

## COURSE <br> DESCRIPTIONS

2022-2023

Since 2020-2021, some of our courses only run alternate years. Those courses are clearly marked in this course catalog with the notation "Next run: 2023-2024". Rising juniors should make special note of these courses as they may not be running during your senior year.

This catalog also lists new courses that are planned to run in future years, but may not run in 20222023. They are also clearly marked with their course descriptions greyed out and italicized.

## ACADEMY COURSES

Qualified students not enrolled in the Honors Academies may take courses marked as academy courses by recommendation of the teachers and/or approval of the Department Head.

## CONTENTS

The DePaul Catholic graduate will exhibit the academic aptitude for success in higher education and possesses a variety of intellectual skills that go beyond college entrance requirements. The student has an appreciation for learning and is willing to be accountable for one's own academic accomplishments. Our broad-based curriculum is designed to meet the growing demands of a faith-filled citizen in global society.

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# GRADUATION REQUIREMENTS 

Theology<br>English<br>Mathematics<br>Science<br>Social Studies<br>Physical Education, Health, Driver Education<br>World Language<br>Technology and Career Education (Infused)<br>20 credits<br>20 credits<br>20 credits<br>15 credits<br>15 credits<br>15 credits<br>10 credits

When electives are added, typical students have more than 140 credits


## COURSE LEVELS

The curriculum offerings provide for differentiated course levels. The number of levels in a department is flexible according to the needs of the students. Students are assigned to classes based on their scholastic history, teacher recommendations, past grade achievements, and test data. Periodic reviews of a student's course level assignment are conducted. If it appears justified that a student is misplaced at a course level, an opportunity will be provided for movement to a more suitable group where possible.

*Due to the rigorous demands of Advanced Placement coursework, the recommended concurrent maximum of AP courses is four.

## GPA ADDED VALUE

For purposes of computing grade point averages, courses will be weighted in direct proportion to their assigned number of credits. All credit courses will be included in the computation.

Grades earned in Honors or AP courses are awarded GPA added values. Grades earned in Honors Courses are awarded an additional 0.33. Grades earned in Advanced Placement courses are awarded an additional 0.67.

## GRADE CALCULATIONS

In the default grade system, these are the GPA values for each grade:
A+ 4.33
A 4.00
A- 3.67
B+ 3.33
B 3.00
B- 2.67
C+ 2.33
C 2.00
C- 1.67
D+1.33
D 1.00
F 0.00

In a College Prep course, a B is awarded 3.00 GPA points. In an Honors level course, a B is awarded 3.33 GPA points due to the 0.33 added value. Similarly, in an Advanced Placement course, a B would be awarded 3.67 GPA points due to the 0.67 added value.

No added value points are awarded for an Fin either an Honors or Advanced Placement course. Semester and cumulative averages appear on each student's semester report card.

## DUAL ENROLLMENT PROJECT ACCELERATION

The Dual Enrollment and Project Acceleration programs allow high school students to satisfy high school graduation requirements while earning college credits. Approved courses are taught by high school teachers who meet college-level educational standards. The courses are approved by partnered colleges and can be transferred as college credit. Most accepted/ approved high school courses are AP or Honors level and are for Juniors and Seniors.

The present cost is $\$ 100.00$ per credit. A three-credit course will be $\$ 300.00$ at registration, which translates into savings towards college in both time and money.


## Project Acceleration

Courses marked with "SHU" are a part of the Seton
Hall University Project
Acceleration Program.


## Dual Enrollment

Courses marked with "CU" are a part of the Caldwell University Dual Enrollment Program.

## THE HONORS ACADEMIES

TheAcademy ofScience andTechnology welcomed its first class in the fall of 2019. The Academy was comprised of two courses of study: Engineering and Computer Programming. Based on its resounding success, we expanded offerings to include Medical Science in the fall of 2020.

In addition, a second honors academy, The Academy of Arts and Humanities accepted its first class in the fall of 2020. This Academy is comprised of three courses of study as well: Arts and Letters, General Humanities, and Law and Government.

The fall of 2022 marks the inaugural year of our third academy, Business.

Although these courses are open to any student with the appropriate prerequisite, more rigorous sections are run for students in the academy on the honors level.

## Course Notations

Courses marked with "AST" are a part of the Academy of Science and Technology.

Courses marked with "A\&H" are a part of the Academy of Arts and Humanities.

Courses marked with "BUS" are a part of the new Business Academy.

More information about the Honors Academies is available on the DePaul Catholic Website under Academics.

## FRESHMAN CYCLES

The freshmen will be exposed to various quarterly courses to assist in their high school transition and enhance the freshman experience. Courses offered may include Visual Arts 9, Music Appreciation 9, and Computer Literacy.

## HONORS ADMISSIONS CRITERIA

The process used to place a student includes careful consideration of his/her standardized testing scores, historical performance, and classroom observations in the target subject area. No single instrument is perfect, but the rubric used for placement has been carefully crafted and proven. Despite best efforts in recommending placement, some students and parents may disagree with these decisions based on the student's affinity for the subject material. Parents and students are invited to discuss their concerns with the current classroom teacher and the Department Head.

The following are the general guidelines for admissions into an honors-level course. Please refer to the specific course prerequisites for the most accurate information.

Grade 9:
HSPT minimum score in the 90th National Percentile in Language and Reading and a Composite Scoring Index (CSI) of 120

Grade 10, 11, and12:
PSAT EBRW score of 550 for Humanities or 500 for Math; an A in college prep present course to advance; an A - in the present honors course to continue; recommendation of current teacher and Department Head.

## LIKELIHOOD OF HONORS APPROVAL

## Courses with 2 Criteria:

Meets both criteria: Approved Meets 1 of 2: Approval Unlikely Meets 0 of 2: Not Approved

## Courses with 3 Criteria:

Meets 3 criteria: Approved
Meets 2 of 3 criteria: Approval Likely
Meets 1 of 3: Approval Unlikely
Meets 0 of 3: Not Approved

Courses with 4 Criteria:
Meets 4 criteria: Approved Meets 3 of 4 criteria: Approval Likely Meets 2 of 4: Approval Unlikely Meets 0 or 1: Not Approved

## THEOLOGY DEPARTMENT

## The United States Catholic Conference of Bishops (USCCB)

has instituted an integral, consistent, and rigorous Theology curriculum that will help students to come to know Jesus Christ and live the Gospel Message and values as they assume an active role in today's Church and the world. What is distinctive about the framework is its Christological emphasis and its thorough incorporation of the understanding of Divine Revelation presented in Del Verbum. The spiritual, intellectual, developmental, and cultural aspects of adolescence are addressed in the curriculum.

| COURSE NUMBER | COURSE LEVEL | COURSE <br> TITLE | COURSE CREDITS | GRADE LEVEL |
| :---: | :---: | :---: | :---: | :---: |
| 10901 | CP | Theology 9: Sacred Scripture and Christology | 5 | 9 |
| 10902 | H | Honors Theology 9: Sacred Scripture and Christology | 5 | 9 |
| 11001 | CP | Theology 10: Paschal Mystery/The Church | 5 | 10 |
| 11002 | H | Honors Theology 10: Paschal Mystery/The Church | 5 | 10 |
| 11101 | CP | Theology 11: Sacramental/Moral Theology | 5 | 11 |
| 11102 | H | Honors Theology 11: Sacramental/Moral Theology | 5 | 11 |
| 11201 | CP | Theology 12: Catholic Social Teaching/World Religions | 5 | 12 |
| 11202 | H | Honors Theology 12: Discipleship | 5 | 12 |

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## THEOLOGY COURSES


#### Abstract

Theology 9 In the first semester of this year-long course, students are given a general knowledge and appreciation of the Sacred Scriptures. Through their study of the Bible, they will come to encounter the living Word of God, Jesus Christ. In this course, they will learn about the Bible, authored by God through Inspiration, and its value to people throughout the world. They will learn how to read the Bible and will become familiar with the major sections of the Bible and the books included in each section. The students will pay particular attention to the Gospels, where they may grow to know and love Jesus Christ more personally.


The second semester introduces students to the mystery of Jesus Christ, the living Word of God, and the Second Person of the Blessed Trinity. In this course, students will understand that Jesus Christ is the ultimate Revelation to us from God. In learning about who he is, the students will also learn who he calls them to be.

Honors Theology 9
A\&H
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As an honors-level course, students in this course are provided with the opportunity to integrate Scripture with selections from contemporary literature and Church documents.

## Theology 10

The first semester of this year-long course will help students understand all that God has done for us through his Son, Jesus Christ. Through this course of study, students will learn that from the first moment of creation, God has planned for us to share in Divine life as children of God the Father, sisters, and brothers of the Son, united in the Holy Spirit. This is accomplished

## Theology 10 cont'

through the Redemption Christ has won for us. Students will learn how we share in this redemption through Christ and will also be introduced to what it means to be a disciple of Jesus Christ, responding to his call in our lives.

The second semester will help the students to understand that in and through the Church, they encounter the living Jesus Christ. They will be introduced to the fact that the Church was founded by Christ through the Apostles and is sustained by Him through the Holy Spirit. The students will come to know that the Church is the living Body of Christ today. This Body has both divine and human elements. In this course, students will learn not so much about the events in the life of the Church, but about the sacred nature of the Church. Also included in the second semester is a study of Christian Sexuality, through which students will come to a greater understanding of how human sexuality is rooted in our Christian faith, and the importance of this in relation to behavior.

Honors Theology $10 \quad$ SH $\quad$ A\&H
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As an honors-level course, students in this course are provided with the opportunity to integrate Scripture with selections from contemporary literature and Church documents. At this level, students will also develop and coordinate an end of year service retreat (Cardboard City) that will prepare them for additional service in their junior year.

## THEOLOGY COURSES cont'

## Theology 11

The first semester of this year-long course will help students understand that they can encounter Christ today in a full and real way in and through the sacraments, and especially through the Eucharist. Students will examine each of the sacraments in detail so as to learn how they may encounter Christ throughout life.

The second semester of this course will help students understand that it is only through Christ that they can fully live out God's plans for their lives. Students are to learn the moral concepts and precepts that govern the lives of Christ's disciples.

| Honors Theology 11 | SH | A\&H |
| :--- | :--- | :--- |

The first semester of this year-long course will help students understand that they can encounter Christ today in a full and real way in and through the sacraments, and especially through the Eucharist. Students will examine each of the sacraments in detail so as to learn how they may encounter Christ throughout life.

The second semester of this course will help students understand that it is only through Christ that they can fully live out God's plans for their lives. Students are to learn the moral concepts and precepts that govern the lives of Christ's disciples. As an honors-level course, students in this course are provided with the opportunity to integrate Scripture with selections from contemporary literature and Church documents.

## Theology 12

The first semester of this year-long course will introduce students to the Church's social teaching. In this course, students are to learn how Christ's concern for others, especially the poor and needy, is present today in the Church's social teaching and mission.

The second semester of this course continues the foundation laid in the previous six courses, comparing the teaching of the Catholic Church to other traditions, both Christian and NonChristian, with the goal of increasing human unity through fostering awareness of the great spiritual truths which are found in these other communities as well as understanding the ways in which we differ.

| Honors Theology 12 | SH | A\&H |
| :--- | :--- | :--- |

In addition to the Theology 12 topics of Catholic Social Teaching/World Religions, the year-long Honors Theology 12 course expands and provides depth of study with a catholic/ universal vision of unity, peace, and justice. Through the use of the written word, an understanding of spirituality, and involvement in social action, students will be challenged to explore their relationship with the global community. In studying various world religions, students will use methods of comparative examination and empathetic exploration involving various texts and other resources. Thus, the course informs and challenges students to continue the work of peace and justice and to conform their lives with Jesus Christ as the focus of Christian living.

As an honors-level course, students are provided with the opportunity to integrate Scripture, contemporary literature and Church documents to support their understanding of their studies.

## Christian Service Program

All students are required to complete 15 hours of service each year, to total 60 hours by the end of senior year.

Recommended ministries would include:
8th Grade - a project planned by 8th Grade Director
Freshmen/Sophomores - service to the Elderly, Sick and Dying, or Disabled Adults, and/or service to Children

Juniors - service to the Poor
Seniors - service to a site and organization of their choosing encompassing any of the approved ministries from: Elderly, Sick and Dying, or Disabled Adults, Children or the Poor.


