Norwalk Public Schools

Program of Studies 2023 – 2024

P-TECH Norwalk



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Norwalk Public Schools

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P-TECH NORWALK

Pathways in Technology Early College

P-TECH Norwalk is a high school that fosters an inclusive culture and embraces diversity, civility and multiculturalism. P-TECH prepares its graduates to solve problems and apply new technologies within an interconnected and evolving global environment and will strive to ensure that every student has access to engage in a free, authentic, education-based work experience so they may become fundamental, functioning members of a diverse, ever-changing global economy.

The mission of P-TECH is to build an academic community whose members have diverse cultures, backgrounds and life experiences. We will educate them in ways that lead to fulfilling careers and develop skills to become lifelong, passionate investigators. At P-TECH, we will work to educate the nation's future leaders in information technology and software engineering while preparing them for professions that don't yet exist. Further, we will seek to expand the frontiers of computer systems and encourage technological innovation while fostering academic excellence and scholarly learning in a project-based, culturally relevant, inclusive learning environment.

P-TECH Norwalk's goal is to prepare students for the ever-changing workplace by developing professional skills and STEM knowledge. Our students have access to a great support system with the help of counselors, teachers, IBM mentors, and like minded classmates. These professional mentors allow students to interact with like-minded adults working in a particular field and to learn about the modern workforce. Along with encouraging student interests, mentors also help students understand what they want to do after college.

P-TECH Norwalk allows students the opportunity to graduate from high school and earn an Associate in Applied Science (AAS) degree from Norwalk Community College in as little as four years. P-TECH Norwalk offers three possible associate degrees in Computer Science: Software Engineering, Web Development, and Mobile Programming. These degrees are some of the most sought-after in the job market today and are very beneficial to anyone looking for a job.

HIGH SCHOOL PATHWAYS

Network Systems

In this pathway future Computer Hardware Engineers will research, design, develop, and test computer systems and components such as processors, circuit boards, memory devices, networks, and routers. These P-TECH engineers will discover new directions in computer hardware, which generate rapid advances in computer technology.

Web and Digital Communications

In this pathway future Computer Software Engineers will focus on discovering, creating, and designing a practical solution to a problem with a system. Future Software engineers will learn the process of analyzing user needs and designing, constructing, and testing end-user applications that will satisfy these needs through the use of software programming languages. Here, P-TECH learners will apply engineering principles to software development.

Skills Build

In this pathway P-TECH students will learn a combination of abilities, qualities and experiences that they can apply to perform tasks well and better support the discrete skill learned across the other pathways. Students will learn soft skills such as interpersonal skills, organization and leadership as well as hard skills technical skills such as research, computer programming, accounting, excel, professional writing and more.

Programming and Software Development

The programming and software development pathway will prepare future programmers to design, develop, implement and maintain computer systems and software. P-TECH graduates will be prepared for computer engineering careers or degrees that require knowledge of computer operating systems, programming languages, and software development.

Individual Studies

In this pathway, P-TECH Students pursuing the Individual Studies in Computer Studies pathway can build a comprehensive concentration in the area of Computer Science and Technology in order to be proficient in a broad range of programs, such as Computer Science, Cyber Security, Information Technology, Information Systems, Web Development, and Software Engineering.

Network Systems	Programming and Software Development	Web and Digital Communications	Skills Build	Individualized P-TECH Studies
4 Courses	4 Courses	4 Courses	4 Courses	4 Courses
Computer Science Essentials TEALS Drone Engineering & Operations Introduction to Java Introduction to Robotics Computer Construction and Repair	Exploring Computer Science Computer Science Essentials TEALS Software Design and Integration I AP Computer Science Principles TEALS AP Computer Science A TEALS Video Game Design	Exploring Computer Science AP Computer Science Principles Introduction to Java Cybersecurity TEALS Two-Dimensional Design (ART 121) Graphic Design (GRA 151) Web Development (CST 153)	Workplace Learning 1 Workplace Learning 2 Workplace Learning 3 Cooperative Work Experience Honors Venture Capital: Business Development Principles of Financial Literacy Excel-erate Money Wise, Future Ready Sports and Entertainment Marketing	Students in the General Studies Pathway take a multidisciplinary approach to education.

NCC AAS DEGREES

Mobile Programming

The Mobile Programming degree teaches students fundamental concepts as well as fosters preparation for tomorrow's programming needs. Course work is focused on programming in heterogeneous platform environments through multiple programming languages, and development of both written and verbal communication skills needed in all areas of the business community.

Software Engineering

The Software Engineering degree emphasizes the complete lifecycle of the software development process. Students learn how to design, develop, test, deploy, and maintain software using rigorous software engineering practices. Students are taught how to leverage technology to create flexible applications and to address the challenges that arise during the development process.

Web Development

The Web Development degree focuses on coding and design aspects of web development. Students gain the skills to implement all facets of web development from design through implementation and are prepared for technical positions within the Computer Science field. Course work is focused on creating web sites and programs that use an integrated development environment (IDE) to create web sites and other programs.

NCC CERTIFICATES

Computer-Aided Design (CAD)

The CAD certificate prepares students for the career options in industry that requires CAD skills. Students will learn to prepare 2D drawings and create 3D solid models using computer applications widely used by the industry. Students will be able to interpret and read engineering drawings, demonstrate an understanding of orthographic projection and create 2D drawings for solid objects, and create 3D models and assemblies and convert 2D drawings to a 3D model. (6 College Credits)

Smartphone App Development

This Smartphone App Development certificate prepares students to plan, design, code, test, and debug solutions to programming problems using a variety of programming languages. Students completing the program will be able to create applications on a variety of devices and programs on the device of their choice on platforms that include Apple iPhone & Google Android OS. (14 College Credits)

Web Developer

The Web Developer certificate provides students with training in the emerging technologies of the Internet. Upon successful completion of all program requirements, students will possess the ability to build a commercial or generic website, develop web pages using low level code and development software packages, and support web pages with server-side java programming and other products. (16 College Credits)

Course Descriptions

	BUSINESS	
Workplace Learning 1	Grade 9	.5 Credit

Workplace Learning 1 (WPL 1) supports students in college and career-readiness. In this course, students develop essential critical thinking, problem-solving, communication and leadership skills that are necessary for success in both their college and career paths. Workplace Learning also develops students' social-emotional skills, such as: self-confidence, grit, persistence, optimism, self-motivation, initiative and resilience. Through WPL, students have the opportunity to communicate with IBM Mentors via an on-line forum, attend guest lectures and visit IBM sites. The essential skills developed in Workplace Learning 1 include: Communication (interpersonal, presentation, interpretative, verbal), Collaboration (demonstrate active listening, ask questions, share resources, stay on task), Analytical Thinking (research, interpret data, solicit expert advice, input and opinions, brainstorm), Self-Management (demonstrate empathy, practice time management, mindfulness and self-care, demonstrate accountability for commitments and actions, demonstrate self-regulation), Entrepreneurship (ask questions), Responsible Leadership (show empathy, exhibit integrity), and Agility and Cognitive Flexibility (exhibit a growth mindset). [Graduation Requirement: Related Course]

Workplace Learning 2	Grade 10	.5 Credit

Workplace Learning 2 (WPL 2) builds on the topics and skills covered in WPL 1. In this course, students continue to develop essential critical thinking, problem-solving, communication and leadership skills that are necessary for success in both their college and career paths. Workplace Learning also develops students' social-emotional skills, such as: self-confidence, grit, persistence, optimism, self-motivation, initiative and resilience. Through WPL, students have the opportunity to communicate with IBM Mentors via an on-line forum, attend guest lectures and visit IBM sites. The essential skills developed in Workplace Learning 1 include: Communication (non-verbal), Collaboration (critique constructively, delegate, manage meetings, stay on task), Analytical Thinking (organize and integrate information, make decisions based on evidence including research, data and expert input , set and test theories, problem solve), Self-Management (demonstrate cultural awareness and intelligence, mindfulness and self-care), Entrepreneurship (exhibit curiosity (ask questions and probe deeper), demonstrate a willingness to learn, show enthusiasm), Responsible Leadership (demonstrate accountability to self and others, foster collaboration), and Agility and Cognitive Flexibility (react proactively to change). Prerequisite: Workplace Learning 1 [Graduation Requirement: Related Course]

Workplace Learning 3

Excel-erate!

Workplace Learning 3 (WPL 3) builds on the topics and skills covered in WPL 1 and WPL 2. Students continue to develop and practice critical thinking, problem-solving, communication and leadership skills. Key areas of focus in WPL 3 are the practical application of employment related skills and an understanding of the real-world work environment, as well as career options and pathways. Students enrolled in WPL 3 gain first-hand knowledge of the nature of the work force with their experiences integrated into the curriculum. This final course in the WPL series, prepares students for a paid, skills-based internship with IBM or other industry partners. Students are eligible for internship based on several factors, including but not limited to, successful completion of the WPL course sequence and enrollment in college courses. The essential skills developed in Workplace Learning 3 include: Collaboration (delegate, manage meetings, build consensus/negotiate), Analytical Thinking (set and test theories, problem solve), Self-Management (practice prioritization or professional and personal commitments, mindfulness and self-care), Entrepreneurship (take initiative to research (act) independently, test new ideas, demonstrate perseverance, innovate and create), Responsible Leadership (demonstrate a service-mindset, led by example (attitudes, behaviors, follow-through), imitative action for self and/or teams, inspire), and Agility and Cognitive Flexibility (seek out new learning, adapt, iterate on deliverables and solutions). Prerequisite: Workplace Learning 2 [Graduation Requirement: Related Course]

Grade 11

Cooperative Work Experience (CWE) Grade 11, 12 1.5 Credit

This course allows students an opportunity to assess and identify career interests, aptitudes, and options in developing a career plan. They will identify skills, aptitudes, and ethics required for employment acquisition in a competitive marketplace. Students will demonstrate mastery of the entry-level employment skills, competencies, and character of education essential for success in the workplace, including issues of diversity, expectations, trends, and labor regulations, as well as demonstrate how academic knowledge and skills are applied to the workplace, personal life, and life-long learning, while gaining an understanding of economic concepts that influence personal, business, and government decisions. [Graduation Requirement: Related Course]

Upon successful completion of this course, you will be able to create and develop Excel worksheets and workbooks in order to work with and analyze the data that is critical to the success of your organization. Students will be able to perform calculations, modify and format a worksheet, print and manage workbooks. [Graduation Requirement: STEM credit, Related Course]

Honors Venture Capital: Busi	ness Development	Grade 10, 11, 12	.5 Credit

This course covers the development process of a new venture. It begins on a conceptual level, then addresses the fundamentals such as financing the new venture, competitive positioning, branding and imaging, insurance and regulatory requirements, marketing, protecting intellectual property, the legal entity structure, the website development components and cost, product sourcing, etc. The class will teach how to pitch the new venture for competitions or to capital providers. [Graduation Requirement: Related Course]

Money Wise - Future Ready Grade 9, 10, 11, 12 .5 Credit	eady Grade 9, 10, 11, 12 .5 Credit
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This course will help students develop a thorough understanding of the concepts and theories that apply to stock market trading of stocks, bonds and mutual funds. Through an on-line investment simulation, students will learn how to research financial information about corporations, develop and manage an investment portfolio, buy and sell stocks on an exchange, and to evaluate market performance with market indexes. In this course students will also plan for financial success with a focus on credit and insurance: types of credit, managing credit, paying for college, insurance, and behavioral finance/financial pitfalls. Students will develop decision-making and goal setting skills, understanding the relationship between career choices and income, and utilizing credit wisely. Students will also learn the most effective way to make their money grow with the help of compound interest and intelligent investing. [Graduation Requirement: **Related Coursel**

.5 Credit

Grade 10, 11, 12

.5 Credit

Principles of Financial Literacy

This course prepares students to plan for financial success with a focus on budgeting and banking: taxes, saving/investing, checking accounts and budgeting. Students will develop decision-making and goal setting skills, understanding the relationship between career choices and income, creating budgets, analyzing paychecks. Students will also learn the most effective way to make their money grow with the help of compound interest and intelligent investing. [Graduation Requirement: Related Course]

Grade 9, 10, 11, 12

Sports and Entertainment Marketing	Grade 10, 11, 12	.5 Credit

Students will be introduced to marketing concepts as they relate to the ever-changing sports and entertainment industries. This course examines the business of sports in the professional, college, and amateur fields, as well as the vast field of entertainment, focusing on their impact on companies, players, and consumers. Topics will include all 7 Marketing functions and focus on the Marketing 4 P's; Price, Product, Promotion and Place. Students will also discuss other related topics such as imaging, licensing, branding and market research. The course will offer field trips, guest speakers and self-directed projects which allow students to apply creativity in creating marketing campaigns to help a business succeed. [Graduation Requirement: Related Course]

COMPUTER SCIENCE AND TECHNOLOGY

Grade 9, 10, 11, 12

Exploring Computer Science

Exploring Computer Science prepares students for learning a programming language. The course will develop students ability to problem solve through programming. Topics covered will include an overview of computer architecture, computer hardware, different types of software, flowcharts, pseudocode, and algorithms. In addition, students will learn how to solve very basic problems using JAVA. [Graduation Requirement: STEM Related Course; Digital Literacy]

