a reading based exploration of Latin grammar. Students will read stories about three major heroes while learning the remaining grammar points from Latin I. Students are expected to have completed a Latin I course and to know the following grammar points: the five declensions; the six tenses in the active voice for the four conjugations and irregular verbs; first, second and third declension adjectives and adverbs; and the demonstrative pronouns hic, ille, and is. The three main goals for the course are: learning the grammar of Latin II, learning the vocabulary of Latin II, and continuing to explore the culture and history of the Romans through research, projects, and discussions. The first two goals will enable students to read complex Latin stories, which will use such Latin grammar points as participles, the passive voice, comparative and superlative adjectives, and the subjunctive mood. The third goal will further their pursuit of the amazing world of the Romans and its impact on today’s world.

Prerequisite:

1. Completion of Latin I and Latin II.

# ARTS

8011	AP® Art History	Grades 10, 11, 12	35 Weeks
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“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 a 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.

## 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.

8032	<b>Art History - H</b>	Grades 10, 11, 12	15 Weeks
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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.

**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.

8022	<b>History of Photography - H</b>	Grades 10, 11, 12	15 Weeks
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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.

**Additional Requirements:**

Access to a scanner is required. Students do not need to have a camera or a darkroom.

8013	Creating Art History - A	Grades 9, 10, 11, 12	15 Weeks
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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.

#### 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.

# TECHNOLOGY EDUCATION

8033	CAD - A	Grades 10, 11, 12	15 Weeks
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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.

Prerequisite:

1. Recommended: Intermediate level of Windows OS navigation.

8053	Engineering Principles - A	Grades 10, 11, 12	15 Weeks
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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.

Prerequisite:

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

# MATHEMATICS

8063	Mathematics of Electricity - A	Grades 10, 11, 12	15 Weeks (Spring Only)
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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 schools students to career opportunities in the electrical power industry.

Prerequisite:

1. Pre-Algebra.
2. Three years of high school mathematics must have already been completed (i.e. this does not count toward the three credit of mathematics graduation requirement.)

6012	Math and Modern Logic - H	Grades 10, 11, 12	15 Weeks
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Prerequisite:

1. Satisfactory completion of Precalculus or
2. Concurrently enrolled in Precalculus with average of 90 percent or higher in Algebra II/Trigonometry or averages of 92 or higher in Algebra II-A, Geometry-A and Trigonometry-H.

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.

6061	AP <sup>®</sup> Calculus BC	Grades 10, 11, 12	35 Weeks
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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<sup>®</sup> 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<sup>®</sup> practice quizzes and unit exams that will conform to the constraints of the AP<sup>®</sup> exam.

Prerequisites:

1. Satisfactory completion of AP Calculus AB (DCHS requirement).
2. In addition to the enrollment fee, this course has an AP<sup>®</sup> fee of \$75.
3. Students must have access to a graphing calculator (preferably a TI-83/TI-84).
4. The required summer assignment for AP<sup>®</sup> Calculus.

Additional Requirements:

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.

## MUSIC

8061	AP <sup>®</sup> Music Theory	Grade 12	35 Weeks
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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.

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<sup>®</sup> course. There is also a \$75 music lab fee.

8073	<b>Fundamentals of Music Composition - A</b>	Grades 10, 11, 12	15 Weeks
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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.

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).

8043	<b>Music Listening and Critique - A</b>	Grades 10, 11, 12	15 Weeks
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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.

Additional Requirements:

In addition to VHS system requirements: Hardware used: internal/external speakers or headphones, specific URLs accessed: multiple addresses at domain "npr.org."

# COMPUTER SCIENCE AND TECHNOLOGY

7062	Introduction to Computer Science Principles	Grades 10, 11, 12	15 Weeks
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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 cyber security.

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.

7061	AP® Computer Science A	Grades 11, 12	35 Weeks
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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.

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.

Prerequisite:

1. Algebra II

7063	Web Design	Grades 9, 10, 11, 12	15 Weeks
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Web Design introduces students to the raw materials of web content and the design techniques that create effective web communication and interaction. The three primary web languages, HTML, CSS, and Javascript, form the raw materials; web standards from the W3C help shape design techniques for media creation, navigation, and interactivity.

Students will create single-page and multi-page web artifacts that meet the standards of the industry. Each week, students will be introduced to a new set of language, computation, and design skills. Students will create one new web project per week to solve a particular problem using their acquired skills. They will also work in teams to create a multi-page site for a real-world client over the course of the semester. Class participation and collaboration will be emphasized so that an authentic design and development community can emerge from the class.

**Additional Requirements:**

Among other helpful tools and curricular resources, students will use the free educational version of Mozilla Thimble, a respected training-level, browser-based web development platform. Please note this course contains a final exam that will require the student to identify in advance an appropriate location as well as an adult proctor for the exam.