## ENGLISH DEPARTMENT

## ADVANCED PLACEMENT ADMISSIONS CRITERIA

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ADVANCED PLACEMENT ENGLISH LANGUAGE
PSAT EBRW score of 550
A- average in English 10, Honors course;
A in college prep English 10 class to advance
Recommendation of English teacher and Department Head
Consultation with the present teacher, AP teacher, and approval of Department Head
Class size is limited.
ADVANCED PLACEMENT ENGLISH LITERATURE AND COMPOSITION
PSAT EBRW score of 550
A- average in English 11, Honors course;
A in college prep English 11 class to advance
Recommendation of English teacher and Department Head
Consultation with the present teacher, AP teacher, and approval of Department Head
Class size is limited.
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## REQUIRED CORE COURSE OFFERINGS

| COURSE <br> NUMBER | COURSE LEVEL | COURSE TITLE | COURSE CREDITS | GRADE LEVEL |
| :---: | :---: | :---: | :---: | :---: |
| 20101 | CP | English 9: Introduction to Genres | 5 | 9 |
| 20102 | H | Honors English 9: Introduction to Genres | 5 | 9 |
| 21101 | CP | English 10: American Literature | 5 | 10 |
| 21102 | H | Honors English 10: American Literature | 5 | 10 |
| 22101 | CP | English 11: British Literature | 5 | 11 |
| 22102 | H | Honors English 11: British Literature | 5 | 11 |
| 25104 | AP | Advanced Placement English Language and Composition | 5 | 11 |
| 23101 | CP | English 12 | 5 | 12 |
| 23102 | H | Honors English 12 | 5 | 12 |
| 25004 | AP | Advanced Placement English Literature and Composition | 5 | 12 |

## ELECTIVE COURSE OFFERINGS

| 24051 | CP | Media Literacy* |
| :---: | :---: | :---: |
| 28051 | CP | Creative Writing* |
| 21151 | CP | Mythology* |
| 24152 | CP | Honors Women in Literature |
| 24251 | CP | Sports in Literature* |


| 2.5 |  |
| :---: | :---: |
| 2.5 | $=\frac{11,12}{10}$ |
| 2.5 | $=\frac{10,11,12}{12}$ |
| 2.5 |  |
| 2.5 |  |

*Honors levels of these courses are offered to Humanities Academy Students only

## ENGLISH COURSES

## English 9

In this year-long course, students study short stories, poems, plays, and novels to continue the development of their skills in close reading and understanding of literature. Student discussion focuses on the traditions of various cultures and the basic literary elements of the different genres. Essays are primarily narrative with instruction and practice in development methods, selection and arrangement, unity, transition, points of view and use of sensory images. Students continue their vocabulary development and practice grammatical and usage conventions as appropriate to their composition development. They begin to develop four-year writing portfolios that provide opportunities for evaluation and self-assessment.
Honors English $9 \quad$ A\&H
In this year-long course, the students develop skills of literacy while encouraging independent and higher-level critical thinking. Through an integrated program of literature, grammar, vocabulary, and writing, students gain the skills needed to become more discerning readers and writers. A genre-based study of literature, non-fiction, and fiction, includes selections that challenge analytical abilities at a more advanced level. Writing instruction emphasizes writing as a process and guides students to construct clear and well-supported literary analysis while introducing other forms of discourse. A willingness to take academic risks and participation in class discussions is expected. Learning to become discriminating users of the Internet for research and collaboration is also taught. Students begin to develop four-year writing portfolios that provide opportunities for evaluation and self-assessment.

## English 10

In this chronological year-long survey emphasizing knowledge of Western literary heritage, students read major writers of American literature from the Colonial period to the 21st century. In composition instruction, students practice both expository types and narrative skills, including aspects of voice, tone, dialogue, imagery, and characterization. Course objectives also include vocabulary development, grammar review, and practice in specific SAT/ACT skills. The writing portfolio continues to develop and expand.

## Honors English 10 A\&H

In this chronological year-long survey students read major writers of American literature from the Colonial period to the 21st century. This course reinforces and expands the literary analysis and writing skills taught and practiced in the 9th grade honors level course. Literature, grammar, vocabulary, and writing assignments serve to advance comprehension while strengthening the students' ability to formulate and express well-founded ideas. Both the pace of instruction and choice of literature reflect a higher level of expectation in terms of the students' ability to explicate the writer's purpose

## Honors English 10 cont'

and use of rhetorical strategies. Students are expected to demonstrate a willingness to rely on an independent analysis in class discussion and written work. The writing portfolio continues to develop and expand.

## English 11

In this year-long survey, students read major British writers. Students engage in literature that encompasses the themes, diversity, and complexity that characterize British thought and society. Practice in analytical and persuasive essays encourages clearer thinking and more effective writing. The study of vocabulary and grammar continues, supporting the students' preparation for the SAT/ACT and the college application process. The writing portfolio continues to develop and expand. The MLA research process is further practiced resulting in the completion of a well-documented research paper.

| Honors English 11 | SH CU | A\&H |
| :--- | :--- | :--- |

In this year-long survey, students read major British writers. Students engage in literature that encompasses the themes, diversity, and complexity that characterize British thought and society. Select works in this honors course require a higher level of both critical reading skills and independent analysis from students. Practice in analytical and persuasive essays encourages an increasingly mature quality of writing that evidences original thought. The study of vocabulary and grammar continues, supporting the students' preparation for the SAT/ACT and the college application process. The writing portfolio continues to develop and expand. The MLA research process is further practiced resulting in the completion of a well- documented research paper.

| AP English Language and Composition | A\&H |
| :--- | :--- |

A summer assignment is required.
This year-long course prepares students for the higher-level reading and writing skills used in college. The course places an emphasis on rhetoric and composition with particular attention to argumentative, narrative and expository works. This course promotes critical reading and writing with attention to the nuances of language, stylistic distinction, purpose, and audience. Students learn to recognize specific devices such as narrative structure, selection of detail, and manipulation of language, tone, diction, allusion, imagery, and syntax. This class nurtures students' growth as mature, critical, and creative thinkers.

At the conclusion of the course, all students will take the Advanced Placement Exam for which there is an additional fee.

## ENGLISH COURSES cont'


#### Abstract

English 12 This year-long course returns to the earlier genre approach to studying short fiction, drama, poetry, and novel with the continued development of student skills in reading imaginative literature. The reading selections extend from the classics of world literature to multi-cultural contemporary pieces. Students deepen their appreciation of literature and its role in explaining the universal condition and the perspectives of different cultures and societies, past and present. This course also includes vocabulary development, grammar review and practice in specific SAT/ACT skills as needed. The writing portfolio continues to develop and expand. The MLA research process is further practiced resulting in the completion of a well-documented research paper.


## Honors English 12 SH CU

This year-long course returns to the earlier genre approach to studying short fiction, drama, poetry, and novel with the continued development of students' skills in reading imaginative literature. The reading selections extend from the classics of world literature to multi-cultural contemporary pieces. Students deepen their appreciation of literature and its role in explaining the universal condition and the perspectives of different cultures and societies, past and present. Students in this course should have well-developed communication skills and the ability and confidence to interpret literature independently. Exposure to literary criticism is integrated into textual analysis. Assessment includes reaction/reflection papers, formal and personal essay and multi-media presentations. Students are also expected to be creative and critical thinkers in their oral and written work. This course also includes vocabulary development, grammar review and practice in specific SAT/ACT skills as needed. The writing portfolio continues to develop and expand. The MLA research process is further practiced resulting in the completion of a well-documented research paper.

AP English Literature and Comp. $\quad$ SH CU $\quad$ A\&H
A summer assignment is required.
This year-long course stresses representative classic literary works from different genres, including essay, poetry, drama, and novel. Analysis of meaning, idea, and style is stressed rather than historical background or factual material. Students develop their understanding of how writers use language to provide both meaning and pleasure to their readers. Students learn to analyze and interpret literature through various critical perspectives. Students practice careful observation of textual detail, establishing connections among their observations and drawing inferences from those connections. Writing instruction focuses on the critical analysis of literature, improving students' abilities to explain clearly and cogently their understanding and interpretation of the literary works they have read. The class is conducted in a seminar style with the emphasis on discussion and evaluation.

At the conclusion of the course, all students will take the Advanced Placement Exam for which there is an additional fee.


#### Abstract

Media Literacy Media Literacy is a semester course designed to help students develop an informed and critical understanding of mass media - as information sources, as entertainment, and as an industry - as well as to examine, interpret, and evaluate the messages contained within and their social, cultural, and political implications. This course exposes students to the complexities of media and provides the methods of analysis necessary to interpret media content as well as methods of critical writing appropriate to media analysis. In addition, this course emphasizes the skills and knowledge required to produce the school newspaper, The Emerald.


## Creative Writing

This semester course provides students with opportunities to develop their literary talents. It emphasizes the development of skills in the creation and study of prose, drama, and poetry in an intensive workshop setting. Students are required to write in a variety of genres and to demonstrate a facility for giving and receiving constructive criticism. Students will demonstrate a better understanding of, and facility with, the revision and writing process through mastery of editing skills. Students will contribute their writing to Impressions, our literary magazine, and will gain knowledge about publication.

## Mythology

This semester course is a survey of ancient Greek and Roman stories about heroes, gods, and the universe. It illustrates the influence of these myths on the art, literature, and culture of the modern world.


## ENGLISH COURSES cont'

## Sports in Literature

This semester class will focus on the connection between sports and literature. The competition, spectacle, personal struggle, and exaggerated personalities so characteristic of those involved in sports provide the perfect backdrop to look deeply into human nature and create literature that transcends sports itself. Themes studied will include leadership and character, definitions of success and failure, hero worship, rivalries, and fate. Novels, short stories and articles will be studied.

> | Honors Women in Literature |
| :--- |
| This semester course introduces students to female authors |
| of fiction, poetry, and critical theory from around the world. |
| The course is aimed at providing students with a historical |
| approach to understanding literature by female authors. |
| Some authors we will focus on will be Willa Cather, Joyce Carol |
| Oates, Kate Chopin, Maya Angelou, Emily Dickinson, Mary |
| Shelley, and Virginia Woolf. Students will learn to understand, |
| analyze, and evaluate reading materials; write timed, |
| impromptu essay responses; edit and revise compositions; |
| and provide an effective, well-organized, fully developed |
| presentation. |

## WORLD LANGUAGES DEPARTMENT ADVANCED PLACEMENT ADMISSIONS CRITERIA

ADVANCED PLACEMENT SPANISH LANGUAGE<br>PSAT EBRW score of 550<br>Grade of B+ for Spanish 3, Honors and/or Spanish 4, Honors<br>Recommendation of present World Language teacher and Department Head

## COURSE OFFERINGS

| COURSE NUMBER | COURSE LEVEL | COURSE TITLE | COURSE CREDITS | GRADE <br> LEVEL* |
| :---: | :---: | :---: | :---: | :---: |
| 32101 | CP | Italian 1 | 5 | 9 |
| 32201 | CP | Italian 2 | 5 | 10 |
| 32302 | H | Honors Italian 3 | 5 | 11 |
| 32402 | H | Honors Italian 4 | 5 | 11, 12 |
| 31101 | CP | Spanish 1 | 5 | 9 |
| 31502 | H | Honors Spanish 1 | 5 | 9 |
| 31201 | CP | Spanish 2 | 5 | 10 |
| 31202 | H | Honors Spanish 2 | 5 | 10 |
| 31301 | CP | Spanish 3 | 5 | 11 |
| 31302 | H | Honors Spanish 3 | 5 | 11 |
| 31402 | H | Honors Spanish 4 | 5 | 11, 12 |
| 31404 | AP | Advanced Placement Spanish Language | 5 | 11, 12 |

## WORLD LANGUAGE COURSES

## Italian 1


#### Abstract

This first-year course in Italian presents the student with the elements needed to develop the skills of listening, speaking, reading and writing in the target language. Grammar, thematic vocabulary and basic syntax are supported by written and oral drills. Appropriate grade-level reading and writing assignments, cultural materials and situations for cooperative learning experiences are provided.