Computer Construction and Repair	Grade 10, 11, 12	.5 Credit
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This course is interactive and provides students with the opportunity to assemble a multimedia computer. An overview of available career and certification options will be provided through a heavy emphasis on technical readings and practice exams. topics covered will include the different types of operating systems, motherboards, CPUs, power supplies, expansion cards, and memory. Students will also research current industry standards for computer construction as older components are updated or become obsolete. [Graduation Requirement: STEM Related Course; Digital Literacy]

Cybersecurity - TEALS Grades 10, 11, 12 .5 Credi	it
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A course that explores the fundamental concepts or applied skills of cybersecurity and may involve project-based labs in a secure environment or virtual range. [Graduation Requirement: STEM Related Course; Digital Literacy]

Data Science/Machine Learning/Artificial Intelligence Grade 10, 11, 12

A semester course that explores the fundamental concepts or applied skills of data science, Machine Learning, and Artificial Intelligence. You will learn about training data, and how to use a set of data to discover potentially predictive relationships. As you build the movie recommendation system, you will learn how to train algorithms using training data so you can predict the outcome for future datasets. You will also learn about overtraining and techniques to avoid it such as cross-validation. All of these skills are fundamental to machine learning. [Graduation Requirement: STEM Related Course]

Drone Engineering and Operation G	Grade 9, 10, 11, 12	.5 Credit
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The Milestone C team of aerospace professionals employ cutting-edge technologies and techniques to equip students with key professional skills pertinent to the drone industry and the engineering field at large. During this course students will learn about basic aerodynamics, unmanned aircraft architecture, and drone flight dynamics before applying the engineering process to design, build, and test fly their own drones in small teams, emulating a real-world aerospace engineering program from beginning to end. Following requirements analysis, design, and manufacturing students will perform flight tests using their First-Person View (FPV) piloting systems on their drones. This one-of-a-kind aerospace

.5 Credit

.5 Credit

.5 Credit

experience culminates in a drone challenge, allowing student teams to compete against each other by applying the knowledge, skills, and experience gained during the course. [Graduation Requirement: STEM Related Course]

1 Credit

.5 Credit

Honors Introduction to Engineering Design (PLTW) Grades 9, 10, 11, 12

This course introduces students to the basics of sketching. Lettering, orthographic projection, and 3D Modeling. Students will practice these skills on the drafting board and be introduced to Computer Aided Drafting (C.A.D.). The knowledge and skills developed can be applied to any of the fields of engineering including civil, electrical and mechanical. Topics include the design process, research and analysis, teamwork, communication methods and engineering standards and technical documentation. This course follows the Project Lead the Way curriculum which will allow students who meet the requirements to receive college credit. [Graduation Requirement: STEM Related Course; Digital Literacy]

Introduction to Java Grade 9, 10, 11, 12 .5 Credit

This introduction to the programming language JAVA covers the basics along with programming logic. A history of the development of programming languages and the Java language will be covered. [Graduation Requirement: STEM Related Course; Digital Literacy]

Grade 10, 11, 12

Introduction to Robotics Robotics is a lab-based course that uses a hands-on approach to introduce the basic concepts of robotics, focusing on the construction and programming of autonomous mobile robots in addition to learning the fundamentals of open loop systems using analog and digital sensors. Course information will be tied to lab experiments; students will work in groups to build and test increasingly more complex mobile robots, culminating in an end-of-semester robot contest. We will be using a VEX Robotic Design System as our platform. Students will complete a variety of robot construction and programming activities. [Graduation Requirement: STEM Related Course]

Software Design and Integration 1 Grade 9, 10, 11, 12 .5 Credit

Software Design and Integration will introduce students to how corporate software projects are developed, managed, integrated and fielded. An interface-oriented approach to software development eliminates the need for any prior coding experience. Students will navigate this multifaceted world following a project-based road map and acquire key professional skills after creating apps, games, and control algorithms. Software Design & Integration students will establish a solid foundation in software development and more importantly, will gain a big-picture understanding of interface management and the engineering process at large. [Graduation Requirement: STEM Related Course; Digital Literacy]

Video Game Design Grade 9, 10, 11, 12 .5 Credit This course will introduce students to the world of video game design and development, learning all aspects of the creative, business, and technological components. Students will examine history, structure, and strategy of game development. Overall creation of the computerized video game will include storytelling, characters, game play, levels, and audio content. Participants will learn key programming constructs using Game Maker software. By the end of the course, students will have created a computerized video game. This course is an introductory-level course that does not

require a background in computer programming. [Graduation Requirement: STEM Related Course; Digital Literacy]

AP Computer Science Principles-TEALS	Grades 9, 10	1 Credit

AP Computer Science Principles is an introductory college-level computing course that introduces students to the breadth of the field of computer science. Students learn to design and evaluate solutions and to apply computer science to solve problems through the development of algorithms and programs. They incorporate abstraction into programs and use data to discover new knowledge. Students also explain how computing innovations and computing systems-including the internet-work, explore their potential impacts, and contribute to a computing culture that is collaborative and ethical. Prerequisite: Algebra 1 [Graduation Requirement: Math; STEM Related Course; Digital Literacy]

AP Computer Science A -TEALS

AP Computer Science A is an introductory college-level computer science course. Students cultivate their understanding of coding through analyzing, writing, and testing code as they explore concepts like modularity, variables, and control structures.. [Graduation Requirement: Math; STEM Related Course; Digital Literacy]

Grades 10, 11, 12

Introduction to Programming - NCC CSC 108

This course covers Fundamentals of programming and program development techniques. Topics include data types, functions, storage class, selection, repetition, pointers, arrays, and file processing. Programming laboratory projects in a closed laboratory environment are supervised by the instructor. Prerequisite: Placement in MAT 172 [Graduation Requirement: Math; STEM Related Course; Digital Literacy]

Introduction to Bioinformatics - NCC CSC 111

Introduction to Bioinformatics is a one-semester course focusing on the pre-existing in silico tools to analyze biological data. Prerequisites: CSC 108, MAT 172 OR MAT 201, or permission of the instructor. Corequisite: BIO 121

Parametric Design (Solid works) - NCC CAD 220

Solid works software will be taught as a tool in computer aided design. The focus of the course is on parametric design and proper use of CAD software to produce engineering parts, assemblies and drawings. Topics include: sketching techniques, dimensioning, Creating and editing 3D models, patterning, material designation and mass properties, assembly techniques, and creating 2D drawings. Prerequisite: MAT 136 [Graduation Requirement: STEM Related Course; Related Course]

Software Engineering Methods - CSC 265

This course explores the methods of software application development following the software processes required for the production of high-quality software. Techniques for creating documentation and using software development tools will be presented. Students will understand and apply the practices of lean and agile development, including stakeholder feedback, use cases, user stories, iterative development, stable/consumable code, continuous integration, test driven development, and value stream maps. Prerequisite: CST 252 or CSC 108 or CSC 207 [Graduation Requirement: STEM Related Course; Digital Literacy]

Introduction to Artificial Intelligence - CSC

This course introduces students to artificial intelligence and machine learning programming. Topics include the history of AI, programming in Python, data structures, algorithm analysis, agile development, web frameworks, and more. Both theory and implementation of AI will be covered. Students will create programs using the fundamentals of artificial intelligence for desktop, mobile, and web. 3 hours lecture, 2 hours lab. Prerequisite: CSC 108 Introduction to Programming and CSC 233 Database Development I [Graduation Requirement: STEM Related Course; Digital Literacy]

Artificial Intelligence II – Machine Learning

A continuation of Introduction to Artificial Intelligence, this course teaches students the key concepts of supervised and unsupervised learning algorithms. Students will learn how to master common methods of data processing and feature engineering, process text and images, and gain hands-on experience in programming machine learning algorithms. 3 hours lecture, 2 hours lab. Prerequisites/co-requisites: CSC 2XX Introduction to Artificial Intelligence [Graduation Requirement: STEM Related Course; Digital Literacy]

Internet Commerce Technology - NCC CSC 111

As a continuation of the Web Development and Design I class, this course continues the knowledge and skills development of a web developer. The course covers JavaScript in detail. Fundamentals such as data types, functions, arrays, loops, and conditionals are included. AJAX and Web 2.0 programming skills are developed. Prerequisite: Eligibility for ENG 101 [Graduation Requirement: STEM Related Course; Digital Literacy]

1 Credit

1 Credit

1 Credit

1 Credit

1 Credit

1 Credit

1 Credit

ENGLISH

Grade 9

English 1

English 3

Honors English 3

This course is an exploration of the reading-writing connection. Students will use the writing process and technology to develop writing proficiency using four core and four ancillary titles of world literature selections. Students will also work on speaking and listening, vocabulary development, comprehension strategies, and logical thinking and study skills. All students will be required to maintain a writing portfolio, keeping on file a variety of writing assignments to be reviewed periodically. [Graduation Requirement: English Credit]

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This accelerated English course will consist of an in-depth examination of both fiction and nonfiction. An emphasis will be placed on the various forms of discourse (e.g., persuasive, expository, narrative, and descriptive). Students will learn the components and skills associated with creating an analytical paper and close reading techniques. Students will read the required four core texts and multiple ancillary texts. All students will maintain a writing portfolio for self- and teacher-assessment of writing progress. This course will provide an intensive educational opportunity for qualified, highly-motivated students. Students are required to complete a summer reading and writing assignment in advance of taking this course. Prerequisite: Eighth-grade teacher recommendation based on student's interest and motivation. [Graduation Requirement: English Credit]

English 2	Grade 10	1 Credit

In this course, students will acquire the skills and develop the vocabulary necessary to read the major genres of literature: the novel, short story, drama, poetry, essay, and biography. Four core and four ancillary titles will be studied. Students will study the various techniques of developing and researching a topic and will write papers and develop multimedia presentations using these skills. Instruction will focus on response writing and the persuasive essay. Grammar, research, vocabulary, and oral communication skills will also be emphasized. Representative written assignments will be kept in their portfolios for periodic review. [Graduation Requirement: English Credit]

Honors English 2	Grade 10	10	Credit
This accelerated English course will consist	of an in-depth analy	vsis of challenging classical and contempo	orary short
stories, drama, novels, poetry, non-fiction, ar	nd biographies. Selec	tions will include, but are not limited to, the	e four core
and four ancillary books for 10th grade. In a	addition, the course w	ill stress the writing process and include an	emphasis
on expository, research and thesis writing.	Work will be collected	ed in a portfolio to be examined periodica	ally. Other
activities will include the acquisition of gra	mmatical skills, the d	evelopment of vocabulary, the application	of literary
terminology, and the development of oral a	communication skills.	The course will provide an intensive, e	ducational
opportunity for qualified, highly- motivated s	tudents. Students are	e required to complete a summer reading c	and writing

assignment in advance of taking this course. [Graduation Requirement: English Credit]

Students in this course will read major writers of American Literature from the early colonial period to the present to become aware of their cultural traditions. All students will read four core and four ancillary titles. Through their reading, discussions, vocabulary work, and writing, students will develop an awareness of their place in society and their value as an individual. Students will develop research skills and use the writing process to develop creative, analytical, and persuasive pieces. Students will maintain a portfolio of written work. [Graduation Requirement: English Credit]

Grade 11

Grade 11

Students in this accelerated English course will develop the ability to examine the growth of American Literature from the colonial to the contemporary period. Through a critical analysis of the works of major American writers, students will achieve knowledge of their cultural traditions, an understanding of the development of American literary thought, and an awareness of their place in society. Titles will include, but are not limited to, the four core and four ancillary titles of the 11th grade curriculum. Students will write papers and produce multimedia presentations to increase their skills in the techniques of expository, narrative, and research writing. Work will be collected and maintained in individual portfolios,

1 Credit

1 Credit

which will be reviewed periodically. Students do intensive vocabulary study and will make use of literary terminology in their discussions and written work. This course will provide an in-depth, challenging study of American Literature for the qualified, highly motivated student. Students are required to complete a summer reading and writing assignment in advance of taking this course. [Graduation Requirement: English Credit]

Senior English Core Related Courses	Grade 12	.5 Credit
(2 courses required) [Graduation Requirement: Eng	Jlish Credit]	each

- Multimedia Journalism This course will introduce you to the techniques of journalism in digital media and offer you conceptual and practical tools with which to join the fray (vlog, blog, podcast, tic-toc, digital storytelling etc). By the end of the course, you should have a clear sense of the various ways journalists have taken up digital media and a sense of how you might use those media yourself. Multimedia Journalism is a collaborative production course, so by the end of the semester you will have learned a number of technical skills that will help you produce and publish online
- Science Fiction This course explores the world of modern science fiction and the role it has played in our cultural imaginations over the last two centuries. Science fiction reflects humanity's relationship to technology, the environment, and the great unknown. Through reading, active discussion, and research, students will engage with the science fictional thought experiments of the past, borrowing from the genre's imaginative imperatives, and purportedly logical frameworks, to assess the potential repercussions of real-world events and of emerging technologies.
- From Text to Tech This course explores literary adaptations that range beyond the stage and cinema. Musicians, electronic game designers, and multimedia installation artists frequently use literature as their source material for new interpretations of familiar characters and stories. This course expands upon traditional literary analysis to deconstruct the interactive qualities and aesthetic properties that different technological mediums can bring to the table. Dante's *Inferno* is a cornerstone of the western canon and though it pains many to see it adapted into a violent, thrill-ride video game, a new media adaptation like this can be an entry point for future generations of readers. Grounded in the source literature itself, and examples of adaptations to more traditional artistic mediums, students will interpret productions of anime, augmented reality/ virtual reality, public and multimedia art, computer-aided graphic design, and video games (both mass market and "indie"). Students will write analyses and produce creative projects in response to these unique adaptations of classic literature.