## Italian 2

A summer assignment is required.
This second-year program in Italian continues to build on the structures presented in Italian I. Emphasis is placed on the development of vocabulary, grammatical structures, and syntax. Skills in oral communication, writing, and reading for comprehension are stressed.

## Honors Italian 3 SH

Prerequisite: $B+$ or higher in Italian 2 and the recommendation of the present World Language teacher.
A summer assignment is required.
This third-year course of study continues the development of grammar and syntax. Advanced vocabulary is presented and skills in writing and reading are reinforced. Students learn about Italian cultural contributions made by the Italian people.

## Honors Italian 4 SH

Prerequisite: A- or higher in Honors Italian 3 and the recommendation of the present World Language teacher. A summer assignment is required.
This year-long course provides students with the opportunity to apply vocabulary, grammar and syntax previously acquired. The focus of study is the further development of the essential communication skills of speaking and listening. The use of the target language in creative writing projects is essential. Reading skills are enhanced by a variety of materials.

## Spanish 1

This first-year course in language endeavors to provide the student with the four essential skills needed for foreign language acquisition: to speak so as to be understood, to listen and be able to understand, to read with comprehension and to write with clarity. Current, relevant vocabulary is presented thematically, and grammar structures and basic rules of usage and syntax are included. Textbooks, workbooks and student manuals provide reading selections and cultural materials for cooperative learning and formal grammar presentation.

## Honors Spanish 1

This Honors Spanish 1 year-long course is prepared for students who obtain a grade of a $\mathrm{B}+$ or higher on the Spanish placement exam. During the first year of Spanish class, students are exposed to different topics including standard grammar, present and past tense. Relevant vocabulary is presented thematically. This course helps students to expand their knowledge of the four elements of language: reading, writing, listening, and speaking.

## Spanish 2

A summer assignment is required.
This year-long course presents the more complex structures of the Spanish language and expands the cultural themes presented in the first level. By the end of the year, the student has acquired a command of the key vocabulary and structures necessary for personal communication, as well as an appreciation of the breadth and variety of the Spanishspeaking world. Readings appropriate for the students' skill level are used to reinforce the grammar and structure presented.

## Honors Spanish 2

Prerequisite: B+ or higher in Spanish 1 and the recommendation of the present World Language teacher.
A summer assignment is required.
Created for advanced students, this year-long course presents the more complex structures of the Spanish language and expands the cultural themes presented in the first level. By the end of the year, the student has completed an extensive study of grammar and vocabulary, with emphasis on speaking and reading skills. Various readings in the target language reinforce the grammar and structure presented.

## Spanish 3

This year-long course allows the student to further his ability to hear and express him/herself in the language in a natural manner. Presentation of the vocabulary units enables the student to learn many synonyms, antonyms, and idioms in a conversational mode, which presents the language in a practical setting. Spanish 3 completes the cycle for college prep students.

## Honors Spanish 3 SH

Prerequisite: B+ or higher in Spanish 2 and the recommendation of the present World Language teacher.
A summer assignment is required.
This year-long course is designed for advanced students who may wish to continue the study of the target language in college. It includes an extensive study of grammar, development of vocabulary, more sophisticated composition work and opportunity for oral expression. Students also read a variety of short stories by representative Hispanic authors, and research about famous Latin painters and popular artists.

## WORLD LANGUAGE COURSES cont'

## Honors Spanish 4 <br> SH

Prerequisite: A- or higher in Spanish 3 and the recommendation of the present World Language teacher.
A summer assignment is required.
This advanced-level year-long course provides the student with ample opportunity to finely hone the target communication skills acquired in the previous years of study. Through an extensive program of grammar, vocabulary and writing practice, students gain the skills needed to become better readers, writers and speakers of the target language.

Students read and discuss short stories that present the opportunity to reinforce reading, speaking, listening, and writing skills through individual and group class activities. Honors Spanish 4 is a rigorous course that prepares students to continue working in the acquisition of the language in college.

Advanced Placement Spanish Language
Prerequisite: A or higher in Honors Spanish 3 and the recommendation of the present World Language teacher. A summer assignment is required.
Through a variety of exercises and activities, students' skills in the target areas of grammar, vocabulary, composition, and oral communication are strengthened and refined in this year-long course.

At the conclusion of the course, all students will take the Advanced Placement Exam for which there is an additional fee.


# MATHEMATICS DEPARTMENT ADVANCED PLACEMENT ADMISSIONS CRITERIA 

ADVANCED PLACEMENT CALCULUS AB AND BC<br>PSAT Math score of 500<br>B+ average in Honors Precalculus<br>Honors Physics taken prior to or concurrently with is strongly recommended Recommendation of current Math teacher and Department Head

ADVANCED PLACEMENT STATISTICS
PSAT EBRW and Math score of 550
B average in Algebra 2 or Honors Algebra 2
Concurrently in a Precalculus or Calculus course
Recommendation of current Math teacher and Department Head

## REQUIRED CORE COURSE OFFERINGS

| COURSE <br> NUMBER | COURSE <br> LEVEL | COURSE TITLE | COURSE CREDITS | GRADE LEVEL |
| :---: | :---: | :---: | :---: | :---: |
| 40100 | CP | Foundations of Algebra 1 | 5 | 9 |
| 40001 | CP | Algebra 1 | 5 | 9 |
| 40002 | H | Honors Algebra 1 | 5 | 9 |
| 42000 | CP | Foundations of Geometry | 5 | 10 |
| 42001 | CP | Geometry | 5 | 10 |
| 42002 | H | Honors Geometry | 5 | 9, 10 |
| 43000 | CP | Foundations of Algebra 2 | 5 | 11, 12 |
| 43001 | CP | Algebra 2 | 5 | 11, 12 |
| 43002 | H | Honors Algebra 2 | 5 | 10, 11 |
| 44001 | CP | Precalculus | 5 | 11, 12 |
| 44002 | H | Honors Precalculus | 5 | 11, 12 |
| 46000 | CP | Selected Topics in Discrete Math | 5 | 12 |
| 47001 | CP | Trigonometry | 5 | 12 |
| 45001 | CP | Calculus | 5 | 17, 12 |
| 45002 | H | Honors Calculus | 5 | 11, 12 |
| 45004 | AP | Advanced Placement Calculus AB | 5 | 11, 12 |
| 45101 | AP | Advanced Placement Calculus BC | 5 | 12 |
| ELECTIVE COURSE OFFERINGS |  |  |  |  |
| 48004 | AP | Advanced Placement Statistics | 5 | 11, 12 |
| 40151 | CP | Financial Literacy | 2.5 | 10, 17, 12 |
| 48851 | CP | Introduction to Statistics | 2.5 | 11, 12 |

## MATHEMATICS COURSES

Department approval (prior teachers, present teacher, and department head) is required for all Mathematics courses. In addition to the general requirements found on Page 8, please note the criteria listed for each course. Freshmen are placed in the appropriate level course based on the placement tests.


#### Abstract

Foundations of Algebra 1 This year-long course is especially designed and structured for the student who will benefit from reinforcement, practice, and drill. The student's fundamental mathematical skills are sharpened while the student is introduced to elementary Algebraic topics. The course includes the development of relations, functions, mathematical sentences, and their graphs from simple linear equations to quadratic functions.


## Algebra 1

This year-long course is a modern treatment of elementary algebra, with a balance of concentration on concepts and on skills. Fitting within the logical structure of algebra, there is a progression from the natural numbers to a basic understanding of the real number system. The course includes the development of relations, functions, mathematical sentences, and their graphs, from simple linear equations and functions to systems of linear equations, quadratic equations, and functions. Emphasis is placed on critical thinking and problem-solving skills, as well as on real-life applications.

## Honors Algebra 1 AST

This year-long course is designed for freshmen in the Honors program. It will cover the main topics in the college prep Algebra 1 course and, in addition, an in-depth study of other topics of Algebra 1 with emphasis on more advanced and original problem-solving techniques and applications. Selected advanced topics are covered according to group background.

## Foundations of Geometry

Prerequisite: Completion of Algebra 1 with lower than a C.
This year-long course is designed for students who need reinforcement in mathematical concepts. The topics covered are the same as those in Geometry. The course is structured so that student proof-writing is approached in an informal manner. Student eligibility is determined by the Mathematics Department.

## Geometry

Prerequisite: C or higher in Algebra 1
This year-long course introduces the students to techniques of logical reasoning while at the same time strengthening their basic algebraic skills. The students develop the ability to interpret and intuitively approach such areas as coordinate geometry, solid geometry, and practical applications of geometric principles.

| Honors Geometry |
| :--- |
| Prerequisite: Completion of Algebra 1 with a grade of A or A+ in |
| CP or B+ in Honors. |
| This year-long course includes an in-depth study of the |
| topics of Euclidean geometry. The use of manipulative and |
| geometric constructions allows for the discovery of postulates |
| and theorems. Emphasis is placed on the development of |
| inductive and deductive reasoning skills, problem-solving, |
| the connection between geometry and algebra, and practical |
| applications. |

## Foundations of Algebra 2

Prerequisite: Completion of Algebra 1, Foundations and Geometry, Foundations or the completion of Algebra 1 and Geometry with grades lower than a C.
This year-long course is designed to follow Foundations of Geometry. The topics covered are the same as those taught in Algebra 2. However, this course is especially designed and structured for those students who need reinforcement, practice, and drill in the fundamental concepts of algebra.

## Algebra 2

Prerequisite: Successful completion of Algebra 1 and Geometry with grades of C or higher in both.
This year-long course is a second course in Algebra. Following a brief review of the topics of Algebra 1, the course includes the study of the following topics: complex numbers, quadratic equations, systems of equations, variation, compound inequalities, functions, radicals, and problem-solving. Algebra 2 may be followed by Precalculus or Trigonometry in senior year.

| Honors Algebra 2 | AST |
| :--- | :--- |

Prerequisite: Sophomores - Successful completion of Algebra 1, Honors with a grade of B+ or higher or Algebra 1, CP with a grade of A-. Juniors - Successful completion of Algebra 1, Honors and Geometry with grades of B+ or higher in both or Algebra 1, CP and Geometry with grades of $A$ - in both.
This year-long course is designed to cover the main topics in the college prep Algebra 2 course and, in addition, higherdegree equations, plane trigonometric functions, and trigonometric identities and formulae.


## MATHEMATICS COURSES cont'

Precalculus
Prerequisite: Completion of Algebra 2 with a grade of C or higher or completion of Algebra 2, Honors with a grade lower than B. This course is broad in scope, including the following topics: analytical geometry, trigonometry, conic sections, elementary polynomial functions, curve sketching, exponential and logarithmic functions, inequalities in one and two variables, and matrices. The graphing calculator is used in this course.

## Honors Precalculus

AST
Prerequisite: Completion of Algebra 2, Honors with a grade of B+ or higher. Taking Honors Physics concurrently is strongly recommended.
In this year-long course, the student is expected to gain deeper insight into the underlying structures of mathematics. The course is designed for mathematically oriented students who have demonstrated superior ability in Algebra 1, Geometry and Honors Algebra 2. Honors Precalculus is presented from the numeric, graphic and algebraic approach and incorporates the use of a graphing calculator. The following topics are included: statements and sets in mathematics, ordered fields, induction, sequences and series, algebra of functions, exponential and logarithmic functions, trigonometric functions and equations, algebra of vectors, plane analytic geometry of points and lines, analytic geometry and matrices, and an introduction to the derivative.

## Selected Topics in Discrete Math

Prerequisite: Completion of Algebra 2, Foundations.
This year-long course is designed for those seniors who have successfully completed Foundations of Geometry and Foundations of Algebra 2. The course includes a variety of selected mathematical topics designed to improve the students' mathematical ability and to strengthen the students' critical thinking skills. Topics will be included from Algebra, Probability, Statistics, Logic and Personal Finance.

## Trigonometry

Prerequisite: Completion of Algebra 2 with a grade lower than $C$. Topics in this year-long course include plane trigonometric functions and trigonometric identities and formulas. Emphasis is placed on the reinforcement of Algebra skills and on integrating topics of Algebra and Trigonometry. The graphing calculator is used extensively in this course.

## Calculus

Prerequisite: Completion of Precalculus or Honors Precalculus with a Teacher and Department Head Recommendation.
The topics include a review of elementary functions, analytical geometry, and trigonometry, together with the concept of limits, and curve sketching. The remainder of the course is devoted to the development of the differential and integral calculus in an informal manner. This year-long CP level course will concentrate on the mechanics of the topics.

| Honors Calculus |
| :--- |
| Prerequisite: Successful completion of Precalculus or |
| Honors Precalculus with a Teacher and Department Head |
| Recommendation. |
| The topics include a review of elementary functions, analytical |
| geometry, and trigonometry, together with the concept of |
| limits, and curve sketching. The remainder of the course is |
| devoted to the development of the differential and integral |
| calculus in an informal manner. This honors-level year-long |
| course will include applications and analysis of the topics. |

Advanced Placement Calculus AB
Prerequisite: Completion of Precalculus, Honors with a grade of B+ or higher. Taking Honors Physics prior to or concurrently is strongly recommended.
Advanced Placement Calculus offers two year-long courses,: $A B$ Calculus and $B C$ Calculus. The $A B$ Calculus course is a college-level course and will be approved only for students who have demonstrated superior ability in Honors Precalculus. The topics covered are those prescribed by the Advanced Placement Program of the College Board. A graphing calculator is used extensively to ensure a course that approaches topics numerically, graphically, and algebraically.

Students in this course must take the AP Statistics exam for which there is an additional fee.

AP Calculus BC NOT OFFERED IN 2022-2023 AST
The BC Calculus course is a continuation of the $A B$ Calculus and is offered to those students who have successfully completed $A B$ Calculus.
This course is rigorous in nature and the topics covered are those prescribed by the Advanced Placement Program of the College Board.

Students in this course must take the AP Statistics exam for which there is an additional fee.

## Advanced Placement Statistics

Prerequisites: Completion of Algebra 2, or Algebra 2, Honors with a grade of B or higher, competency in written communication, concurrently taking a Precalculus or Calculus course.
This year-long course is a college-level course in which the graphing calculator is used extensively. Students will be expected to analyze data using the exploratory and inferential techniques covered in the AP Statistics course description.

Students in this course must take the AP Statistics exam for which there is an additional fee.

## MATHEMATICS COURSES cont'

## Financial Literacy

As of the academic year 2019-20, Financial Literacy is a Middle School requirement for graduation.

This semester course will include financial, economic, business, and entrepreneurial literacy. Students will learn how to make personal economic choices that are appropriate for someone in their financial standing. An understanding of the role of the economy in society will be included as well as how to use entrepreneurial skills to improve productivity in the workplace and professional opportunities.


#### Abstract

Introduction to Statistics Prerequisites: Completion of Algebra 2, or Algebra 2, Honors with a grade of B or higher. Concurrently taking a Precalculus or Calculus course and teacher and Department Head recommendations also required. This semester elective course will involve creating hypotheses, making predictions, testing, and analyzing. Students will study the relationship between statistical data and a range of topics, including independent events, hypothesis testing, descriptive statistics, random variables, distributions, regression, and inferential statistics.


## SCIENCE DEPARTMENT

## ADVANCED PLACEMENT ADMISSIONS CRITERIA

ADVANCED PLACEMENT BIOLOGY<br>ADVANCED PLACEMENT CHEMISTRY<br>ADVANCED PLACEMENT ENVIRONMENTAL SCIENCE<br>PSAT Math score of 550<br>A minimum final grade of B in Honors level courses in Biology, Chemistry, Algebra 2, and/ or Precalculus; or a minimum final grade of B+ in college-prep Biology, Chemistry, and Algebra 2.<br>Recommendation of present Science teacher and Department Head

## ADVANCED PLACEMENT PHYSICS

PSAT Math score of 550
A minimum final grade of $B$ in all previous science courses
A minimum final grade of B in Algebra 2 or currently enrolled in Algebra 2
A minimum final grade of $B$ in Honors Physics
Recommendation of present Science teacher and Department Head

## SCIENCE DEPARTMENT cont'

REQUIRED CORE COURSE OFFERINGS

| COURSE <br> NUMBER | COURSE LEVEL | COURSE TITLE | COURSE CREDITS | GRADE LEVEL |
| :---: | :---: | :---: | :---: | :---: |
| 50000 | CP | Foundations of Biology | 5 | 9 |
| 50001 | CP | Biology | 5 | 9 |
| 50002 | H | Honors Biology | 5 | 9 |
| 51000 | CP | Chemistry in the Community | 5 | 10 |
| 51001 | CP | Chemistry | 5 | 10 |
| 51002 | H | Honors Chemistry | 5 | 10 |

## ELECTIVE COURSE OFFERINGS*

| 50004 | AP | Advanced Placement Biology | 5 | 11, 12 |
| :---: | :---: | :---: | :---: | :---: |
| 51004 | AP | Advanced Placement Chemistry | 5 | 11, 12 |
| 55004 | AP | Advanced Placement Environmental Science | 5 | 11, 12 |
| 53001 | CP | Environmental Science | 5 | 11, 12 |
| 52004 | AP | Advanced Placement Physics 1 | 5 | 11, 12 |
| 52001 | CP | Physics | 5 | 11, 12 |
| 52002 | H | Honors Physics | 5 | 11, 12 |
| 57101 | CP | Earth and Space Science | 5 | 11, 12 |
| 56001 | CP | Human Anatomy and Physiology | 5 | 11, 12 |
| 56002 | H | Honors Human Anatomy and Physiology | 5 | 11, 12 |
| 56101 | CP | Exercise Science/Introduction to Sports Medicine | 5 | 12 |
| 51102 | H | Honors Health and Disease | 2.5 | 9 |
| 51151 | CP | Forensic Science | 2.5 | 11, 12 |
| 55051 | CP | Genetics | 2.5 | 10, 11, 12 |
| 55052 | H | Honors Genetics | 2.5 | 10, 11, 12 |
| 57052 | H | Honors Microbiology | 2.5 | 10, 11, 12 |
| 59152 | H | Honors Current Topics in Biological Research | 2.5 | 11, 12 |
| 59152 | H | Honors Histology | 2.5 | 11, 12 |

*15 CREDITS OF SCIENCE ARE REQUIRED FOR GRADUATION

In addition to the general requirements found on Page 8, please note the criteria listed for each course. Freshmen are placed in the appropriate level course based on the placement tests.

## SCIENCE COURSES

Foundations of Biology
This year-long course presents a unique view of biological concepts in animal and plant studies, human physiology, disease, and consumerism. Students are held responsible for traditional concepts while being exposed to the ramification of biology in everyday life. The information is presented in a way that students can not only establish in their own minds a reason for knowing something but can also translate experiences into relationships, applying these relationships to their lives in a concrete way.

## Biology

This year-long course is a cellular approach to the study of life. The aim is to develop an understanding of the problems and generalizations of life science. The text used stresses an inquiry approach both in the classroom and in lab work. The subject matter includes a study of the nature of life, organism, continuity of life, physiology, evolution, and ecology.

## Honors Biology

AST
In this year-long course, students are introduced to the basic concepts of biology and will further examine this information as a study of the greater theme of life as it exists in nature. The biological processes of living things are studied in detail, from basic cellular processes to the systems of multicellular organisms. The subject matter includes a study of the nature of life, organism, continuity of life, physiology, evolution, and anatomy. Laboratory exercises complement the current work being discussed in the classroom.

Chemistry in the Community
Prerequisites: Completion of Algebra 1 Foundations, Biology Foundations, or completion of Algebra 1, CP Biology with a grade lower than a C+ in both courses.
This year-long course provides a foundation for future scientific study. Concepts of Chemistry are explored with emphasis on the periodic table, laboratory experiments, demonstrations and mathematical solutions.

## Chemistry

Prerequisites: Completion of Algebra 1 and Biology with a minimum final grade of B or completion of Algebra 1, Honors and Biology, Honors with a minimum final grade lower than a C+. Strong analytical and Algebraic skills are necessary to be successful in this level course. Students will leave this yearlong course with the ability to solve problems using a factorlabel (dimensional analysis) method, significant figures, and algebraic manipulation of symbolic equations. Topics of study include atomic structure and theory, chemical bonding, chemical reactions, gas laws, acids and bases, and stoichiometry. The course combines lectures, self-study, traditional laboratory exercises, and experimental design to enhance understanding of the big ideas in chemistry.

## Honors Chemistry

Prerequisites: $A$ - in both Algebra 1 and Biology or B in Algebra 1, Honors and Biology, Honors.
This year-long chemistry course is designed for students who are considering a science career and who have shown superior aptitude and interest in science and mathematics. The emphasis is on quantitative, analytical, and problemsolving skills. Topics include modern atomic theory, periodic properties and laws, bonding and molecular dynamics, stoichiometric relationships, gas laws, thermodynamics, acidbase reactions, kinetics, electro-chemistry, nuclear chemistry, and equilibrium.

Advanced Placement Biology AST
A summer assignment is required.
This year-long course is a lab-based course that is a rigorous survey of the major biological themes. Because of the ongoing information explosion in biology, the goals of this course cannot be based solely on the accumulation of facts and technical details. Rather, students are expected to develop a framework for modern biology in which they understand concepts and themes that integrate and unify the major topics and science as a process of inquiry. The course emphasizes the development of thorough and accurate observation skills, and the careful consideration of facts to substantiate the thoughts and ideas. Heavy reading assignments reinforce the material presented in class. Content areas that are stressed include biochemistry, organic chemistry, cell physiology, genetics, microbiology, ecology, and evolution. There is a heavy emphasis on laboratory work and the ability of the student to combine lecture information with readings for problem-solving and further investigation.

Students in this course must take the AP Biology examination in May for which there is an additional fee.


## SCIENCE COURSES cont'


#### Abstract

Advanced Placement Chemistry AST A summer assignment is required. Advanced Placement Chemistry is a highly-mathematical, introductory college-level year-long course that builds upon the knowledge base gained in a first-year chemistry course. This course emphasizes inquiry and reasoning skills as methods to develop enduring understandings. The areas of study include but are not limited to: the structure of matter, the properties of matter, chemical reactions, rates of chemical reactions, thermodynamics, and equilibrium. Students will be required to do independent research and reading, write formal lab reports, and think analytically about problems they may never have encountered before.


Students will be engaged in hands-on laboratory work, integrated throughout the course, which accounts for a minimum of $25 \%$ of the course time.

Students in this course must take the AP Chemistry examination in May for which there is an additional fee.

> | Advanced Placement Environmental Science |
| :--- |
| A summer assignment is required. |
| The goal of this year-long AP Environmental Science course is |
| to provide the students with scientific principles, concepts, and |
| methodologies required to understand the interrelationships |
| of the natural world, to identify and analyze environmental |
| problems both natural and human-made, to evaluate the |
| relative risks associated with these problems, and to examine |
| alternative solutions for resolving or preventing them. The AP |
| Environmental Science course is demanding and designed |
| to be the equivalent of a one-semester, introductory college- |
| level course in Environmental Science. Environmental Science |
| is interdisciplinary; it embraces a wide variety of topics from |
| different areas, which include concepts of geology, biology, |
| chemistry, and geography. |

Areas of study include the structure and function of aquatic ecosystems and biomes, system modeling of ecosystems, population dynamics, nutrient cycles, human population growth, global atmospheric interactions, energy production, pollution, biodiversity, and deforestation. Students perform a significant amount of fieldwork in the form of observation and data collection on local ecosystems.

Students in this course must take the AP Environmental Science examination in May for which there is an additional fee.


#### Abstract

Advanced Placement Physics 1 AST

Prerequisite: Completion of Honors Physics with a minimum final grade of $B$. A summer assignment is required. This year-long course is a rigorous math-based course. It is designed to be equivalent to the first semester of an introductory college-level Algebra-based physics course. Students choosing to take this class will find it challenging, with extended study time requirements outside of class. On average, the student is expected to spend one hour on homework problems each night, with additional time spent reviewing the chapter in the book and examining homework solutions from the previous night's work.


Students are required to apply the principles learned in class to problem-solving in homework, test, and laboratory settings. The major topics of study include kinematics, Newtonian mechanics, energy, harmonic motion, waves, sound, electrostatics, and simple electric circuits.

At the conclusion of the course, all students will take the Advanced Placement Exam for which there is an additional fee.