Ecojustice: Environmental Justice in the 21st Century Grade 9, 10, 11, 12	Ecojustice:	Environmental Justice in the 21st Century	y Grade 9, 10, 11, 12	.5 Credit
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This course will be interactive and collaborative with a hands-on approach that will focus on authentic experiences in nature and will provide students with the opportunity for creating, planning, organizing, and fundraising field trips to test and build skills. This course will prepare students to be strong leaders with teamwork and communication skills that will not only prepare them for survival in nature, but also how to survive in school and in their community. This course will explore the evolving relationship humans have in nature and will focus on environmental justice and ethics in the 21st century. [Graduation Requirement: Related Course]

Integrated SAT Prep	Grades 10, 11, 12	.5 Credit
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This course is intended to prepare students for the evidenced-based reading, writing, and math segments of the SAT. Teachers will provide students with activities in analytical thinking and with the skills and strategies associated with the evidence-based reading and writing section and the math section of the redesigned SAT. Topics covered include developing a study plan, vocabulary, sentence completion strategies, reading comprehension, and essay-writing strategies, as well as time management, scoring procedures, and strategies for managing test anxiety. Course materials may include SAT review materials, current assessment software programs, and previous standardized examinations. This course does not fulfill the graduation credit in English or mathematics. [Graduation Requirement: Related Course]

	Digital Storytelling	Grades 10, 11, 12	.5 Credit
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Storytelling will be a great option for any student who wants to learn more about the conventions of filmmaking and how to use various forms of technology to tell interesting and compelling stories. The course will introduce elements of storytelling and will encourage creativity and teamwork through a variety of projects such as video narratives, memoirs, poetry, short films, and more. [Graduation Requirement: Related Course]

Approaches to Film and Media Study	Grades 10, 11, 12	5 Credit
Approaches to Thim and Media Sida		

This one-semester English related course teaches students to view, discuss, and write about films critically in order to understand the ways in which films convey meaning, express points of view, influence public opinion, and reflect the time period. Students will learn about the history of film, the basics of film theory, and the critical analysis of film. Although films will be viewed in class, students will be expected to view films at home and in the movies. Genres and movements of film include, but are not limited to, Film Noir, Impressionism, montage, science fiction/fantasy, westerns, Cinema Verite, and silent films. Possible readings include film analyses, directors' notes, texts on which films are based, screenplays, and reviews. Students will use a variety of media to respond to their viewing. [Graduation Requirement: Related Course]

Composition - NCC ENG 101

This course develops students' abilities to write effective essays and to reason critically. A review of grammar and syntax, as needed, is included. The goals of unity, coherence and logical development are pursued through analysis of professional and student essays and through practice of prewriting, writing and revision techniques. Students learn various organizational patterns. Students will write and revise several essays. A portfolio is required. Prerequisites: Placement determined by college entrance exam, completion of ENG 088 with a grade of B (ENG 101 traditional) or with a grade of C- or better for ENG 101/ENG 101W (Workshop), or by recommendation of ESL faculty [Graduation Requirement: English Credit]

Literature and Composition - NCC ENG 102

This composition course is a continuation of work on skills begun in ENG 101. Students receive further instruction in composition and write frequently in and out of class. The analytical and critical essays they produce focus on fiction, drama, and poetry. To prepare for these writing tasks, students learn how to read and appreciate various literary genres, how to interpret literature, and how to explain and support their ideas in writing. Prerequisite: ENG 101 [Graduation Requirement: English Credit]

Public Speaking – NCC COM 173

The course introduces students to the communication techniques needed to organize and deliver oral messages in a public setting, with emphasis on extemporaneous speeches that inform, demonstrate and persuade. Basic communication theory, including reasoning patterns and logical fallacies, is covered. Prerequisites: Eligibility for ENG 101 [Graduation Requirement: Related Course]

The Creative Voice - NCC IDS 210

Defining art in its broadest sense to include visual, performance and media arts, as well as literature, music and philosophy, this course encourages students to explore the nature of creative expression. Students will learn to identify and evaluate these art forms, and, in the process, they will be asked to see relationships and make connections between various forms of creative expression. In addition to theoretical discussion of the humanities, students will engage in and explore their own creative processes. Prerequisite: ENG 102 [Graduation Requirement: English Credit]

Great Books - NCC IDS 230

Recommended for Honors Program Candidates, this interdisciplinary Great Books seminar focuses on a variety of questions that are central to the human condition, such as What is Justice? What is Beauty? and What is Race? The methodology of textual close reading and Socratic discussion is emphasized, including the shared responsibilities of an inquisitive, dialogue-centered learning community and the communication of complex ideas that emerge from the reading of foundational texts. Prerequisite: ENG 102 [Graduation Requirement: English Credit]

1 Credit

1 Credit

1 Credit

1 Credit

FAMILY AND CONSUMER SCIENCE

Principles of Culinary Arts

Through a combination of demonstration and hands-on practice, students will be introduced to the basic principles of cookery, including recipe interpretation, measurements, food safety, and basic cooking methods. [Graduation Requirement: Pathway Related Course]

Culinary Arts 1	Grades 10, 11, 12	1 Credit

Students will discover what makes a restaurant successful and examine principles of nutrition, food production and service. Students will prepare and serve a variety of foods in an industrial kitchen and visit local hotels and restaurants. Students will learn using the industry-standard Prostart 1 curriculum. Prerequisite: Principles of Culinary Arts [Graduation Requirement: Pathway Related Course]

Culinary Arts 2 Grades 11, 12 1 Credit

Students will apply basic principles of food production and service covered in year one. They will extend their knowledge and understanding of cold kitchen, cooking methods, ethnic and regional cuisines, baking and pastry arts, charcuterie, and dining room management through practical application. Students will learn using the industry-standard Prostart 2 curriculum. Prerequisite: Culinary Arts 1 [Graduation Requirement: Pathway Related Course]

Culinary Arts 3 Grades 11, 12 1 Credit	rts 3
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Students will apply theory and practical knowledge through techniques learned in Culinary Arts 1 and 2. Students will conduct research and produce special projects in addition to acting as an assistant chef instructor to students in Culinary Arts 1 and 2 courses. Students will assist the head chef in preparing and catering events within the school building and off campus locations as well. Prerequisite: Culinary Arts 1 and 2 [Graduation Requirement: Pathway Related Course]

HEALTH EDUCATION AND SAFETY

Health Education 1	Grades 9, 10	.5 Credit

The health courses develop the concept that a person's health is greatly influenced by the kind of information that a person has and the way this information is used in making decisions about the individual's life. Life skills integrated throughout coursework are: accessing reliable information, advocacy, analyzing influences, decision making, goal setting, and not limited to student self-management. The Health Curricula focuses on Four State standards: Healthy and Active Life, Injury and Disease Prevention, Human Growth and Development, Substance Abuse Prevention. Students must pass 1 credit of health and safety to graduate. [Graduation Requirement: Health and Safety]

Health Education 2Grades 11, 12.5 CreditThe health courses develop the concept that a person's health is greatly influenced by the kind of information that a
person has and the way this information is used in making decisions about the individual's life. Life skills integrated
throughout coursework are: accessing reliable information, advocacy, analyzing influences, decision making, goal

setting, and not limited to student self-management. The Health Curricula focuses on Four State standards: Healthy and Active Life, Injury and Disease Prevention, Human Growth and Development, Substance Abuse Prevention. Students must pass 1 credit of health and safety to graduate. [Graduation Requirement: Health and Safety]

Grade 9, 10

.5 Credit

JROTC

The mission of the Air Force Junior Reserve Officer Training Corps (AFJROTC) is to develop citizens of character dedicated to serving their nation and community. All Aerospace Science courses strive to build better and more successful citizens through academic classes, leadership and community service opportunities, physical fitness classes, and co-curricular activities. Students who take full advantage of the program, inside and outside the classroom, will finish with experience and skills that make them highly competitive for higher education and scholarship opportunities or employment.

Cadets are required to wear the uniform once a week to all classes. In uniform, the student is required to meet USAF grooming standards as they relate to hair, jewelry, earrings, facial hair, etc. Prospective cadets should make certain they know these requirements prior to enrollment. Failure to wear the uniform or meet grooming standards will result in failure of the course.

Aerospace Science and L	eadership 1	Grades 9, 10, 11, 12 (New Cadets Only)	
AR9290GAC (Fall))	Milestones in Aviation History		.5 Credit
AR9291GAC (Spring)	Traditions, Wellness, and Foundation	ons of Citizenship	.5 Credit

This course is an aviation history course focusing on the development of flight throughout the centuries. It starts with ancient civilizations and flight, then progresses through time to future developments in aerospace, with an introduction into cyber technologies. The leadership course will introduce cadets to the history, organization, mission, traditions, goals, and objectives of JROTC for all services. It introduces key military customs and courtesies, how to project a positive attitude, and examines the principles of ethical and moral behavior. It provides strategies for effective note taking and study skills for academic success. The Wellness program seeks to motivate cadets to lead active, healthy lifestyles beyond high school and into their adult lives.

Aerospace Science and L	eadership 4:	Grades 10, 11, 12 (Returning Cadets)	
AR9284GAE	Exploring Space & Communico	tions, Awareness & Leadership	1 Credit

The Aerospace Science class, "Cultural Studies: An Introduction to Global Awareness", is a customized course about the world's cultures. The course is specifically created for the US Army, Marine Corps, Navy, and Air Force Junior ROTC programs. It introduces students to the world's cultures through the study of world affairs, regional studies, and cultural awareness. The course delves into history, geography, religions, languages, culture, political systems, economics, social issues, environmental concerns, and human rights. The Leadership Education class, "Life Skills and Career Opportunities", will be helpful to students deciding which path to take after high school. Information on how to apply for admission to college or to a vocational or technical school is included. Information on how to begin the job search is available to students who decide not to go to college or vocational school. Available also is information about financial planning and how to save, invest, and spend money wisely. The Wellness program seeks to motivate cadets to lead active, healthy lifestyles beyond high school and into their adult lives. **Prerequisite: Aerospace Science and Leadership 1**

Note: Our curriculum changes annually based on a four-year cycle. Aerospace Science 1 is for new cadets and offered every year. The following are the additional academic courses covered over the cycle for returning cadets:

- Aerospace Science 2: The Science of Flight; Principles of Management
- Aerospace Science 3: Cultural Studies; Life Skills
- Aerospace Science 4: Exploring Space; Communications, Awareness, and Leadership

MATHEMATICS

Intensified Algebra 1	Grades 9	2 Credits
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In this course students examine real world problems using tables, graphs, and equations. Topics include number patterns, linear equations, proportions and percent, positive and negative numbers, writing formulas, slopes and intercepts, data analysis, systems of linear equations, common laws of exponents and probability and statistics. Successful completion gives the student one credit in mathematics and one credit for a math related course. The one additional math related credit or STEM credit does not fulfill graduation credit in mathematics. [Graduation Requirement: 1 credit Math credit and 1 credit Math Related Course]

Algebra 1	Grades 9, 10, 11, 12	1 Credit
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In this course students examine real world problems using tables, graphs, and equations. Topics include number patterns, linear equations, proportions and percent, positive and negative numbers, writing formulas, slopes and intercepts, data analysis, systems of linear equations, common laws of exponents and probability and statistics. In addition, students will engage in an extensive study of systems of linear equations as well as an introductory study of quadratic equations and expressions. [Graduation Requirement: Math credit; STEM Related Course]

Integrated Algebra and Geometry Grades 10, 11, 12

This course is designed with two goals. First, it develops a solid understanding of Algebra 1 material, while building foundational conceptual understanding of Geometry and Algebra 2 concepts. Second, it cultivates the essential skills and habits required to make use of mathematics, including the ability to approach challenging problems and to communicate mathematical ideas clearly. The mathematical content of the course includes more advanced applications of material from Algebra I, as well as material drawn from the traditional content of Geometry and some Algebra 2. Topics are woven throughout the course to build a deeper understanding. Prerequisite: Algebra 1 or Intensified Algebra [Graduation Requirement: Math Credit; Math Related Course; STEM Related Course]

Applied Geometry

Algebra 2

Grades 10, 11, 12

In this course, students will study lines, angles, triangles, polygons, circles, and three-dimensional figures using both inductive and deductive reasoning. Topics include transformations and the coordinate plane; congruence, proof and constructions; polygons; similarity, proof, and trigonometry; circles, and other conic sections; extensions to three dimensions; and applications of probability. Prerequisite: Algebra 2 [Graduation Requirement: Math credit; STEM Related Course]