Physics
Pre- or Co-requisite: Precalculus and completion of Algebra 2 with a minimum final grade of $B$.
A summer assignment is required.
This year-long course introduces students to the study of physics conceptually by studying physical phenomena, and by requiring them to describe those phenomena computationally and graphically, both in the classroom and the laboratory. The behavior of our physical universe is studied through the following topics: kinematics, dynamics, momentum, energy, thermodynamics, waves, light, optics, sound, electricity, and magnetism.

Honors Physics
Pre- or Co-requisite: Honors Precalculus and completion of Algebra 2, Honors with a minimum final grade of $B$.
A summer assignment is required.
This year-long course introduces students to the study of physics conceptually by studying physical phenomena, and by requiring them to describe rigorously, those phenomena computationally and graphically, both in the classroom and the laboratory. The behavior of our physical universe is studied through the following topics: kinematics, dynamics, momentum, energy, thermodynamics, waves, light, optics, sound, electricity, and magnetism.

## SCIENCE COURSES cont'

## Earth and Space Science

This year-long capstone science course is designed to cover space, earth, ocean, and atmospheric sciences in a rigorous, quantitative fashion, and builds on previous courses in biology, chemistry, and physical science by repeating and reinforcing content knowledge and problem-solving skills learned in those courses but used now in an earth science context. Earth and Space Science is a course focusing on the study of the Earth's lithosphere, atmosphere, hydrosphere, and its celestial environment. Students enrolled in this course analyze and describe Earth's interconnected systems and how they are changing due to natural processes and human influence. Topics covered include rocks, minerals, natural resource management, sculpturing of Earth's surface, plate tectonics, earthquakes, volcanoes, geologic history, the atmosphere, weather, climate, history of astronomy, the solar system, stars, and galaxies.

## Human Anatomy and Physiology

Prerequisite: C in Biology, Honors or C+in college prep Biology.
The objective of this year-long course is to present the student with the study of the anatomy and physiology of the life processes of the human body. The course focuses on anatomical terminology, anatomical identification, and physiological processes of human body systems. It will stress an inquiry approach both in class and lab work.

Honors Human Anatomy and Physiology SH AST
Prerequisite: B in Biology, Honors or B+ in college prep Biology. The objective of this year-long course is to present the student with an in-depth study of the anatomy and physiology of the life processes of the human body. It includes such topics as locomotion, regulation, circulation, and digestion. The major portion of the lab work involves dissecting a mink and a fetal pig. This course should be considered a must for any eligible student who is considering a career in the medical, healthrelated, or biological fields.

## Environmental Science

Every day our environment changes. What is our role in the change? What can we do to effect positive change? This yearlong course takes an interdisciplinary approach to introduce students to the science that runs our planet. Students will learn how to identify and analyze environmental problems, evaluate risks associated with these issues, and examine alternative solutions. Students complete field investigations about the ecosystem that is our school campus and how the school fits into the greater environment.
Exercise Science/Intro to Sports Medicine AST

Prerequisite: B in any level of Anatomy and Physiology. Recommendation of both Physical Education and Science Department Heads.
This year-long course has a practicum to be completed outside of school hours with a member of the Athletic Training staff as a required component of the course.

Students taking this course will examine the relationship between exercise and human performance and the role of physical activity in the promotion of healthy lifestyles. Exercise science consists of several overlapping disciplines, including biomechanics, exercise physiology and biochemistry, growth and development, exercise nutrition, measurement and evaluation, and exercise psychology. The program of study is designed to provide an effective blend of classroom instruction and practical experience.

Additional focus will be on prevention, immediate care, clinical evaluation, diagnosis, treatment, and rehabilitation of athletic injuries. Students will also learn about the professional responsibility of athletic trainers as well as the organization and administration required within the profession.
Honors Health and Disease AST

This semester course is designed to explore aspects of human health and disease and the role of modern medicine in treating and preventing health disorders. It is a companion for students of Honors Biology, encompassing not only infectious and non-infectious disease, but the nature of immunity, immune system dysfunction, preventative and diagnostic techniques, and treatments for disease.

## Forensic Science

Prerequisites: Successful completion of any level Biology and Chemistry course.
This semester course is an introduction to the study of Forensic Science and includes the following topics: History of Forensic Science, the crime scene, physical and biological evidence collection and analysis, microscopic investigations, hair and fiber analysis, determination of the time of death, and insect study. DNA evidence is also covered along with computer, document, and voice recognition as evidence.

Disclaimer: Some of the course content may be unpleasant.

## SCIENCE COURSES cont'

| Genetics |
| :--- |
| Prerequisite: C+in Biology |
| This semester course introduces students to the study and |
| concepts of genetics and molecular biology. Topics include |
| mitosis and meiosis, Mendelian genetics, chromosome |
| mapping, DNA structure and replication, gene expression and |
| regulation, genetic mutations and genetic disorders. |

Honors Genetics AST

Prerequisite (Gr. 11, 12): B+ in Biology.
Prerequisite (Gr. 10): B+in Biology, Honors::
This honors-level semester course includes the same topics as the CP level course but with a more thorough and complex approach, building upon knowledge attained in the honors level Biology course.

Honors Microbiology
AST
Prerequisite (Gr. 11, 12): B+ in Biology.
Prerequisite (Gr. 10): B+ in Biology, Honors.
This semester course introduces students to the study of microorganisms and the techniques of microbiology. This course examines the history of microbiology, the structure of bacterial cells, the nature of bacterial cultures, and the conditions necessary for the growth of bacteria and the study of diseases caused by microorganisms.


#### Abstract

Honors Current Topics in Biological Research Prerequisite: B in Biology; This semester course includes a wide spectrum of topics reflecting recent breakthroughs, discoveries, and issues in the field of Biology. The topics serve as a basis for an in-depth study of the background of the subject, its scientific impact, current importance, and how it has or will affect society. Topics include emerging diseases, the effects of global warming on animal populations, and the Human Genome Project, as well as others. Students are expected to suggest and research topics for inclusion in the course.


## Honors Histology

Prerequisite: B in Biology.
Histology is the study of the microscopic structure of animal tissues. Specifically, this semester focuses on the characteristics of the different tissue types that form organ systems, how they are combined to form those systems, and how they work collectively to perform the functions of each system. This course presents the microscopic anatomy, which comprises of the structural basis of normal physiology. Such knowledge is essential for understanding disease mechanisms in terms of altered structure and function of the human body. Emphasis is placed on light and electron microscopic study of tissues in class and in the laboratory using personal computer imaging technology and direct light microscopic examination. This course is highly recommended for students with aspirations in the medical, health, and biological fields.

## SOCIAL STUDIES DEPARTMENT

## ADVANCED PLACEMENT ADMISSIONS CRITERIA

ADVANCED PLACEMENT UNITED STATES HISTORY<br>ADVANCED PLACEMENT EUROPEAN HISTORY<br>ADVANCED PLACEMENT UNITED STATES GOVERNMENT<br>ADVANCED PLACEMENT PSYCHOLOGY<br>PSAT EBRW score of 550<br>A- average in Honors Social Studies and English courses; A in college prep Social Studies and English courses<br>Consultation with current Social Studies teacher and approval of Department Head

ADVANCED PLACEMENT WORLD HISTORY: MODERN
Acceptance into the Honors Arts and Humanities Academy

## SOCIAL STUDIES DEPARTMENT cont' REQUIRED CORE COURSE OFFERINGS

| COURSE NUMBER | COURSE LEVEL | COURSE TITLE |
| :---: | :---: | :---: |
| 60001 | CP | Modern World Studies |
| 60002 | H | Honors Modern World Studies |
| 60004 | AP | Advanced Placement World History: Modern |
| 61001 | CP | United States History 1 |
| 61002 | H | Honors United States History 1 |
| 62001 | CP | United States History 2 |
| 62002 | H | Honors United States History 2 |
| 62004 | AP | Advanced Placement United States History |

COURSE GRADE
CREDITS LEVEL

| 5 | 9 <br> 5 <br> 5 <br> 5 <br> 5 <br> 5 <br> 5 | 9 |
| :---: | :---: | :---: |
| 10 |  |  |
|  | 10 |  |
| 10 |  |  |

ELECTIVE COURSE OFFERINGS

| 66002 | H | Honors European History |
| :---: | :---: | :---: |
| 66004 | AP | Advanced Placement European History |
| 69004 | AP | Advanced Placement United States Government |
| 67004 | AP | Advanced Placement Psychology |
| 63502 | H | Honors Citizens and the Law |
| 63352 | H | Honors Civics |
| 64051 | CP | Economics |
| 65151 | CP | United States Constitutional Law |
| 63151 | CP | American Women's History |
| 63251 | CP | Sports and American Society |
| 67051 | CP | Psychology |
| 67151 | CP | Sociology |
| 68051 | CP | World Genocide |
| 70051 | CP | Principles of Business |


| 5 | 12 |
| :---: | :---: |
| 5 | 12 |
| 5 | 11, 12 |
| 5 | 11, 12 |
| 2.5 | 10, 11 |
| 2.5 | 9, 10 |
| 2.5 | 11, 12 |
| 2.5 | 11, 12 |
| 2.5 | 11, 12 |
| 2.5 | 11, 12 |
| 2.5 | 11, 12 |
| 2.5 | 11, 12 |
| 2.5 | 11, 12 |
| 2.5 | 10, 11, 12 |

## SOCIAL STUDIES COURSES

## Modern World Studies

This full-year program introduces students to the modern world through a comprehensive look at the religious, political, historical, and geographic issues which challenge our world today. Through an examination of the significant characteristics of past societies and historical movements, students develop an appreciation for the impact of ideologies, conflict, and globalization on the contemporary world. In addition to exploring the nature of world societies, this curriculum is designed to develop and strengthen critical reading, writing, research, and thinking skills. A major research project is part of the course requirements.

## Honors Modern World Studies

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## AP World History: Modern A\&H

In AP World History: Modern, students investigate significant events, individuals, developments, and processes from 1200 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical connections; and utilizing reasoning about comparison, causation, and continuity and change over time. This full-year course provides six themes that students explore throughout the course to make connections among historical developments in different times and places: humans and the environment, cultural developments and interactions, governance, economic systems, social interactions and organization, and technology and innovation.

At the conclusion of the course, all students will take the Advanced Placement Exam for which there is an additional fee.

United States History 1
US 1 is the first of a two-year thematic exploration of the history of the United States beginning with the era of exploration and colonial America and continuing through the emergence of the United States as an expanding industrial and world power. This course reinforces critical reading, writing, research, and thinking skills developed in grade 9. A major research project is part of the course requirements.

## Honors United States History 1

A\&H
US 1 is the first of a two-year thematic exploration of the history of the United States beginning with the era of exploration and colonial America and continuing through the emergence of the United States as an expanding industrial and world power. This course reinforces critical reading, writing, research, and thinking skills developed in grade 9. This course offers a serious, diligent student the opportunity to pursue an intensive and extensive study of American history. A major research project is part of the course requirements.

## United States History 2

US 2 is the second of a two-year thematic exploration of the history of the United States beginning with World War I and continuing to the dawn of the 21st century and contemporary history. This course reinforces critical reading, writing, research, and thinking skills. A major research project is part of the course requirements.

## Honors United States History $2 \quad$ SH

US 2 is the second of a two-year thematic exploration of the history of the United States beginning with World War I and continuing to the dawn of the 21st century and contemporary history. This course reinforces critical reading, writing, research, and thinking skills. This course requires a strong commitment by the individual student to stay abreast of the scope and sequence of the course curriculum. A major research project is part of the course requirements.

## Advanced Placement United States History <br> A\&H <br> A summer assignment is required. <br> This full-year course prepares students to take the AP exam in U.S. History. It includes an in-depth analysis of foreign and domestic affairs from the Gilded Age to the present. It emphasizes critical reading and interpretation of historical documents and understanding of alternative interpretations of historical topics by leading historians and of changing historical interpretations throughout history. This course requires well-developed writing skills, as demonstrated by the composition of analytical essays, document-based essays, and short research assignments.

At the conclusion of the course, all students will take the APUSH Exam for which there is an additional fee.

## SOCIAL STUDIES COURSES cont'

## Honors European History

This full-year study of European History since 1450 introduces students to the cultural, economic, political, and social developments that played a fundamental role in shaping the world in which we live. Students develop a contextual comprehension of contemporary institutions, the role of continuity and change in the present-day society and politics, and the evolution of current forms of artistic expression and intellectual discourse. The student develops an understanding of the political themes in modern European history and an ability to analyze historical evidence and historical interpretation through various writing assignments including document-based questions. A major research project is part of the course requirements.

## AP European History $\quad$ SH $\quad$ NEXT RUN: 2023-24

This full-year study of European History since 1450 introduces students to the cultural, economic, political, and social developments that played a fundamental role in shaping the world in which we live. The students develop a contextual comprehension of contemporary institutions, the role of continuity and change in the present-day society and politics, and the evolution of current forms of artistic expression and intellectual discourse. The student develops an understanding of some of the political themes in modern European history, an ability to analyze historical evidence and historical interpretation, and an ability to express historical understanding in written format.

At the conclusion of the course, all students will take the Advanced Placement Exam for which there is an additional fee.

## Advanced Placement US Government $\quad$ A\&H

This full-year course gives students an analytical perspective on government and politics in the United States. It includes both the study of general concepts used to interpret U.S. government and politics and the analysis of specific examples. It requires familiarity with the various institutions, groups, beliefs, and ideas that constitute U.S. government and politics. Students will be able to critically analyze relevant theories and concepts, apply them appropriately and develop their connections across the curriculum. Students will also be able to analyze and interpret basic data relevant to U.S. government and politics including data presented in charts, tables, and other formats.

At the conclusion of the course, all students will take the Advanced Placement Exam for which there is an additional fee.


#### Abstract

Advanced Placement Psychology A\&H The Advanced Placement Psychology course is a full-year survey course with numerous units of introductory psychology on the college level. Topics for the class include the history of psychology, research and statistics, neuropsychology, sensation and perception, cognitive, behavioral, clinical, and social psychology. A large focus of the class is directed at the scientific understanding of human behavior especially as it relates to the latest findings in brain research.


At the conclusion of the course, all students will take the Advanced Placement Exam for which there is an additional fee.

## Honors Civics A\&H

This semester course is designed to prepare students to become well-informed, active citizens in the community, state, and nation. Students will learn how power and responsibility are shared and limited by the government, the place of law in the American constitutional system, the rights the American government guarantees its citizens, and the impact American politics has on world affairs. Students will also examine how the world is organized politically and how civic participation in the American political system compares to that in other societies around the world today.

Honors Citizens \& the Law A\&H
Our system of government emphasizes the importance of the rights and responsibilities of individuals in our society. This semester course explains how the law works for the protection of the individual and for the protection of society from those who break the law. Topics explored include civil liberties, trial procedures, jury selection, crime, punishment, and the death penalty.

Students will be expected to continually improve their social studies skills and stay abreast of current events on the topics covered in class. The class involves higher-level thinking and analysis of primary documents and sources.


## SOCIAL STUDIES COURSES cont’

## Economics

This semester course introduces students to the basic principles of the free enterprise system so they will be better able to function as consumers, workers, and citizens. Areas of study include economic theory, economic systems, money and banking, business organization, monetary and fiscal policy, supply and demand, and the role of government. Students gain an understanding and appreciation of the importance of living in an economic system that protects individual freedoms.

| United States Constitutional Law A\&H |
| :--- |
| This semester course will introduce students to the United |
| States legal system with special emphasis on the Supreme |
| Court and arrest, trial, and appeal procedures. The course |
| will begin with a brief overview of the three branches of |
| government and the American court system. The students will |
| then study and analyze important Supreme Court cases. The |
| students will also participate in a mock trial and/or Supreme |
| Court review of a controversial Constitutional question. |

## Psychology

This one-semester course provides the opportunity to study individual and social psychology and how the knowledge and methods of psychologists are applied to the solutions of human problems. One of the goals is to broaden the students' range of understanding with respect to their actions and the actions of others. The course develops critical thinking and writing skills through an emphasis on ethics in scientific research. A major research project is one of the requirements.

## Sociology

Sociology is the study of society and human behavior. It focuses on the systematic study of social behavior, social institutions, and social change. Emphasis is placed on the interaction between individuals and culture. Areas of study in this semester course include family, religion, community organizations, political and social groups and leisure time organizations. Moral values, traditions, folkways, the mobility of people and other factors in society that influence group behavior are also included. A major research project is one of the requirements.



#### Abstract

World Genocide In this semester course, students will examine racism, antiAntisemitism, and ethnic conflict. Emphasis will be given to the Armenian genocide, the Holocaust, and recent conflicts and genocides in Africa, Asia, the Middle East, and the Balkans. The class will also analyze the role individuals and the international community played in these conflicts.


#### Abstract

American Women's History This semester course will examine women's lives in American history, placing them at the center of our interpretation. The class will explore women's contributions and achievements, as well as the barriers women faced, in American society from colonial times to the present. The students will consider social, political, cultural, and economic histories of women in the United States. Women's history reveals larger themes in US history, and the class will examine the ties between the two. The course seeks to answer the following questions: How did women's lives vary throughout different eras in history? How did women shape their lives? How is history different when viewed from a woman's perspective? What is the value of women's history?


## Sports and American Society

The students in this semester course will examine the role that sports have played in American society. Students will look at how sports have impacted American culture and how sports were perceived during different time periods in American history. Topics covered will include how sports interact with the American educational, political, and economic systems. The students will also examine how sports helped develop equality among the races and genders.

## Principles of Business

This semester course is designed to introduce students to the world of business. Topics presented will include marketing, finance, management, and business ethics. The course will provide students with a basic understanding of the history of business in the United States and an understanding of the current global perspective on business. The course will teach students the skills and knowledge needed to be successful in business. Possible requirements will be participation in a Stock Market Simulation game and inventing a new product, designing the concept and a business marketing plan.

# COMPUTER SCIENCE DEPARTMENT 

## ADVANCED PLACEMENT ADMISSIONS CRITERIA

ADVANCED PLACEMENT COMPUTER SCIENCE PRINCIPLES<br>PSAT EBRW and Math scores of 500 or better<br>Students are expected to be familiar with standard computer operations<br>(e.g., login, cut \& paste, email attachments, etc.) before enrolling in the course.

ADVANCED PLACEMENT COMPUTER SCIENCE A
PSAT EBRW and Math scores of 550 or better
Successful completion of Honors Intro to Java Programming
Students are expected to be familiar with standard computer operations

## COURSE OFFERINGS

| COURSE | COURSE | COURSE | COURSE | GRADE |
| :---: | :---: | :---: | :---: | :---: |
| NUMBER | LEVEL | TITLE | CREDITS LEVEL |  |


| 77004 | AP | Advanced Placement Computer Science Principles |
| :---: | :---: | :---: |
| 79004 | AP | Advanced Placement Computer Science A |
| 75102 | H | Honors 3D Design with UE5 |
| 75951 | H/CP | Introduction to Computer Programming (Python) |
| 75851 | H | Honors Java Programming |
| 77052 | H | Honors Mobile App Development |
| 77051 | CP | Web Design |
| 79052 | H | Honors Cybersecurity |
| NEW | H | Honors CS50 |


| 5 | 10, 11, 12 |
| :---: | :---: |
| 5 | 11, 12 |
| 5 | 10, 11, 12 |
| 2.5 | 10, 11, 12 |
| 2.5 | 10, 11, 12 |
| 2.5 | 10, 11, 12 |
| 2.5 | 10, 11, 12 |
| 2.5 | 11, 12 |
| 2.5 | 10, 11, 12 |

## COMPUTER SCIENCE COURSES

## AP Computer Science Principles <br> AST

Computer Science Principles (CSP) offers a multidisciplinary approach to teaching the underlying principles of computation. The full-year course will introduce students to creative aspects of programming, using abstractions and algorithms, working with large data sets, understandings of the Internet and issues of cybersecurity, and impacts of computing that affect different populations. CSP will give students the opportunity to use current technologies to solve problems and create meaningful computational artifacts. Together, these aspects of the course make up a rigorous and rich curriculum that aims to broaden participation in computer science.

At the conclusion of the course, all students will take the Advanced Placement Exam for which there is an additional fee.

AP Computer Science A NOT OFFERED IN 2022-2023
Prerequisite: B+ or better in Honors Java Programming.
Computer Science embraces problem-solving, hardware, algorithms, and perspectives that help people utilize computers to address real-world problems in contemporary life. The AP Computer Science A full-year course introduces students to computer science with fundamental topics that include problemsolving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design.

At the conclusion of the course, all students will take the Advanced Placement Exam for which there is an additional fee.

## COMPUTER SCIENCE COURSES cont'

Intro to Computer Programming (Python) AST
Students are introduced to computer programming using the Python programming language. Python is a general-purpose programming language that can be used on any modern computer operating system. It can be used for processing text, numbers, images, scientific data, etc. Python handles a lot of complexity, so it is beginner-friendly in that it allows students to focus on learning programming concepts. The basics of Python serve to create a solid foundation for the student's programming career ahead of C-based languages, also referenced in this semester course.

Students are expected to be familiar with standard computer operations (e.g., login, cut \& paste, email attachments, etc.) before enrolling in the course.

## Honors Java Programming

In this semester course, students are introduced to computer programming using the Java programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, using object-oriented tools, Java exception handling, file input/output, threads, collection classes, and networking.

Students are expected to be familiar with standard computer operations (e.g., login, cut \& paste, email attachments, etc.) before enrolling in the course.

| Honors Mobile App Development $\quad$ AST |
| :--- |
| Beginning with the basics of design, this semester course |
| progresses through the process of creating quality |
| professional-level Android applications. Students will be |
| exposed to the block modeling of App Inventor and the |
| scripting language of JavaScript. App Development is a |
| programming-intensive course designed for the serious |
| programmer. |

## Web Design

Web Design is an introduction to the design, creation, and maintenance of web pages and websites. Students learn how to critically evaluate website quality, learn how to create and maintain quality web pages, learn about web design standards and why they're important, and learn to create and manipulate images. This semester course progresses from introductory work on web design to a culminating project in which students design and develop websites for local community organizations.

Students are expected to be familiar with standard computer operations (e.g., login, cut \& paste, email attachments, etc.) before enrolling in the course.

Honors 3D Design with UE5
AST
Unreal Engine 5 is a complete suite of development tools made for anyone working with real-time technology. From enterprise applications and cinematic experiences to highquality games across PC, console, mobile, VR and AR, Unreal Engine 4 gives students everything they need to create robust interactive experiences.

A world-class tool-set and accessible workflows empower developers to quickly iterate on ideas and see immediate results without touching a line of code. For over two decades, Unreal Engine's multiplayer framework has produced some of the industry's most compelling multiplayer experiences. But UE5 is far more than games. Designed by film and TV professionals, Sequencer unlocks your creative potential with a fully nonlinear, real-time cinematic editing and animation tool built for collaboration. Successful students will develop strategies to enable and direct their learning as they face challenges that increase in difficulty throughout the course. Students should have a well-functioning and well-maintained computer before considering this year-long course.

## Honors Cybersecurity

AST
Students will develop a way of thinking that is securityoriented, provides a better understanding of how to think about adversaries, and how to build systems that defend against them. This semester course covers the fundamental concepts from the hardware to the software to the humancomputer interface, with the use of cryptography to secure interactions. These concepts are illustrated with examples drawn from modern practice and augmented with hands-on exercises involving relevant tools and techniques.

[^1]
# ENGINEERING DEPARTMENT <br> COURSE OFFERINGS 

| COURSE NUMBER | COURSE LEVEL | COURSE <br> TITLE |
| :---: | :---: | :---: |
| 71102 | H | Honors Engineering 1: Applications |
| 71202 | H | Honors Engineering 2: Robotics |
| NEW | H | Honors EntreX Lab (UDel) |
| 71302 | H | Honors Engineering Capstone |
| NEW | H | Honors Introduction to Artificial Intelligence |
| 71451 | CP | Introduction to Engineering Design |
| 71452 | H | Honors Introduction to Engineering Design |


| COURSE CREDITS | GRADE LEVEL |
| :---: | :---: |
| 5 | 10, 17, 12 |
| 5 | 10, 11, 12 |
| 5 | 11, 12 |
| 5 | 12 |
| 5 | 11, 12 |
| 2.5 | 10, 11, 12 |
| 2.5 | 10, 11, 12 |

In addition to the general requirements found on Page 8, please note the criteria listed for each course.