The major theme of this course is functions. The concept of functionality will be developed fully, and the course includes a study of linear, quadratic, exponential, and polynomial. Also included in this course is content with probability and statistics. Prerequisite: Intensified Algebra 1 or Algebra 1; May be taken concurrently with Geometry. [Graduation Requirement: Math credit; STEM Related Course]

Grades 10, 11, 12

Honors Algebra 2	Grades 9, 10, 11, 12	1 Credit

The operations of the complex number system, linear, polynomial, quadratic, cubic, and quartic equations, logarithms and exponents, permutations, combinations, probability, coordinate geometry, conic sections and sequences and series, will be included in the course. Students will have the opportunity to enhance their mathematical experience through various forms of technology. The topics covered in this course will help prepare students for future college math courses. Prerequisite: Intensified Algebra 1 or Algebra 1. [Graduation Requirement: Math Credit; STEM Related Course]

Precalculus

Grades 10, 11, 12

1 Credit

This course will expand the student's knowledge of functions. Polynomial, exponential, logarithmic, and trigonometric functions and their applications will be studied in depth. Also included are other topics in trigonometry, sequences and series, probability and some analytic geometry. Students will have the opportunity to enhance their mathematical

1 Credit

1 Credit

.5 Credit

experience through various forms of technology. The topics covered in this course will help prepare students for future college math courses. Prerequisite: Algebra 2 [Graduation Requirement: Math credit; STEM Related Course]

Honors Precalculus Grades 10, 11, 12 1 Credit

All of the topics of Precalculus will be covered, with a more theoretical emphasis. In addition, the student will study rational functions, polar and parametric equations, and vectors. Prerequisite: Algebra 2 [Graduation Requirement: Math credit; STEM Related Course]

Grades 10, 11, 12

Statistics topics studied include describing data with graphs, distributions, histograms, and other graphical techniques. Students will also use statistical measures of center and spread to analyze data and graphical displays. Probability topics include: probability rules, probability distributions-discrete, binomial, Poisson, and normal distributions. Other topics studied are sampling design, sampling distributions, hypothesis testing and confidence intervals for one mean and one proportion samples using z-tests and t-tests. Prerequisite: Algebra 2 Graduation Requirement: Math Credit; Math Related Course; STEM Related Course]

This course is intended to prepare students for the evidenced-based reading, writing, and math segments of the SAT. Teachers will provide students with activities in analytical thinking and with the skills and strategies associated with the evidence-based reading and writing section and the math section of the redesigned SAT. Topics covered include developing a study plan, vocabulary, sentence completion strategies, reading comprehension, and essay-writing strategies, as well as time management, scoring procedures, and strategies for managing test anxiety. Course materials may include SAT review materials, current assessment software programs, and previous standardized examinations. This course does not fulfill the graduation credit in English or mathematics. [Graduation Requirement: Related Course]

Grades 10, 11, 12

Intermediate Algebra – NCC MAT 136

Statistics

Integrated SAT Prep

Includes a study of functions, relations, and graphs; applications; linear functions and inequalities; quadratic and other polynomial functions; exponents and radical expressions; rational expressions and equations; and systems of equations. Department exit assessment is required. Students must earn a C- or higher to move to the next level course, MAT 146, MAT 172 or MAT 201. Prerequisite: High School Algebra 2 and appropriate placement test score [Graduation Requirement: Math credit; STEM Related Course]

College Algebra – NCC MAT 172

TI graphing calculator is required. Topics include concepts of functions; numeric, algebraic, and graphic techniques as applied to the following functions: polynomial, piecewise, rational, radical, exponential, logarithmic; complex numbers; applications; and systems of equations. Topics that might be included are recursively defined functions and topics in analytic geometry. Department exit assessment is required. Prerequisite: MAT 136E or MAT 136 with a grade of C- or higher or appropriate placement test score [Graduation Requirement: Math credit; STEM Related Course]

Pre-Calculus - NCC MAT 186

TI graphing calculator required. Topics include concepts of functions; numeric, algebraic, and graphic techniques applied to the following functions: polynomial, radical, rational, exponential, logarithmic, and circular/trigonometric; right triangle trigonometry and applications; trigonometric identities and equations; applications; topics in analytic geometry. Department exit assessment is required. Prerequisite: MAT 172 with a grade of C- or higher or equivalent [Graduation Requirement: Math credit; STEM Related Course]

Statistics - NCC MAT 201

TI graphing calculator required. Concepts of population and sample, basic experimental designs, introduction to data collection methods; organizing and describing data with graphical techniques and numerical methods; basic probability theory; discrete and continuous probability distribution; normal curves and applications; making inferences about populations (a) point estimates (b) interval estimates (c) hypothesis tests; relationships between two variables, (a) scatter

1 Credit

1 Credit

.5 Credit

.5 Credit

1 Credit

plots (b) correlation (c) regression. Department exit assessment is required. Prerequisite: MAT 136E or MAT 136 with a grade of C- or higher or appropriate placement test score; eligibility for ENG 101 or permission of instructor. [Graduation Requirement: Math credit; STEM Related Course]

Discrete Math - NCC MAT 210

This course is designed to prepare math, computer science and engineering majors for a background in abstraction, notation, and critical thinking for the mathematics most directly related to computer science. Topics include: logic, relations, functions, basic set theory, proof techniques, mathematical induction, graph theory, combinatorics, discrete probability, recursion relations, elementary number theory and graph theory. Prerequisite: MAT 186 with a grade of C- or higher or appropriate placement test score; eligibility for ENG 101 or permission of instructor. [Graduation Requirement: Math credit; STEM Related Course]

Calculus I - NCC MAT 254

TI graphing calculator required. Topics include limits and continuity; derivatives; techniques of differentiation; applications of differentiation; anti-derivatives; Fundamental Theorem of Calculus and the definite integral; applications of the integral; trapezoidal and Simpson's rules. Department exit assessment is required. Prerequisite: MAT 186 with a grade of C- or higher [Graduation Requirement: Math credit; STEM Related Course]

Introduction to Engineering - NCC EGR 111

Students will be introduced to the fields of engineering through design and graphics and comprehensive engineering projects. Topics include: sketching, charts, graphs, forces, energy, electrical circuits, mechanisms, robotics, manufacturing technologies, and fundamentals of engineering economics. Prerequisite: MAT 136 or a satisfactory score on mathematics assessment test. [Graduation Requirement: Math; STEM Related Course]

MULTILINGUAL LANGUAGE LEARNER (MLL) EDUCATION

The Norwalk Public Schools (NPS) MLL Welcome Center identifies Multilingual Learners (MLLs) through the Home Language Survey and administers the English LAS Links, Spanish LAS Links (if applicable), and a math placement test to determine appropriate course placement and services. Once designated as MLLs, students are tested annually on the LAS links until they reach the CT State mandated English Mastery Standards. The NPS MLL Welcome Center, in collaboration with school administrators, takes into consideration a student's prior educational history as individual student transcripts are reviewed for credit transfers. Recommendations are approved by the Assistant Principal in charge of registration at each high school. All MLLs and their families are invited to attend an orientation meeting to welcome them into the NPS school community and to discuss placement recommendations, services, and accepted credit transfers. In case families are unable to make said orientation, families are informed in writing by the school's Assistant Principal or their designee.

Below are the placement recommendations for MLL students in English and Math courses. Entry points may vary based on the students' transferred credits, LAS Links and math placement test results.

MLL Course Placement Process for English

- New Arrivals with 0-1 years/LAS Level 1 will go into **English Foundations**. New Arrivals with LAS Level 2 will go into **English Development**. New Arrivals with LAS Levels 3 or 4 go into **Transition English or English 1**, co-taught with an MLL teacher. Then, MLL students will proceed by following the English course sequence.
- Multilingual Learners with 2 years or more in the United States will be placed in English 1 or Transition English and co-taught with an MLL teacher.

MLL Course Placement Process for Content-area Subjects

- It is highly recommended that placement of bilingual content-area teachers be used to support MLL students. In the absence of a bilingual content-area teacher, school administrators can staff content-area classes using a co-teaching model with an MLL teacher or with a Bilingual Paraeducator.
- Bilingual Paraeducators should be assigned to a content area teacher that is not bilingual or not an MLL teacher to best support MLLs in learning the content and provide MLLs access to the curriculum.

1 Credit

1 Credit

MLL Course Sequence by Content

Subject Area	First Course (SLIFE & Newcomers)	Second Course	Third Course	Fourth Course
English (New Arrivals, less than 2 years)	English Foundations (2 credits) *1 credit goes to a Humanities elective	English Development (1 credit)	Transition English B (grades 11-12) (1 credit) *co-taught with MLL teacher	English 2 (1 credit) *co-taught with MLL teacher
English	English 1 (1 credit) *co-taught with MLL teacher <i>or</i> Transition English A (grades 9-10) (1 credit) *co-taught with MLL teacher	English 2 (1 credit) *co-taught with MLL teacher	English 3 (1 credit)	Senior Core English Course (1 credit)
Math	Bilingual Math Foundations (2 credits) Bilingual/Dual certified Math teacher, or co-taught with MLL teacher or Bilingual Aide	Intensified Algebra 1 (2 Credits) Bilingual/Dual certified Math teacher, or co-taught with MLL teacher or Bilingual Aide	Integrated Algebra/Geometry or Algebra 2 or Principles of Algebra 2 (1 credit) *Dual certified Math teacher, or co-taught with MLL teacher or Bilingual Aide	Geometry (1 credit)
Social Studies	Bilingual (Spanish) World History *Dual certified SS <i>or</i> World History (1 credit) *Co-taught with Bilingual Aide	Bilingual (Spanish) US History *Dual certified SS or US History (1 credit) *Co-taught with Bilingual Aide	Civics (0.5 credit) *Co-taught with Bilingual Aide	SS Related Course
Science	Bilingual Biology (1 credit) *Dual certified Science teacher, or co-taught with Bilingual Aide	Earth and Integrated Physical Science (1 credit) *Dual certified Science teacher, or co-taught with Bilingual Aide	Chemistry (1 credit) *Dual certified Science teacher, or co-taught with Bilingual Aide	Physics (1 credit) *Dual certified Science teacher, or co-taught with Bilingual Aide
World Languages	MLL Foundations with Spanish Language gaps placed in Native Language Spanish 1 OR Other Native Language Spanishor other WL courses based on prior education, placement test, and/or Dept. Chair recommendation.			

EL4300GAG EL English Foundations Grades 9, 10, 11 2 Credits *[Graduation Requirement: 1 credit Core English and 1 credit Pathway Related Course] 2 Credits

This course provides intensive English instruction with emphasis on school routines, survival English, oral skills, literacy development and cultural orientation. Successful completion gives the student one credit in English and one Pathway Related Course credit. The one related course credit does not fulfill the graduation requirement in English. Prerequisite: Students identified as Multilingual Learners with gaps in their education.

EL4461GAE	English Development	Grades 9, 10, 11	1 Credit
*[Graduation Requirem	ent: 1 credit Core English]		

The course involves the sequential development of listening, speaking, reading and writing skills for students at the beginning and advanced beginning levels of English proficiency. Through a content-based approach, students acquire survival and basic communication, as well as reading and writing skills. Successful completion gives the student one credit in English. Prerequisite: Students identified as Multilingual Learners.

EN0017GAE	Transition English	Grades 9, 10, 11, 12	1 Credit
*[Graduation Reg	uirement: Core English		

This course follows the English I curriculum standards and is designed for MLL students. The course is co-taught between an English teacher and an MLL teacher. Teachers use instructional strategies that are effective with MLLs to prepare students for the mainstream English II course that is next in the English core sequence. The curriculum is an exploration of the reading-writing connection and students will incorporate the writing process as they develop their communication skills and engagement in academic discourse. Successful completion gives the student one credit in English.

EL4471GAE	Bilingual World History	Grades 9, 10, 11	1 Credit
*[Graduation Requireme	ent: Social Studies Related Co	ourse]	

This course is a survey of World History from its origins to the 21st century, conducted in Spanish and English. It includes historical development of economics, and political, social and religious institutions with an emphasis on geography's impact on historical and cultural development. Prerequisite: Participation in the Bilingual (Spanish) Program.

EL4472GAE	Bilingual US History	Grades 10, 11	1 Credit
*[Graduation Requirem	ent: US History Requirement]	

This course surveys the development of the American political, socio-cultural, and economic landscapes beginning with the exploration of the Americas until today, conducted in Spanish and English. Students concentrate on specific time periods through American history with emphasis on important events and critical ideas. Prerequisite: Participation in the Bilingual (Spanish) program.

EL4301GAG	Bilingual Math Foundations	Grades 9, 10, 11	2 Credits
*[Graduation Requirem	ent: 1 credit Core Math and 1 cr	redit Math Related Course or STEM Related Course	e]

This course provides intensive Basic Math instruction with emphasis on the English and Math skills needed to prepare students for Algebra, conducted in Spanish and English. Successful completion gives the student one credit in Mathematics and one STEM Related Course credit. The one related course credit does not fulfill graduation requirements in Mathematics. Prerequisite: Students identified as Multilingual Learners with gaps in their education. Prerequisite: Participation in the Bilingual (Spanish) program.