## ENGINEERING COURSES

## Honors Engineering 1: Applications AST

Prerequisite: Successful completion of Intro to Engineering Design. Building on skills developed in the prerequisite Introduction to Engineering Design course, students further develop skills in structural, mechanical, and electrical engineering through hands-on projects that also involve simulation software and computer-assisted design in this year-long course.

During the fourth quarter, students apply the disciplinespecific knowledge gained in the first three quarters. Each student is mentored by a science, math, technology, or engineering instructor who serves as a professional resource to guide the student through an applied engineering project designed to solve a real-world issue. This course satisfies the third-year Science requirement.

## Honors Engineering 2: Robotics

 ASTPrerequisite: Completion of Honors Intro to Engineering Design. Building on the engineering design principles ingrained in Honors Intro to Engineering Design, this course presents an overview of robotics in practice and research with topics including vision, motion planning, mobile mechanisms, kinematics, inverse kinematics, and sensors.

In course projects, students construct robots which are driven by a micro-controller, with each project reinforcing the basic principles developed in lectures. Students usually work in cohorts, rotating responsibilities among electrical and mechanical engineers and computer scientist.


#### Abstract

Honors EntreX Lab (UDel) BUS/AST This year-long course is a combination of Mechatronic Engineering and Entrepreneurship. Run under the auspices of the University of Delaware's Horn Entrepreneurship Program, students develop the key skills of idea generation, creative problem solving, leadership, evidence-based decision making, resilience, teamwork and persuasive communication. These skills last a lifetime and develop competitive advantages and self-confidence rarely found in other programs..


Mechatronics, as an engineering discipline, is the synergistic combination of mechanical engineering, electronics, control engineering, and computers - all integrated through the design process.

Students may earn 3 credits from UDel should they choose the dual enrollment option, for which there is an additional fee payable to UDel.

[^2]
# ENGINEERING COURSES cont' 

Honors Introduction to Artificial Intelligence AST
Prerequisite: $B+$ or better in an Honors Engineering course and a strong background in Mathematical concepts.
This full-year course is an introduction to the basic principles, techniques, and applications of Artificial Intelligence. Coverage includes knowledge representation, logic, inference, problem solving, search algorithms, game theory, perception, learning, planning, and agent design. Students will experience programming in Al language tools. Potential areas of further exploration include expert systems, neural networks, fuzzy logic, robotics, natural language processing, and computer vision.


#### Abstract

Honors Introduction to Engineering Design Grade 9 Honors Prerequisite: Concurrent enrollment in Honors Algebra 1, Geometry, or Honors Geometry The major focus of the HIED semester course is to expose students to the engineering design process, research and analysis, teamwork, communication methods, global and human impacts, engineering standards, and technical documentation. HIED allows students to develop skills and understanding of course concepts through activity-, project-, and problem-based learning and challenges students to continually hone their interpersonal skills, creative abilities, and understanding of the design process. The course assumes no previous knowledge of engineering, but students should be concurrently enrolled in college preparatory mathematics and science. The successful HIED students will develop strategies to enable and direct their learning as they face challenges that increase in difficulty throughout the course. Students will also learn how to document their work and communicate their solutions to their peers and members of the professional community.


# FINE AND PERFORMING ARTS DEPT. ART 

ADVANCED PLACEMENT ADMISSIONS CRITERIA
ADVANCED PLACEMENT ART HISTORY
PSAT EBRW score of 550 or better
Consultation with and approval of Department Head ADVANCED PLACEMENT STUDIO ART

Consultation with and approval of Department Head

## COURSE OFFERINGS

| COURSE <br> NUMBER | COURSE LEVEL | COURSE TITLE | COURSE CREDITS | GRADE LEVEL |
| :---: | :---: | :---: | :---: | :---: |
| 88004 | AP | Advanced Placement Art History | 5 | 17, 12 |
| 80504 | AP | Advanced Placement Studio Art | 5 | 17, 12 |
| 80002 | H | Honors Portfolio | 5 | 17, 12 |
| 81001 | CP | Advanced Painting and Drawing | 5 | 10, 17, 12 |
| 80951 | CP | Art Essentials | 2.5 | 10,71 |
| 80952 | H | Honors Art Essentials | 2.5 | 9, 10 |

# FINE AND PERFORMING ARTS DEPT. cont' <br> COURSE OFFERINGS 

| COURSE <br> NUMBER | COURSE LEVEL | COURSE TITLE | COURSE CREDITS | GRADE LEVEL |
| :---: | :---: | :---: | :---: | :---: |
| 80451 | CP | Mixed Media | 2.5 | 10, 17, 12 |
| 80551 | CP | Graphic Design | 2.5 | 10, 17, 12 |
| 81451 | CP | Photoshop Essentials | 2.5 | 17, 12 |
| 81452 | H | Advanced Photoshop, Honors | 2.5 | 17, 12 |
| NEW | CP | Yearbook Production 11 | 2.5 | 17, 12 |
| NEW | CP | Yearbook Production 12 | 2.5 | 12 |
| 80051 | CP | Visual Arts 9 | 1.25 | 9 |

In addition to the general requirements found on Page 8, please note the criteria listed for each course. All Honors and AP courses require the permission of the Department Head.

## ART COURSES

## Advanced Placement Art History

Prerequisite: A grade of A- or better in Honors Art Essentials or Honors Portfolio; PSAT EBRW score of 550 or better Consultation with and approval of the Department Head. The Advanced Placement Art History year-long course is equivalent to a two-semester introductory college course that explores topics such as the nature of art, art making, and responses to art. By investigating artistic traditions from a global perspective, students become active participants in the global art worlds, engaging with its forms and content, as they experience research, discuss, read and write about art, artists, art-making and responses to and interpretations of art.

At the conclusion of the course, all students will take the Advanced Placement Exam for which there is an additional fee.

| Advanced Placement Studio Art SH A\&H |
| :--- |
|  |
| Drawing and Honors Portfolio and consultation with and |
| approval of Department Head. |
| The Advanced Placement Program in Studio Art enables highly |
| motivated students to do college-level work in studio art while |
| still in high school. This course encourages independent |
| study in three areas. In the Breadth section, students are |
| given specific studies suggested by the College Board. In |
| Concentration, students create and base their artwork on the |
| mature development of a single theme and work toward a |
| personal style. Quality, the final part of the course, emphasizes |
| excellence of idea and craftsmanship in six significant works |
| of art. |


| AP Studio Art (cont') | SH | A\&H |
| :--- | :--- | :--- |

Complete Advanced Placement Studio Art course information is available online at www.collegeboard.com/ap/studioart/ index.html.

The students will also create their own Digital Portfolio of their work for the year. They may receive college credit for the year-long course in addition to high school credit. Students may select one of two portfolio programs for AP: Drawing or 2-Dimensional Design.

At the conclusion of this course, all students will submit a Digital Portfolio to the College Board for an additional fee.

| Honors Portfolio |
| :--- |
| Prerequisite: A grade of A- or better in Art Essentials |
| and Advanced Painting and Drawing and the |
| recommendation of the Department Head |
| Designed for the aspiring artists who have already |
| demonstrated proficiency in using the elements of art and |
| principles of design effectively in the creation of art. This year- |
| long course provides students with the opportunity to explore |
| advanced styles and techniques as they build a solid portfolio |
| for presentation to prospective colleges. Honors Portfolio |
| also provides a firm foundation for those intending to enroll |
| in Advanced Placement Studio. It emphasizes creative and |
| structured work designed to increase critical thinking and |
| visual observation-based drawing skills. One, two and three- |
| dimensional work are included in a flexible curriculum that |
| allows for personal artistic development. The students will |
| create a Digital Portfolio of their work for the year. |

# ART COURSES cont' 


#### Abstract

Advanced Painting and Drawing SH A\&H Grade 10 Arts \& Literature Academy, Grade 11 and 12 by invitation only; a grade of A- or better in Art Essentials is required for consideration. Designed for the aspiring artist, Advanced Painting and Drawing is a year-long course that offers students the opportunity to master the techniques of various media while exploring realistic, stylized, abstract and non-representational design. Correct observation and development of threedimensional form on two-dimensional surfaces are emphasized. The program includes demonstrations and practice in portraiture, the human form, advanced topics in perspective, series creation, etc. Working from life and/or the imagination is stressed. Areas of study include art history, aesthetics, how art affects our environment, art criticism and evaluating works of art for effectiveness. The students will create a Digital Portfolio of their work for the year.


## Art Essentials

Prerequisite: Recommendation of the Department Head. Students explore the elements and principles of good design while learning basic skills in various media in this semester course. Drawing, painting and three-dimensional work are the focus of the program. Basic perceptual and organizational skills are stressed as students become attuned to their unique aesthetic awareness and creative self-expression. The media involved may include pen and ink, graphite, charcoal, pastels, acrylics, watercolors, etc. Areas of study include composition, aesthetics and art criticism. The students will create a Digital Portfolio of their work for the semester.

Honors Art Essentials A\&H
Grade 9 Arts \& Literature Academy, Grade 10 by Invitation Only after portfolio presentation to Dept Head.
Students explore the elements and principles of good design as related to the works of artists throughout history, as well as learning basic skills in various media. In this semester course, drawing and painting are the focus of the program. Basic perceptual and organizational skills are stressed as students become attuned to their unique aesthetic awareness and creative self-expression. The media involved may include pen and ink, graphite, charcoal, pastels, acrylics, watercolors, etc. Areas of study include composition, aesthetics, and art criticism. The students will create a Digital Portfolio of their work for the semester.

| Mixed Media | SH | A\&H |
| :--- | :--- | :--- |

## Prerequisite: Art Essentials or Honors Art Essentials

The Mixed Media semester course allows the student to create one, two, and three-dimensional works of art while exploring the juxtaposition and interaction of various types of media, such as charcoal, acrylic paint, marker, color pencil, watercolors, etc. Techniques such as printmaking, positive and negative assembly, and found-object construction enhance the program. Areas of study include exploration of historical works, effects of art on personal environments and criticism/analysis. .

## Graphic Design

Prerequisite: Art Essentials and teacher recommendation or Honors Art Essentials
Students MUST have a working school tablet. An introduction to digital imaging and design, the semester course, Graphic Design introduces the structure and terms of the various types of digital imagery used in creative problem solving and communication. Students will use their knowledge of the Elements of Art and Principles of Design learned in Art Essentials, as well as composition, to use text, images and color to express a message. Program used is Adobe Illustrator.

## Photoshop Essentials

Prerequisite: Art Essentials and teacher recommendation or Honors Art Essentials. Students MUST have a working school tablet. This semester course is designed to give students an introduction to the Adobe Photoshop program and how to use it to perform various image processing and enhancing techniques. Photoshop Essentials offers students the opportunity to produce various projects through which they will learn how to use layers, layer effects, filters, painting and blending, color modification, and creating images of different formats for different applications.

## Honors Advanced Photoshop

Prerequisite: Honors Art Essentials or Art Essentials and an A- or better in Photoshop Essentials.
Students MUST have a working school tablet. This semester course is designed as a continuation and advancement of the knowledge learned in Photoshop Essentials. Adobe Photoshop is an image editing software used by photographers, graphic designers, video game artists, etc. Working with a variety of features, tools and manipulation techniques, Advanced Photoshop students will be able to create their own unique, original images. The course provides an in-depth exploration of the many creative opportunities that exist utilizing knowledge and/or expertise in Photoshop. The students will create a Digital Portfolio of their work for the semester.

## Yearbook Production 12

This semester-long course runs first semester and helps produce Green Years, the DePaul Catholic High School yearbook. In this course, students will gain skills in the following areas: page design, publishing techniques, copy writing, editing, photography, record keeping, time management, teamwork, marketing, and leadership skills. Students are tasked with producing a timeless, creative, and innovative publication which will record our school's community, memories and events.

The bulk of the work wraps up in March, after which a handful of seniors will be invited to remain in Yearbook 11 where they help to train next year's staff.

As a production course, attendance is critical to success.