EL3320GAE	Bilingual Biology	Grades 9, 10, 11	1 Credit
*[Graduation Requi	rement: Biology/Life Scienc	e (Lab)]	

Emphasis of study will be placed on the biochemical, physiological, morphological, ecological, bacteriological, embryonic, nutritional, pathological and biographical natures of life, conducted in Spanish and English. Upon completion of this course a student will have a knowledge of the principles on which all life depends, and an awareness of the interdependence of organisms in the biological world with reference to the balance of nature and conservation. Prerequisite: Participation in the Bilingual (Spanish) program.

EL0009GAC	MLL Academic Lab	Grade 9 (10, 11, if newly arrived)	0.5 Credit
*[Graduation	Requirement: Pathway Related Cours	el	

This MLL Academic Lab course should be taken concurrently with English Development. This lab is designed to give MLL students support in their academic courses, including English support.

EL0013GAC	MLL Culture and Career Seminar 1	Grade 9 (10, 11, if newly arrived)	0.5
Credit			
*[Graduation Requirem	ent: Pathway Related Course]		

This one semester interdisciplinary course is designed as an introductory course for Multilingual Learners. They will learn and apply 21st century skills, laying a foundation which will be used during their high school years and are applicable in the real world. In addition to an introduction to career exploration, the curriculum will focus on 'skills for success' including: communication skills, organizational skills, civic responsibility, problem solving, personal development (such as collaboration and self-advocacy), technology skills, and researching skills. Students will be learning how to succeed in high school and how these skills can be applied throughout life.

EL0014GAC	MLL Culture and Career Seminar 2	Grade 10, 11	0.5 Credit
*[Graduation F	Requirement: Pathway Related Course]		

This one semester interdisciplinary course continues to develop Multilingual Learners' skills for success with emphasis on post-secondary options. Students explore their passions and interests and how these interests might influence their career choices. They will start thinking about internship options and develop skills for resume writing and job interviews. They will also learn about the college application process and explore what different colleges have to offer. Prerequisite: MLL Culture and Career Seminar 1

EL5503GAC3	MLL Career Exploration Internship	Grades 11, 12	0.5 Credits
*[Graduation Re	quirement: Pathway Related Course]		

This one semester internship provides students with real-world career experiences and an opportunity to connect learning in the Culture and Careers Seminar 1 and 2 with the workplace. With support from the MLL Career Pathways Facilitator, students will be able to hone their work and life skills within American culture. The experience will enhance students' opportunities for post- secondary success in the job world. Prerequisite: successful completion of Culture and Careers Seminar 1 and 2 or Teacher Recommendation.

Summer Course Only

EL4463GAE	English Literature	Grades 9, 10 11, 12	0.5 Credits
*[Graduation R	equirement: Pathway Related Course]		

This course is designed for students at the intermediate to advanced level of English proficiency. Emphasis is placed on learning academic English - reading, writing, and grammar, especially related to the content areas.

		MUSIC	
AR8917GAE	Theatre Studies 1	Grades 9, 10, 11	1
*[Graduation Regu	irement: Fine Arts]		Credit

Theatre Studies I is an introduction to the techniques, vocabulary, etiquette, and history of the art of theatre. Students will learn fundamental theatre skills through introductory modules that explore ensemble building, stage movement, dramatic literature, playwriting, the various roles and careers in the theatre, theatre history, and acting techniques for the stage. This course emphasizes daily participation and values process over product. Students' will engage in daily activities, reading and writing assignments, and summative assessments involving performances and projects.

AR8884GAE	Dramatic Writing	Grades 10, 11, 12	1 Credit
*[Graduation Red	quirement: Fine Arts]		

Dramatic writing is for students looking to create their own scripts for theatre, film, or multi-media. Students will learn dramatic structures, methods of revision, how to give feedback to their peers and be asked to write daily in a wide range of mediums including playwriting, screenwriting, animation, narrative podcasts, graphic novels, and video games. This course will ask students to create a full length project which they will have the opportunity to have read in front of an invited audience. Prerequisite: Theatre Studies 1 or teacher recommendation.

AROYZUGAC AC	cting I	Grades 10, 11, 12	1 Credit
*[Graduation Requirement: Fin	ne Arts]		

Acting I is for experienced theater students who wish to develop as performers and are seeking performance opportunities. Students will deepen performance technique by engaging in daily vocal and physical training. They will study a wide range of acting skills and forms including classical and contemporary stage acting, improvisation, musical theater, script analysis, and film acting. Students will also develop an audition portfolio and participate in a scene study in front of an invited audience. Prerequisite: Theatre Studies 1 or teacher recommendation.

AR8885GAE	Play Production	Grades 11, 12	1 Credit
*[Graduation	Requirement: Fine Arts]		

Play Production is a culminating theatre course that allows experienced theatre students to apply what they have learned in previous coursework to creating full productions. In the first semester, students will design, produce, and perform a one-act play directed by the instructor. During the second semester, students will self-select the work and a student director to lead a second production. This course is designed to support student capstones. It is only available to upperclassmen who have taken at least two credits of theatre.

AR88935GAE	Technical Theatre and Production	Grades 10, 11, 12	1 Credit
*[Graduation Re	quirement: Fine Arts]	0100es 10, 11, 12	i crean

Technical Theatre and Production is a practicum that will introduce students to the essential elements of lighting, scenic, costume, prop, and sound design as well as how to organize and support a production through scheduling, budgeting, and advertising. Students will be given hands-on experience with set construction, scenic painting, hanging and focusing lighting equipment, and creating and editing sound cues. They will be given extra-curricular opportunities to apply those skills to concerts and productions throughout the school year. This course requires a prerequisite of Theatre Studies I and teacher approval.

AR8851GAE	Beginning Choir	Grades 9, 10, 11, 12	1 Cradit
*[Graduation	Requirement: Fine Arts]		l ciedii

Beginning choir is a mixed group of students with a desire to learn the fundamentals of voice production and to improve their natural vocal abilities. It is designed for students with a desire to learn the fundamentals of voice production and to improve their natural voice abilities. There should be a demonstrated desire to learn basic music reading. Through the use of voice drills and the singing of solo and ensemble repertoire, students develop an awareness of the voice as an expressive and resonant instrument. Through this group, students can attain the necessary experience for singing in other auditioned choral ensembles. Areas of study include: basic music theory, music reading skills, voice production, and musical interpretation. A variety of music literature is studied, both sacred and secular. Choir members are required to participate in all scheduled school and community performances.

AR8852GAE	Advanced Choir	Grades 10, 11, 12	1 Credit
*[Graduation	Requirement: Fine Arts]		

Advanced choir is a group of experienced singers who have participated in other performing organizations including choir, band or orchestra. Areas of study are: basic music theory, voice production, solo and ensemble singing, and artistic interpretation. A variety of music literature is studied, including sacred and secular compositions from the master works to contemporary. Advanced choir members are required to participate in all activities that include: school assemblies, public concerts, contests, CMEA events, and exchange concerts. Prerequisite: Beginning Choir or teacher recommendation.

AR8862HAE	Honors Chamber Singers	Grades 10, 11, 12	1 Credit
*[Graduation Requirement	nt: Fine Arts]		

This course is a serious study of artistic music for the select chorus musician. Music will be selected by the instructor for its aesthetic content, historical importance and variety of style. Whenever possible, the pieces will be performed in original content with regard to language and accompaniment. Students will be selected through an audition-based criterion. This group is a performance-oriented organization and the students are required to participate in all school, community, and county performances. Prerequisite: Audition or teacher recommendation.

AR8863GAE	Chorale	Grades 10, 11, 12	1 Credit
*[Graduation Re	quirement: Fine Arts]		

Chorale is composed of experienced singers who have previously performed in music ensembles such as choir, advanced choir, chamber singers, band or orchestra. Students will be selected through an audition-based criterion. This is a performance-based organization; therefore, students are required to participate in all designated school, community and county performances, as well as after school rehearsals. Prerequisite: Audition

AR8893GAE	Music Theory	Grades 9, 10, 11, 12	1 Credit
*[Graduation Requirem	ent: Fine Arts]		

This course is designed for students who already possess the rudimentary skills necessary for reading and performing music, and who wish to deepen their understanding of notation, meter, and harmonic elements. An emphasis will be placed on ear training, dictation, scales, and listening examples from the Medieval Period until today. This course will prepare students for furthering their studies in AP Music Theory.

AR8893ACE	AP Music Theory	Grades 10, 11, 12	1 Credit
*[Graduation	Requirement: Fine Art]		i Grean

This course is designed for students who have an interest in learning the inner workings of music. Emphasis will be placed on four-part writing with standard voice-leading techniques. Students will expand their harmonic vocabulary through composition, ear training, and analysis. This high-level, fast-paced course will prepare students for success on the AP Music Theory exam, and is strongly recommended for students considering a major or minor in music. Prerequisite: BMHS Honors Intermediate Music Theory OR Instructor Approval / NHS Music Theory OR Instructor Approval

AR8871GAE	Prelude Orchestra	Grades 9, 10, 11, 12	1 Credit
*[Graduation Req	uirement: Fine Arts]		

This course is a continuation of the middle school orchestra program at a more advanced level. The orchestra plays at special programs, in other schools in the system, and at public concerts. Emphasis is placed upon good rhythm, intonation, tone, and technique. String quartets and small ensembles are offered. Students will be required to attend

weekly pull-out lessons. Prerequisite: Orchestra in middle school or audition. Prerequisite: Orchestra in middle school or audition

AR8872GAE	Philharmonia Orchestra	Grades 10, 11, 12	1 Credit
*[Graduation Requirem	ent: Fine Arts]		

This course is a continuation of course 8871 (Prelude) at a more advanced level. The Philharmonic Orchestra plays at special programs, at other schools in the system, and at public concerts. Emphasis is placed upon refining tone quality, artistic interpretation of music, and application of music theory and music history to informed performance practice. String quartets and small ensembles are offered. Students are encouraged (but not required) to audition for music festivals (CMEA, NEMFA, etc.). Students will be required to attend weekly pull-out lessons. Prerequisites: Completion of Prelude Orchestra and audition.

AR8873HAE	Honors Principal Orchestra	Grades 10, 11, 12	1 Credit
*[Graduation Requ	irement: Fine Arts]		

This course is a continuation of 8871 (Prelude) at a more advanced level. The Principal Orchestra plays at special programs, at other schools in the system, and at public concerts. Emphasis is placed upon elevating all elements of performance practice to the highest level in order to create a truly artistic interpretation. String quartets and small ensembles are offered. Students in Principal Orchestra are expected to participate in the Norwalk All-City Orchestra and are encouraged (but not required) to audition for music festivals (CMEA, NEMFA, etc.). Students will be required to attend weekly pull-out lessons. Prerequisites: Completion of 8871 Prelude Orchestra and audition.

AR	8881GAE	Symphonic Band	Grades 9 10 11 12	1 Credit
*[0	Graduation R	Requirement: Fine Arts]	010005 9, 10, 11, 12	rciedii

Symphonic Band is the initial band instrumental course. This course will survey the basic idiomatic concepts of marching band, theatrical band, harmony and theory, classical concert band, contemporary concert band, and parade band. Within the confines of the course tone production, embouchure development, intonation, rhythmic reading and accuracy and musical expression will be stressed. Public appearances are required in the venues of marching band, symphonic band, and combined bands. All participants are required to rehearse the two weeks prior to the commencement of school (band camp) for the purpose of advanced preparation in the curricular area of marching band. Out of school practice for marching band occurs in September through November. Students will be required to attend weekly pull-out lessons. Prerequisite: Participation in middle school band or an audition.

AR8883GAE	Wind Ensemble	Grades 10, 11, 12	1 Credit
*[Graduation Red	quirement: Fine Arts]	010063 10, 11, 12	lorean

Students will have an in-depth study of marching band, theatrical band, harmony and theory, classical concert band, contemporary concert band, and parade band. Special emphasis will be placed on advanced knowledge of timbre, intonation, rhythmic reading, musical expression, sight-reading, musical interpretation, and idiomatic styles. Public appearances are required in venues of marching band, wind ensemble, and combined bands. All participants are required to rehearse the two weeks prior to the commencement of school (band camp) for the purpose of advanced preparation in the curricular area of marching band. Out of school practice for marching band occurs in September through November. Students will be required to attend weekly pull-out lessons. **Prerequisite: Participation in Symphonic Band an Audition.**

AR8895HAE	Honors Wind Symphony	Grades 10 11 12	1 Credit
*[Graduation Requiremen	it: Fine Arts]	010100es 10, 11, 12	i credii

Wind Symphony is the premiere performing organization of the band instrumental department. Instrumentation is based on one person per part except doubling in clarinet, flute, and percussion. Admission into the ensemble requires previous successful participation in Symphonic Band or Wind Ensemble and an audition. Students will have an intensive study of marching band, theatrical band, harmony and theory, classical concert band, contemporary concert band, solo repertoire, individualized regional and state adjudication, small ensemble performances, and parade band. Knowledge of timbre, intonation, rhythmic reading, musical expression, sight-reading, musical interpretation, and stylistic understanding of idiomatic styles will be coupled with an analysis utilizing nationally accept rubrics. Public appearances are required in the venues of marching band, wind symphony, combined bands, small ensembles, and soloists. All participants are required to rehearse two weeks prior to the commencement of school (band camp) for the purpose of advanced participation in the curricular area of marching band. Out of school practice for marching band occurs in September through November. Students will be required to attend weekly pull-out lessons. Prerequisite: Participation in Symphonic Band/Wind Ensemble and an Audition.

AR8896GAC	Color Guard	Grades 9, 10, 11, 12	0.5 Credit
*[Graduation Red	quirement: Fine Arts]		

This is an intensive outdoor study of body, dance, staging, drill, saber, rifle, and flag styles. These seven styles will be assimilated into a singular performance idiom. Exploration, analysis, demonstration, and evaluation of contemporary performances styles will be examined utilizing nationally accepted rubrics. Public appearances are required in the venue of the marching band.

All participants are required to rehearse the two weeks prior to the commencement of school (band camp) for the purpose of advanced preparation in the curricular area of marching band. Out of school practice with the marching band occurs in September through November. Prerequisite: Membership in the marching band and an Audition.

AR8882GAE	Jazz Ensemble	Grades 9, 10, 11, 12	1 Credit
*[Graduation Requ	irement: Fine Arts]		

Students will build upon their knowledge from their participation in pre-required courses and through the study of jazz, rock, gospel, blues and fusion idioms. Emphasis will be placed upon the performance and interpretation of various jazz styles, rhythms, harmony and theory, and improvisation. Public performances are required. Prerequisite: Concurrent enrollment in Symphonic Band, Wind Ensemble, or Wind Symphony and an Audition.

AR8897GAC	Winter Guard	Grades 9, 10, 11, 12	0.5 Credit
*[Graduation Require	ment: Fine Arts]		

This is an intensive indoor study of body, dance, staging, drill, saber, rifle, and flag styles to prerecorded music. These seven styles will be assimilated into a singular performance idiom. This performance idiom is referred to as winter guard. Exploration, analysis, demonstration, and evaluation of contemporary performances styles will be examined utilizing nationally accepted rubrics by Winter Guard International and Musical Arts Conference. Public appearances are required in the venue of winter guard. Out of school practices and performance occur in January through April. Prerequisite: Membership in the marching band and an Audition.

AR8866GAC	Winter Percussion Ensemble	Grades 9, 10, 11, 12	0.5 Credit
*[Graduation Requireme	nt: Fine Arts]		

This is an intensive study of percussion through the use of performance, instruction and evaluation. The students will be exposed to a variety of musical instruments, including but not limited to, traditional marching percussion, concert percussion, pitched and non-pitched instruments. A broad range of musical styles will be explored, including but not limited to, classical, contemporary, rudimental and theatrical. Assessments will be given based on the nationally accepted rubrics from Winter Guard International and locally through the Musical Arts Conference. Public performances are required as part of the course. Out of school rehearsals and performances will occur from December through May. Prerequisite: Membership in the marching and concert band program or by audition to the director of bands.

PHYSICAL EDUCATION AND WELLNESS

Physical Education Grades 9, 10, 11, 12 .5 Credit

Physical Education is a comprehensive program that teaches students the skills and concepts necessary to lead a healthy lifestyle. Adaptive PE will be provided in accordance with the student's Individualized Educational Plan. Credit earned in physical education counts toward honor roll, graduation, and rank-in-class. Students must pass 1 credit of physical education and wellness to graduate, which includes the state required physical fitness test. [Graduation Requirement: Physical Education and Wellness]

The program is designed to develop physically educated students who:

- Demonstrate competency in motor skills and movement patterns needed to perform a variety of physical • activities
- Demonstrate understanding of movement concepts, principles, strategies, and tactics as they apply to the and performance of physical activities learning
- Participate in regular physical activity
- Achieve and maintain a health-enhancing level of physical fitness •
- Exhibit responsible personal and social behavior that respects self and others in physical activity settings
- Value physical activities for health, enjoyment, challenge, self-expression and/or social interaction

Aquatic Fundamentals (Swimmina)	Grades 9, 10, 11, 12	.5 Credit

Whether you are only in, on, or around the water in the summer, you live near the beach or have a pool, you want to swim for exercise or pleasure, already know the basics or are beginning, this semester course is for all grades and abilities. Designed for all levels, classes allow swimmers to develop good habits in, on, and near water, become comfortable in the water, learn and refine new strokes, and become stronger, safer swimmers. [Graduation Requirement: Physical Education and Wellness]

Functional Fitness Grades 10, 11, 12 .5 Credit

This course will focus on exercises and programs which allow students to perform the activities of daily life more easily and without injuries. The foundation of the course is PLT4M, which utilizes a variety of research-based fitness and performance programs, managed through an online platform, which will allow students to capture their results and measure their progress. [Graduation Requirement: Physical Education and Wellness]

Lifeguarding	Grades 10, 11, 12	.5 Credit
The American Red Cross lifeguarding clo	usses are designed with your learning style	e in mind. Students must be at least 16
years old to enroll. The American Red	Cross Lifeguard Manual contains skills	s sheets and references to help you
understand the importance of water safe	ety and arm you with all of the knowledge r	necessary to help save lives and avoid

injury. At the culmination of the course, students will take the lifeguarding test for the opportunity to be a certified lifeguard. [Graduation Requirement: Physical Education and Wellness]

Water Safety Instructor (WSI)	Grades 10, 11, 12	.5 Credit
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Earn your certification to teach American Red Cross swimming and water safety, and gain the skills needed to teach courses and make presentations to swimmers of every age and ability. This course trains instructor candidates to teach all of the courses presented in the Swimming and Water Safety program to all age groups; Learn-to-Swim Levels 4-6 and Adult Swim. At the culmination of the course, students will take the WSI test for the opportunity to be a certified water safety instructor. [Graduation Requirement: Physical Education and Wellness]

Yoga and Meditation Practices Grades 9, 10, 11, 12 .5 Credit

This course will focus on the achievement of optimal mental health through the proven practices of Yoga and Meditation. It will include gathering background knowledge of both Yoga and Meditation as well as practical application with a certified teacher. Students will be challenged to look within themselves through meditation and then they will use skills to begin Yoga practice where mind and body come together to form a peaceful experience that can be very transformative.

Students will be expected to document their experiences through journaling and will also be asked for proof of learning when it comes to different styles of meditation and different yoga poses. Though this will be a more cerebral PE experience, students will also be challenged physically through Yoga practice. [Graduation Requirement: Physical Education and Wellness]

SCIENCE

Grades 9, 10, 11, 12

1 Credit

Biology (Lab Science)

Emphasis of study will be placed on the biochemical, physiological, morphological, ecological, bacteriological, embryonic, nutritional, pathological and biographical natures of life. Upon completion of this course a student will have a knowledge of the principles on which all life depends, and an awareness of the interdependence of organisms in the biological world with reference to the balance of nature and conservation. [Graduation Requirement: Biology/Life Science]

Honors Biology with EIPS (Lab Science)	Grades 9	1 Credit
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Honors Biology will cover topics similar to those covered in the college prep biology class: the principles and inter-relationships of living forms with reference to the balance of nature and a realistic concern for the environment. These topics will be covered in greater depth, placing more emphasis on the self-reliance of the student. Biochemistry will be emphasized, and students will be expected to write science papers and work on science projects. Strongly Recommended: grades of "A" 7th and 8th grade science and 8th grade science teacher recommendation (based on student's interest and motivation); students taking and obtaining a grade of "B" or better in Algebra in 8th grade. [Graduation Requirement: Biology/Life Science (Lab)]

Earth and Integrated Physical Science	Grade 10	1 Credit
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Emphasis of study will be placed on students' understanding of the interconnections and feedbacks among the geosphere, hydrosphere, atmosphere, and anthroposphere as well as the physical aspects of motion, energy, forces, and waves and technology. Students will study climate systems and climate change, the human impacts on Earth systems and issues of human sustainability, current global and regional data sets, the systems and transfer of energy, laws of force and motion, and waves and technological applications. Students will make projections for the future, analyze space systems and research, and use engineering design concepts to evaluate future societal choices in the earth, space, and physical sciences. Upon completion of this course a student will have a knowledge of principles including but not limited to: energy futures, resource management, space exploration and structures, land use, environmental impacts, pollution regulation, and applications of motion, waves, and energy. Prerequisite: Biology and Chemistry. [Graduation Requirement: Chemistry/Physical Science; Science Related Course; STEM Related Course]

Chemistry (Lab Science)	Grades 10, 11, 12	1 Credit

This course covers the following topics: properties of materials, the transformations which matter undergoes, the conditions

affecting those transformations and the nature and amount of energy released or absorbed in these changes, the uses of materials and creation of new substances. Emphasis is placed upon mathematical application to chemistry and an extensive degree of laboratory work. Recommended C or better in the prerequisite courses. Prerequisite: Intensive Algebra 1 or Algebra 1 and Biology [Graduation Requirement: Chemistry/Physical Science (Lab)]

Honors Chemistry with EIP	PS (Lab Science)	Grades 10, 11	1 Credit

This course is for students in the accelerated science sequence and provides an in-depth concentrated study of topics studied in high school chemistry. The work is rigorous and challenging and laboratory activities constitute a major part of this course's curriculum. Prerequisite: Biology; Co-requisite: Algebra 2. [Graduation Requirement: Chemistry/Physical Science (Lab)]

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Genetics

Grades 11, 12

1 Credit

.5 Credit

Physics is the study of matter and energy including an introduction to the mechanics of solids, liquids and gasses, wave motion, sound, heat, magnetism, electricity, light and other concepts in modern physics. The fundamental principles and concepts of each topic are studied and applied through problem-solving and laboratory experimentation. Emphasis is placed on experience integrating physics and mathematics, as well as physics for engineering. Prerequisites: Biology and Algebra 2 or Geometry [Graduation Requirement: Science Related Course; STEM Related Course]

Honors Physics Grades 11, 12 1 Credit

Honors Physics is an in-depth study of physics. Demands will be placed on the student to work independently in the classroom as well as the laboratory. The student will be expected to complete both long and short term outside projects and research as well as to master the use of sophisticated equipment including computers. The honors course will emphasize quantitative physics.Problems involving several physical relationships will be stressed as well as derivation of physical relationships. Prerequisites: Biology and Algebra 2 or Geometry; [Graduation Requirement: Science Related Course; STEM Related Course]

Astronomy	Grades 10, 11, 12	.5 Credit
A rigorous study of	astronomy to provide an understanding of the order of the	ne universe and an awareness of man's

place in this order. This course includes such diverse topics as the modern concept of the origin of the universe, the life and death of the stars, galactic evolution, pulsars, quasars and black holes. Prerequisites: Intensified Algebra 1 or Algebra 1, and Biology. [Graduation Requirement: Science Related Course; STEM Related Course]

Environmental Science	Grades 9, 10, 11, 12	.5 Credit

An introduction to the biological and non-biological factors of the environment and their effects on environments and inter-environmental relationships, including an investigation into methods of control and management of human-populated environments. Environmental outdoor laboratory sessions in the Norwalk area are part of the course. Prerequisite: Biology [Graduation Requirement: Science Related Course; STEM Related Course]

 Everyday Chemistry
 Grades 11, 12
 .5 Credit

 This course is a project-based, consumer chemistry course that will examine the chemistry behind everyday life: movie
 .5

Grades 10, 11, 12

special effects, toys, foods, art, and forensic chemistry. This course takes a hands-on approach with each unit beginning with a challenge task. Students will perform experiments and investigations to meet their unit challenge. This semester related course is not a substitute for a full year lab Chemistry class. [Graduation Requirement: Science Related Course; STEM Related Course]

This course is designed to educate students about molecular basis and application of Genetics. Topics include, but are not limited to mitosis and meiosis, birth defects, Mendelian genetics, patterns of inheritance, sexual development and inheritance, pedigrees, structure and function of nucleic acids, transcription and translation, DNA mutation and repair, genetic disorders, karyotypes, allele frequencies, genetic engineering, and biotechnology. Prerequisite: Biology [Graduation Requirement: Science Related Course; STEM Related Course]

Forensics	Grades 11, 12	.5 Credit
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Forensics is the application of science to those criminal and civil laws that are enforced by police agencies in a criminal justice system. Discussion in this course will be limited to only those areas of chemistry, biology, physics, and geology that are useful for determining the value of crime scene and related evidence. Work in this course will center around the science and technology of evidence collection. This course will be a comprehensive review of biology, chemistry, physics and other science topics. Topics covered will include fingerprinting, body fluids, DNA typing, fire tread analysis, hair and fiber analysis, metallurgy, polygraph testing, ethics, and legal issues. Prerequisite: Biology and Chemistry [Graduation Requirement: Science Related Course; STEM Related Course]

Honors Anatomy and Physiology

Human Anatomy and Physiology includes the study of all structures within the major organ systems of the human body. The morphology of these systems will be directly correlated with how major structures are able to function. This course is designed to examine a healthy state of the human body in comparison with the abnormalities and their physiological effects that result from disease. A comprehensive review of biology, chemistry, and other biological sciences will be integrated throughout this full year course. Dissections will serve as a significant form of assessment allowing practical application of the knowledge attained throughout the semester. Prerequisite: Biology and Chemistry [Graduation Requirement: Science Related Course; STEM Related Course]