## ART COURSES cont'

Yearbook Production 11
This semester-long course runs second semester and helps produce Green Years, the DePaul Catholic High School yearbook. Working in a cohort and guided by seniors with experience in yearbook production, the juniors in this course will learn teamwork and responsibility, brainstorm content, and determine typography, design, graphics, and layout for their senior yearbook.

The most diligent students will be invited as seniors to continue in Yearbook Production 12.

## Visual Arts 9

Required Freshman Course
Freshmen Art Seminar allows the student to examine creativity through exploration of the media and processes that are used by artists to express ideas, beliefs and emotions. Students will be introduced to the Elements of Art and Principles of Design. They will be able to recognize them in works of art and understand how they are used to create works of art.

As a production course, attendance is critical to success.

## SEQUENCE OF ART COURSES



Full-Year Course

# FINE AND PERFORMING ARTS DEPT. MUSIC AND DANCE <br> ADVANCED PLACEMENT ADMISSIONS CRITERIA 

ADVANCED PLACEMENT MUSIC THEORY<br>PSAT EBRW score of 550 or better<br>Approval of Department Head

## COURSE OFFERINGS

| COURSE <br> NUMBER | COURSE LEVEL | COURSE <br> TITLE | COURSE <br> CREDITS | GRADE LEVEL |
| :---: | :---: | :---: | :---: | :---: |
| 82204 | AP | Advanced Placement Music Theory | 5 | 17, 12 |
| 86101-301 | CP | DePaul Voices 1, 2, 3 | 5 | 10, 17, 12 |
| 89051 | CP | Music Seminar | 2.5 | 10, 17, 12 |
| NEW | H | Honors Music Seminar | 2.5 | 9 |
| 89351 | CP | Music Production | 2.5 | 10, 17, 12 |
| 87151 | CP | Piano 1 | 2.5 | 10, 17, 12 |
| 87351 | CP | Piano 2 | 2.5 | 10, 17, 12 |
| 87552 | H | Advanced Piano | 2.5 | 17, 12 |
| 86441 | CP | Music Appreciation - Theory | 1.25 | 9 |
| 86541 | CP | Music Appreciation - Voice | 1.25 | 9 |
| 89901 | CP | Introduction to Ballet | 2.5 | 10, 11, 12 |

## MUSIC AND DANCE COURSES

## Advanced Placement Music Theory A\&H

The year-long AP Music Theory course corresponds to one-to-two semesters of typical, introductory college music theory and aural skills coursework. Students learn to recognize, understand, describe, and produce the basic elements and processes of performed and notated music. Course content extends from the fundamentals of pitch, rhythm, timbre, and expression to concepts of harmonic function, phrase relationships, and tonicization.

At the conclusion of the course, all students will take the Advanced Placement Exam for which there is an additional fee.

DePaul Voices 1, 2, 3
Required: Students must be comfortable singing publicly and be willing to perform in front of audiences, both large and small. DePaul Voices: Think "Pitch Perfect." This group performs a cappella arrangements of pop music, which is accompanied by vocal percussion (beatboxing). There are many opportunities for solos and opportunities to compete at national a cappella festivals - just like "Pitch Perfect." If you like to sing, speak with the music teacher about enrolling in this year-long course.

# MUSIC AND DANCE COURSES cont’ 


#### Abstract

Music Seminar Required: Students must have prior vocal or instrumental experience and must audition. Recommendation of the music teacher and department chairperson is also required. Music Seminar is a year-long course that provides the opportunity for students to improve their skills either as a singer or as an instrumentalist. Students should feel comfortable practicing independently as well as performing in small or large ensembles. Individual learners will be allowed to select and learn music that interests them personally, whether it be pop, jazz, musical theater or classical and are encouraged to compose their own music.


Honors Music Seminar A\&H
Required: Students must have prior vocal or instrumental experience and must audition. Recommendation of the music teacher and department chairperson is also required.
Music Seminar is a year-long course that provides the opportunity for students to improve their skills either as singers or as instrumentalists. Students should feel comfortable practicing independently as well as performing in small or large ensembles. Individual learners will be allowed to select and learn music that interests them personally, whether it be pop, jazz, musical theater, or classical, and are encouraged to compose their own music.

Music Production
A\&H
Required: Grade A- or better in Music Appreciation
Students will learn to create their own music through the mastery of the four stages of professional music production: recording, editing, mixing, and mastering. Using programs similar to GarageBand, students will learn techniques used by professional musicians to produce music for movies, video games, and songs written by the best artists of our generation. Students wishing to enroll in this semester course should be comfortable working with new technology and have a basic knowledge of music theory (the manipulation of music through the elements of beat, melody, harmony, and color).

[^3]
#### Abstract

Piano 1 Piano 1 is paced for the motivated student with no prior keyboard skills to learn to play. The semester course emphasizes reading and keyboard theory. Most people will be able to meet the class requirements with practice during the class hour; however, students are encouraged to practice additionally outside of class. More experienced students may supplement class assignments with additional repertoire. Students with advanced piano training should audition for Piano 2.


Piano 2
Prerequisites: A grade of B+ or better in Piano 1 and the recommendation of the music teacher.
A continuation of skills acquired in Piano 1 class, this semester course provides the opportunity for further mastery of the keyboard through increased technical ability. Students are expected to include practice time outside of the classroom as the course becomes more advanced.

## Honors Advanced Piano

Prerequisites: A grade of $B+$ or better in Piano 2 and the recommendation of the music teacher.
A continuation and further development of skills acquired in Piano 2 class, this semester course provides the opportunity to pursue a mastery of the keyboard through increased technical aptitude, as well as assistance in establishing a fuller repertoire and stronger performance ability.

## Introduction to Ballet

Come enjoy the beauty and grace of classical ballet. This semester course will cover basic ballet positions, steps and vocabulary with a focus on the student's awareness of proper posture and body alignment. Standing barre work and center floor exercises will be given to enhance coordination, strength, balance and flexibility. Participants will also develop a sense of musical awareness and movement quality. No prior ballet experience necessary.

[^4]
## BUSINESS DEPARTMENT

The newly formed Business Department is a result of DePaul Catholic's formation of the Business Academy, set to launch in September 2022 along side the existing Academy of Science and Technology and the Academy of Arts and Humanities.

The following list of courses are for 2022-23 with subsequent years seeing more robust semester electives and the following full-year courses:

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» Introduction to Economics and Business Law
» Marketing
" Virtual Enterprise
" Accounting Principles
" Advanced Placement Macroeconomics
» Advanced Placement Microeconomics
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## Honors EntreX Lab (UDel)

BUS/AST
This year-long course is a combination of Mechatronic Engineering and Entrepreneurship. Run under the auspices of the University of Delaware's Horn Entrepreneurship Program, students develop the key skills of idea generation, creative problem solving, leadership, evidence-based decision making, resilience, teamwork and persuasive communication. These skills last a lifetime and develop competitive advantages and self-confidence rarely found in other programs..

Mechatronics, as an engineering discipline, is the synergistic combination of mechanical engineering, electronics, control engineering, and computers - all integrated through the design process.

Students may earn 3 credits from UDel should they choose the dual enrollment option, for which there is an additional fee payable to UDel.
Economics BUS

This semester course introduces students to the basic principles of the free enterprise system so they will be better able to function as consumers, workers, and citizens. Areas of study include economic theory, economic systems, money and banking, business organization, monetary and fiscal policy, supply and demand, and the role of government. Students gain an understanding and appreciation of the importance of living in an economic system that protects individual freedoms.


#### Abstract

Financial Literacy BUS

As of the academic year 2019-20, Financial Literacy is a Middle School requirement for graduation.

This semester course will include financial, economic, business, and entrepreneurial literacy. Students will learn how to make personal economic choices that are appropriate for someone in their financial standing. An understanding of the role of the economy in society will be included as well as how to use entrepreneurial skills to improve productivity in the workplace and professional opportunities.


Principles of Business
An honors-level of this course is the required freshman-level course for the Business Academy

This semester course is designed to introduce students to the world of business. Topics presented will include marketing, finance, management, and business ethics. The course will provide students with a basic understanding of the history of business in the United States and an understanding of the current global perspective on business. The course will teach students the skills and knowledge needed to be successful in business. Possible requirements will be participation in a Stock Market Simulation game and inventing a new product, designing the concept and a business marketing plan.

## PHYSICAL EDUCATION \& HEALTH DEPT.

Physical Education is required yearly of all high school students. The program is planned with the triple purpose of providing an opportunity for the development of a healthy well-adjusted person, an interest in physical activity, and a tolerance of others. A variety of activities is offered, designed to meet the needs and abilities of each grade level, and changing with each marking period and season.

## REQUIRED COURSE OFFERINGS

| COURSE | COURSE | COURSE |
| :---: | :---: | :--- |
| NUMBER | LEVEL | TITLE |


| COURSE | GRADE |
| :--- | :--- |
| CREDITS | LEVEL |


| $\frac{91141}{9241}=\frac{C P}{C P}$ | Health <br> Driver Education <br> 91001 <br> 93001 <br> $C P$ |
| :--- | :--- |
| Physical Education 1/2 |  |
| Physical Education 3/4 |  |


| $\frac{1.25}{1.25}$ | $\frac{9}{10}$ |
| :---: | :---: |
| $\frac{3.75}{5}$ | $\frac{9,10}{9}$ |
|  |  |

Starting in the fall of 2022, Physical Education 3/4 is optional for juniors and seniors whose GPA is 3.5 or better and wish to pursue an additional academic course in its place.

Juniors and seniors who remain in Physical Education will have four quarters of PE as the Health requirement is waived for all juniors and seniors.

## HEALTH COURSES

## Health

The first part of this course is designed to heighten students' awareness regarding such personal health issues as physical fitness, sleep and fatigue, nutrition, care of skin, hair and nails, and healthy personality traits. Also, current information concerning the use of tobacco, alcohol and illegal drugs, along with eating disorders, AIDS and reproductive systems is thoroughly discussed.

The second focus of this course is designed to teach students First Aid, Personal Safety and AIDS Awareness, as presented by the American National Red Cross. Emergency procedures such as C.P.R., obstructed airways, artificial respiration, bandaging, and transport and carry are covered with the use of choking and CPR mannequins.

Driver Education
The theory portion of Driver Education is compulsory for all sophomores. The course consists of more than 30 hours (the state-required minimum) of lecture and audio-visual aids, dealing with the fundamentals of driving. There is also a thorough examination of the New Jersey Driver Manual, culminating with the administration of the New Jersey State written examination.

Health and Driver Education are taught on both the freshman and sophomore levels, alternating years.



[^0]:    THE "TEACHING, TOUCHING SAFETY PROGRAM"
    IS INCLUDED IN ALL GRADE LEVELS.

[^1]:    Honors CS50
    Introduction to the intellectual enterprises of computer science and the art of programming. This course teaches students how to think algorithmically and solve problems efficiently. Topics include abstraction, algorithms, data structures, encapsulation, resource management, security, software engineering, and web programming. Languages include C, Python, and SQL plus HTML, CSS, and JavaScript. Problem sets inspired by the arts, humanities, social sciences, and sciences. Course culminates in a final project.

    No prior experience with Computer Programming is needed
    for the successful completion of this course.

[^2]:    Honors Engineering Capstone
    AST
    Prerequisite: A- or better in both Honors Engineering 1 and 2
    Capstone courses provide students with an opportunity to apply concepts and tools studied in the engineering program to the solution of a "real-world" problem. The capstone course requires students to integrate knowledge gained from previous courses, including project management, business, and engineering disciplines, as well as the practical experience that they may have gained. The objective is not to develop complex engineering products or services, but rather to introduce and understand the multidimensional processes by which a design is selected, guided, and controlled. This year-long course satisfies the third-year Science requirement.

[^3]:    Music Appreciation - Theory
    Music Appreciation is a required Freshman course.
    Throughout our daily lives, we are bombarded with musical messages through TV, the Internet, radio, and various other media. In this course, students will become more aware of the music in their lives. The course will help students become more familiar with music in their lives as it relates to cultural experiences.

[^4]:    Music Appreciation - Voice
    Music Appreciation is a required Freshman course.
    Designed for those who wish to experience vocal performance, this course provides students the opportunity to sing with a group, either exploring or enhancing their singing skills. Learners will also become more familiar with music in their lives as it relates to cultural experiences.