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Public Health and Epidemiology investigates introductory level epidemiology principles, concepts and procedures useful in the surveillance and investigation of health-related events. Some topics will include disease control and prevention; epidemiology; outbreak investigations; preparedness and response; and surveillance. Basic microbiology and vaccinations, universal precautions, and biostatistics concepts will also be integrated. Prerequisite: Biology and Algebra 1; Co-requisite: Chemistry [Graduation Requirement: Science Related Course; STEM Related Course]

Advanced PlacementEnvironmental Science Grades 9, 10, 11, 12

This course is designed to be the equivalent of an introductory university course in environmental science. It is an incredibly interesting, complex applicable science that is constantly changing and expanding. It is a rigorous laboratory science course that stresses scientific principles, process, and analysis while also providing opportunities to explore the many social, political, economic, and ethical issues that are relevant to the environmental topics studied. Prerequisite: Biology and Chemistry. [Graduation Requirement: Science Related Course; STEM Related Course]

Introduction to Biology - NCC BIO 105

A course for non-science majors. Representative topics include the chemistry of life, genetics, structure and function of cells and tissues, and selected plant and animal systems. Labs may involve dissection of plant and animal specimens, microscope work, and elementary biochemistry experiments. Three hours of class work, three hours of lab per week. Prerequisites: Eligibility for ENG 101 and eligibility for MAT 136 [Graduation Requirement: Science; STEM Related Course]

General Biology I - NCC BIO 121

This course offers a comprehensive study of fundamental biological concepts. The nature of scientific inquiry, water and carbon chemistry, cell structure and function, metabolism, photosynthesis, genetics and evolution are studied. Lab may include dissection of animal species. Prerequisites: Eligibility for ENG 101, high school biology recommended [Graduation Requirement: Science; STEM Related Course

Survey of Science - NCC SCI 114

This course fulfills the IDS requirement. This course explores basic concepts of physics, chemistry and biology, focusing on the interrelatedness of these disciplines through lecture demonstrations, computer simulations, group collaborations and may include field trips. The topics covered include chemistry (atomic structure, elements, periodic table and simple reactions), biology (characteristics of living things, cell cycle, DNA and genetics, ecology and the environment) and physics (energy, heat, temperature and light). The laboratory portion of the course is tied closely to the lecture and will use analytical techniques to explore questions from the perspective of chemists, biologists and physicists. Prerequisite: ENG 101, eligibility for MAT 136 or the equivalent. [Graduation Requirement: Science; STEM Related Course]

Grades 11, 12

1 Credit

1 Credit

1 Credit

1 Credit

SOCIAL STUDIES

African American/Black and Puerto Rican/Latino Studies Grades 10, 11, 12

The course is an opportunity for students to explore accomplishments, struggles, intersections, perspectives, and collaborations of African American/Black and Puerto Rican/Latino people in the U.S. Students will examine how historical movements, legislation, and wars affected the citizenship rights of these groups and how they, both separately and together, worked to build U.S. cultural and economic wealth and create more just societies in local, national, and international contexts. Coursework will provide students with tools to identify historic and contemporary tensions around race and difference; map economic and racial disparities over time; strengthen their own identity development; and address bias in their communities. [Graduation Requirement: Social Studies Related Course]

American Studies and Pop Culture	Grades 10, 11, 12	.5 Credit

This course is for students who are interested in studying American History using popular culture. Students will be able to examine cultural products such as film, television, music, art, advertisement and study its relevance and connection to the society which produced them. This class requires students to analyze and critique historical events and values that influenced popular culture. [Graduation Requirement: Social Studies Related Course]

Grades 10, 11, 12

.5 Credit The course surveys the origins and institutions of the US Government. Emphasis is placed on the political organization and structure of our national, state and local governments as well as their development. The Constitution and its interpretation will be studied through the use of Supreme Court decisions. Analysis and interpretation of outside readings will be required. Students are encouraged to actively participate in the democratic process and will be given an opportunity to participate in the governmental process through fieldwork projects. [Graduation Requirement: Civics]

Honors Civics Grades 10, 11, 12 .5 Credit

This course studies the origin, institutions, and influence of the US government on its citizens and the world at large. The course lays the groundwork of understanding the functions and purpose of federal, state and local governments so that students may more easily find themselves as active citizens. Topics of study will include both concrete knowledge such as familiarity of the Constitution and more abstract discussions about the government's role in society and the meaning of justice. Analysis and interpretation of historical concepts as well present-day political issues will help guide students in the course. Students are encouraged to actively participate in the democratic process and will be given an opportunity to participate in the governmental process through fieldwork projects. [Graduation Requirement: Civics]

Computer Ethics	Grades 11, 12	.5 Credit

This course is an introduction to the major issues surrounding the use of computers in our society, with a special focus on fields related to computer science and information technology management. The course will cover an analysis of major trends in emerging computer technology and their potential effects on work, leisure, government, and human relations. Students will examine the assumptions which underlie our culture's relation to technology and the relation between their own ethics and the values and ethics implicit in our uses of technology and information. [Graduation Requirement: Social Studies Related Course]

World History

Civics

This course is a survey of World History from its origins to the 21st century. It will include historical development of economics, political, social and religious institutions with an emphasis on geography's impact on historical and cultural development. [Graduation Requirement: Social Studies Related Course]

Grade 9

1 Credit

Honors World History	Grade 9	1 Credit

This course is a survey of World History from its origins to the 21st century. It will include historical development of economics, political, social and religious institutions with an emphasis on geography's impact on historical and cultural development. Students will conduct some in-depth studies of themes in World History including conducting research, analyzing primary and secondary sources, writing a research paper, and/or completing a research project. The student is responsible for obtaining their summer assignments and submitting the completed work on time. Any student who fails to meet the due date for summer assignments will receive a failing grade. Strongly Recommended: B or better in grade 8; standardized assessment scores will be considered in teacher recommendation; strong writing and reading skills; ability to do independent writing and research [Graduation Requirement: Social Studies Related Course]

Sociology	Grades 10, 11, 12	.5 Credit
ecclogy	0.0000 10, 11, 12	

This course is a one-semester study of society and the structures we build within society. The course will be based on the exploration of sociological perspectives, culture, and human nature through socialization, social structure, and research methods of sociologists. The class will use readings, articles, discussions, and projects to highlight how society is built. [Graduation Requirement: Social Studies Related Course]

 Street Law
 Grades 9, 10, 11, 12
 .5 Credit

 This course is designed to examine the United States judicial branch and court cases relevant to teenagers. Street Law will not only advance student understanding of justice, but also empower students with the skills, legal, and civic

US History	Grades 10, 11, 12	1 Credit

knowledge to bring about positive change for themselves and the community. [Graduation Requirement: Pathway Related

Course]

This course surveys the development of the American political, socio-cultural, and economic landscapes during the post-Civil War period and investigates the role of the United States in world affairs. Provision may be made for students to concentrate on and/or specialize in areas of interest through classroom projects and writing assignments. [Graduation Requirement: US History]

Honors US History	Grades 10, 11, 12	1 Credit

This course surveys the development of the American political, socio-cultural, and economic landscapes with an emphasis on the post-Civil War period and investigates the role of the United States in world affairs. Provision may be made for students to concentrate in special areas of interest through classroom projects, formal essays, and research papers. The student is responsible for obtaining their summer assignments and submitting the completed work on time. Any student who fails to meet the due date for summer assignments will receive a failing grade. Strongly Recommended: B or better in World History; standardized assessment scores will be considered in teacher recommendation; strong writing and reading skills; ability to do independent writing and research. [Graduation Requirement: US History]

Yearbook in Design	Grades 11, 12	1 Credit

In this class, students will study the function, techniques, and responsibilities of journalism design. The course will include instruction and lab activity. Students will assist with the preparation and publication of the senior yearbook. This course is recommended for students whose writing skills are firmly grounded. Students will have Photoshop lessons to design page layouts. Students will also have instructions on marketing and advertising to sell and distribute the final product. Yearbook is a permanent Legal Document: it gives students opportunities to gather points toward college admissions. It also will give students a good understanding of how to use Photoshop, Windows, and the Adobe Suite in creating pages and advertisements. Students will be assigned deadlines and tasks to complete for grading purposes. Prerequisite: Teacher recommendation. [Graduation Requirement: Related Course]

Advanced Placement US Government and Politics Grades 11, 12

This course explores the political theory and everyday practice that direct the daily operation of our government and shape our public policies. The express purpose of this course is to prepare students to take the AP Exam for U.S. Government and Politics. The course is for all intents and purposes taught on a college level and it requires a substantial amount of reading and preparation for every class. The objectives of this course go beyond a basic analysis of how our government "works." Students will develop a critical understanding of the strengths and weaknesses of the American political system, as well as their rights and responsibilities as citizens. This course fulfills the Civics graduation requirement. Students are expected to take the Advanced Placement exam. [Graduation Requirement: Civics; Social Studies Related Course]

Advanced Placement United States History Grades 10, 11, 12	1 Credit
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This one-year course will cover the history of the United States from the colonial period through the modern age in accordance with the College Board requirements for Advanced Placement United States History course. Focus will be placed on the major developments in political-constitutional economic and diplomatic history, as well tracing developments in social, cultural and intellectual history through each major time period. Emphasis will be placed on drawing meaning from a wide variety of primary and secondary source documents and on the clarity of written expression. A college text will be used. Students are expected to take the Advanced Placement exam. [Graduation Requirement: US History]

United States History I – NCC HIS 201	Grades 10, 11, 12	1 Credit

This survey of American history studies the diverse roots of American politics, society, culture, and the economy. The Colonial period, the American Revolution and the formation of the republic are discussed. The evolution of opposing socioeconomic systems, sectionalism and sectional conflict, the Civil War and Reconstruction are also examined. Prerequisite: Eligibility for ENG 101 [Graduation Requirement: US History]

FINE ARTS

Foundations of Art

This class is the department foundation full-year class designed to introduce students to the principles and elements of art. This course teaches students a wide variety of materials and techniques for creating art. Drawing skills, essential to the creative process, are stressed as well as painting, printmaking, and sculpture. Students are introduced to the computer lab and the Adobe Creative Suite. Students build a large art vocabulary while learning how to critique their own and others' artwork. Students are required to keep a sketchbook for homework and design ideas.[Graduation Requirement: Fine Arts]

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Students taking Art II create advanced drawing, painting and collage projects while learning advanced applications of the principles and elements of art and design. Students look at, write about, discuss and create artworks influenced by master artists to guide their artistic choices as well as deepen their visual literacy. Advanced Middle School art students can by-pass Art I and register for Art II with a Middle School art teacher recommendation. 9th Graders are expected to register for a second, Part I course, the other Semester. Prerequisite: Foundations of Art or Middle School Art Teacher Recommendation [Graduation Requirement: Fine Arts]

Art HistoryGrades 9, 10, 11, 12.5 CreditThis half-year survey class is designed for students who wish to study the global history of art from Prehistoric to the
present. Students read, write about, and discuss art. Minimal art making is involved. Students learn to distinguish
between art historical arguments that are rooted in historical fact, accepted scholarly interpretation, and informed

Advanced Placement Art History	Grades 10, 11, 12	1 Credit

speculation. This class can be used as a preparation for AP Art History. [Graduation Requirement: Fine Arts]

This class is a college level survey class covering Art from Prehistoric time to the present. AP Art History focuses on reading, analysis of, writing, and discussion about art and art history. This course is designed to teach students to analyze art through the lenses of Formalism, historical, religious, cultural, political, gender, and socio-economic contexts. It is also intended to prepare students for the College Board National Art History Exam. Students are expected to take the Advanced Placement exam. Advanced Placement (AP) classes are rigorous college courses that are offered in the high school setting. AP courses require summer assignments that are due on the first day of school. The student is responsible for obtaining their summer assignments and submitting the completed work on time. Any student who fails to meet the due date for summer assignments will receive a failing grade. Prerequisite: Required summer work. [Graduation Requirement: Fine Arts]

Cultural Perspectives in ArtGrades 9, 10, 11, 12.5 CreditThis course introduces and examines critical cultural studies and theories of culture particularly related to the Middle
East, South Asia, and Africa. This course will enable students to articulate their emerging knowledge of Middle East,
South Asian, and African cultures in a theoretically informed language. Students will develop critical thinking and
creativity through problem solving and self-assessment. Students will create original artwork based on an appreciation
of native artists' techniques and cultural tradition. [Graduation Requirement: Fine Arts]

Applied Arts 1

Grades 9, 10, 11, 12

.5 Credit

In this class, students create products for a "client or company" by learning and utilizing fine art concepts and skills in; product/ industrial, marketing/advertising, interior, textile, environmental and set design. This class is open to freshmen taking Art 2 the other semester. Students are required to keep a sketchbook for homework and design plans. Prerequisite: Foundations of Art, Advanced Foundations of Art or Middle School Art Teacher Recommendation *[Graduation Requirement: Fine Arts]

1 Credit

Grades 9, 10, 11, 12

Applied Arts 2	Grades 10, 11, 12	.5 Credit
This course teaches students advanced	I fine art concepts in; product/ industrial,	marketing /advertising, interior, textile,
environmental and set design. Student	s will work with various methods and m	aterials to create new products for the
marketplace. Through theory, practic	e and reflection, students will develop	original approaches to solve multiple
rigorous design challenges. A sketchb	ook for design plans and homework is	required. Prerequisite: Applied Arts 1
[Graduation Requirement: Fine Arts]		

Digital Illustration and Design 1	Grades 9, 10, 11, 12	.5 Credit

In this course, students will learn the principles and elements of art as they apply to digital art and design. Students will create projects modeled after real-world industry assignments, developed in Adobe Photoshop and Illustrator. Students will present a final project at the conclusion of the course. Prerequisite: Foundations of Art, Advanced Foundations of Art or Middle School Art Teacher Recommendation [Graduation Requirement: Fine Arts]

Digital Illustration and Design 2	Grades 9, 10, 11, 12	.5 Credit
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In this course, students will learn advanced principles and elements of art as they apply to digital art and design. Students will create advanced real-world projects modeled after industry assignments developed in Adobe Photoshop and Illustrator. Students will create digital art projects utilizing advanced Adobe tools. Students will create a mock company, logo and website. Students will learn copyright and fair use policies for Internet imagery and digital design. At course end, students will present a final project as an animated graphic advertisement for their company. Prerequisite: Digital Illustration and Design 1 [Graduation Requirement: Fine Arts]

Drawing 1	Grades 9, 10, 11, 12	.5 Credit
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This course is designed for all students who would like the opportunity to increase their drawing skills in an intense half-year course. Students explore a wide variety of drawing techniques, materials, subjects and styles. Drawing will be based on observation and imagination that will lead the student to self-discovery and awareness of his/her environment. A sketchbook/journal is required to plan and think through composition ideas. Prerequisite: Middle School Art Teacher Recommendation [Graduation Requirement: Fine Arts]

Drawing 2	Grades 10, 11, 12	.5 Credit
This course challenges the technically ski	lled drawing student. Students focus o	n portfolio pieces concentrating on
portraiture, the human figure, still life, and l	andscape drawings. Sketchbooks are re	equired to keep a record of progress
and ideas for future drawing compositions.	Prerequisite: Drawing 1 [Graduation Re	quirement: Fine Arts]

UConn ECE Drawing 2	Grades 10, 11, 12	.5 Credit

This course challenges students' technical and creative skills, learning advanced principles of drawing from observation. Students create artworks in a variety of genres including: still life, perspective drawings, landscapes, and portraiture. Students use a variety of mediums including graphite, charcoal, and ink. Students will be required to submit drawing assignments to complete a portfolio. Students can earn three college credits for this course. Prerequisite: Drawing 1 & Foundations of Art or Advanced Foundations of Art [Graduation Requirement: Fine Arts]

In this class, students will look at, read, talk about, and create a variety of modern and contemporary global art styles including but not limited to: Impressionism, Post-Impressionism, Cubism, Abstract Art, Surrealism, Abstract Expressionism, Pop Art, Photo Realism, Folk Art, Contemporary Crafts, Performance Art and more! Students will learn about the history of art while creating Modern and Contemporary art styles with a variety of art making methods and materials including: drawing, painting, printmaking, sculpture, and crafts. Homework is required. Prerequisite: Foundations of Art, Advanced Foundations of Art or Middle School Art Teacher Recommendation. [Graduation Requirement: Fine Arts]

painting media, techniques, and subjects.	. Media to include: Watercolor, Gouache, ar	nd Acrylics. Art styles will be the focus
as students learn the basics of color medi	a. As with other classes, a sketchbook is re	equired, as the student will be using it
Recommendation [Graduation Requireme	ant: Fine Arts]	Foundations of Art of Middle School
Painting 2	Grades 10, 11, 12	.5 Credit
Students who would like to add to their p to create thematic, meaningful and curren work independently and to make personal Prerequisite: Painting 1 [Graduation Requ	portfolio will be challenged in this advance nt paintings; which will expose intent and al choices for materials and techniques w uirement: Fine Arts]	d painting course. They will be asked a mastery of media. Opportunities to ill be given throughout the semester.
Alternative Photography	Grades 9, 10, 11, 12	.5 Credit
In this course students will apply the p of Cyanotype Van Dyke, Anthotype, Cher and how these alternative processes contemporary photographic practice. Stu cameras to incorporate digital photo ter artwork. Prerequisite: Foundations of Art, [Graduation Requirement: Fine Arts]	principles and elements of art and photo mogram and Print Transfers. Students w and photographic genres were utili idents will photograph with Smartphone c chniques and technologies, such as dig , Advanced Foundations of Art or Middle S	graphy to the alternative processes vill learn the History of Photography ized as well as integrate within cameras and budget point and shoot gitally enlarged negatives, into their School Art Teacher Recommendation
Photography 1	Grades 9, 10, 11, 12	.5 Credit
non-camera darkroom imagery, build an Students learn how to make contact shee and Photoshop. Prerequisite: Foundation Recommendation [Graduation Requireme	id use pinhole cameras, and learn how to ets and to enlarge images from negatives ons of Art, Advanced Foundations of ent: Fine Arts]	o create Images using a film camera. 5. Students learn Digital Photography Art or Middle School Art Teacher
Photography 2	Grades 9, 10, 11, 12	.5 Credit
This class is an extension of Photo 1 that images. In this course students will learn such as using the filter system. Student Students learn advanced Digital Photogr Requirement: Fine Arts]	offers students a more in depth look into he how to process their own film and learn r ts will be introduced to lighting techniq raphy and Adobe Suite applications. Prer	ow to take good quality photographic more advanced darkroom techniques ues both natural and manipulative. requisite: Photography 1 [Graduation
Honors Photography 3	Grades 10, 11, 12	.5 Credit
This course expands on the use of the techniques and the chemical process of burning and dodging techniques. Stud Prerequisite: Photography 2 [Graduation	e camera established in Photo 2. Stude f film developing. Darkroom instruction w dents learn advanced Digital Photograp Requirement: Fine Arts]	ents will explore advanced shooting vill include introduction of filters and phy and Adobe Suite applications.
Honors Portfolio	Grades 11, 12	1 Credit
This class is designed for Art Students or review. Portfolio students can be preparin Students are expected to be proficient in artwork. Prerequisite: Two years of art clo	who want to build a superior portfolio, a ng for AP Studio Art, taking AP concurrently 2D Processes. Students create a substant asses. [Graduation Requirement: Fine Arts	body of work, for higher educational 4, or have finished AP Studio Art class. ial (20-24 pieces) portfolio of finished]
Drintmaking 1		
	Grades 9, 10, 11, 12	.5 Credif

media, techniques, and subjects. Media include: stencil, monoprint, collagraph, linoleum, woodcut, dry-point etching, and embossed prints as well as found object printmaking. In addition to making prints, students will engage in these media

Painting 1

Grades 9, 10, 11, 12

For the student who loves to paint, this class is designed for the student who wishes to explore and improve in all forms of

.5 Credit

through historical and conceptual topics. Prerequisite: Foundations of Art, Advanced Foundations of Art or Middle School Art Teacher Recommendation [Graduation Requirement: Fine Arts]

Printmaking 2	Grades 10, 11, 12	5 Credit

Students in this course will learn advanced printmaking techniques and processes building on previous techniques and media covered in Printmaking 1. Students work in a variety of media including; reduction printmaking, multiple layer stencil, woodcut, embossing and collage transfer. Students can independently research new methods and materials. This class encourages both collaborative and independent work. Prerequisite: Printmaking 1 [Graduation Requirement: Fine Arts]

3D Sculpture 1 Grades 9, 10, 11, 12 .5 Credit

This course is a 3-dimensional art or sculpture class. Students learn to make artworks in a variety of media including; folded paper/ cardboard, papier-mâché, clay, wood, assemblage, wire, and plaster. Students learn clay/ ceramics hand building techniques. Students will learn to visualize and create artworks from 2D plans in 3D form using a sketchbook for homework and design plans. Prerequisite: Foundations of Art, Advanced Foundations of Art or Middle School Art Teacher Recommendation [Graduation Requirement: Fine Arts]

3D Sculpture 2	Grades 10, 11, 12	.5 Credit
This class offers students	advanced clay hand building and wheel thrown pottery techniques.	Students problem solve

building sculptures using more challenging applications of the principles and elements of art and design. Students create 3D artworks from a variety of methods and materials including; paper, papier-mâché, clay, wire, wood and assemblage. Students must be able to work independently and collaboratively. Students will learn to visualize and create artworks from 2D plans in 3D form using a sketchbook for homework and design plans. Prerequisite: 3D Media 1, 3D Sculpture 1 [Graduation Requirement: Fine Arts]

Advanced Placement Studio Art Grades 11, 12 1 Credit

This class is designed for students pursuing art in their higher-level educational choices. A rigorous course with art school foundation level expectations, AP Studio requires a portfolio review and summer work for acceptance. Students create a concentration of (30) quality works for review and scoring by the College Board. Students with passing exam scores earn college credits. Students are expected to take the Advanced Placement exam. The student is responsible for obtaining their summer assignments and submitting the completed work on time. Prerequisite: Two years of art classes. [Graduation Requirement: Fine Arts]

Textile Arts 1

This course is designed to teach students textile making, designing and fiber arts. Students will learn a variety of hand and machine sewing techniques as well fiber arts including; knitting, crocheting, weaving, macramé, embroidery, paper craft including silk screening. Students will learn historical and cultural connections to craft based techniques. Students create sketchbooks and are required to submit unit design plans. Prerequisite: Foundations of Art, Advanced Foundations of Art or Middle School Art Teacher Recommendation *[Graduation Requirement: Fine Arts]

Grades 9, 10, 11, 12

Textile Arts 2 Grades 10, 11, 12 .5 Credit

This course is designed to teach students advanced textile making, designing and fiber arts. Students will learn a variety of advanced hand and machine sewing techniques as well as advanced fiber arts including; knitting, crocheting, weaving, macramé, embroidery and paper craft. Students will learn historical and cultural connections to craft based techniques. Students create sketchbooks and are required to submit unit design plans. Students will visit a Design studio or place of employment to learn about vocational educational opportunities. Students will create a final project or a Capstone experience. Prerequisite: Textile Arts 1*[Graduation Requirement: Fine Arts]

Two-Dimensional Design - NCC ART 121

This introductory course focuses on the basic elements and principles of design such as line, texture, space, balance, unity and scale. Students are responsible for purchasing supplies. Prerequisites: Eligibility for ENG 088 or ESL 152 or permission of Art coordinator [Graduation Requirement: Fine Arts]

.5 Credit

Color Theory - NCC ART 109

This course is an examination of the action and interaction of color and the study of the visual and psychological factors related to color perception. Students are responsible for purchasing supplies. Two hours lecture, three hours studio. Prerequisites: Eligibility for ENG 101 or permission of Art coordinator. [Graduation Requirement: Fine Arts]

Graphic Design I: Skills and Principles - NCC GRA 151

An introductory course focusing on the fundamental nature, skills and principles of graphic design. Students will learn about composition, communication and technology. Classes consist of lectures, demonstrations, applied practice and critiques. Students are responsible for purchasing supplies. Prerequisite: Eligibility for ENG 101 and MAT 136 or permission of the Graphic Design coordinator [Graduation Requirement: Fine Arts; STEM Related Course; Digital Literacy]

Typography - NCC GRA 202

This introductory course focuses on the history, fundamental theory and use of type. Students will learn typographic anatomy, measurement, identification, specification, composition, and terminology. Traditional and contemporary technology will be used to complete exercises and projects. Students are responsible for purchasing supplies. Two hours lecture, three hours studio. Prerequisite: ART 111 or permission of the Graphic Design coordinator. [Graduation Requirement: Fine Arts]

Graphic Design II: Process and Presentation - NCC GRA 252

Building upon technical skills covered and theoretical concepts explored in prerequisite courses, this course focuses on the design process, graphic styles and presentation. Emphasis will be on typography, identification marks, layout and color. Classes consist of lectures, demonstrations, applied practice and critiques. Co-requisite or Prerequisite: GRA 241 and GRA 236 or permission of the Graphic Design coordinator [Graduation Requirement: Fine Arts; STEM Related Course; Digital Literacy]

Digital Imaging: Adobe Photoshop - NCC GRA 231

Students expand upon their graphic design skills and knowledge of procedures learned in GRA 151. Through lectures, demonstrations, exercises and real-world projects, the focus will be on Adobe Photoshop. Students will learn to create as well as edit digital images. Students will apply these techniques to solve design problems in print and web environments. Students are required to have basic knowledge of graphic design before registering for this course. Prerequisite: GRA 151 or ART 111, ART 121 or permission of the Graphic Design coordinator [Graduation Requirement: Fine Arts; STEM Related Course; Digital Literacy]

Digital Page Design: Adobe InDesign - NCC GRA 241

Students expand upon their graphic design skills and knowledge of procedures learned in prerequisite courses. Through lectures, demonstrations, exercises, and real-world projects, the focus will be on Adobe InDesign. Students learn to construct digital documents while developing page layout and typography skills. Two hours lecture, three hours studio. Prerequisite: GRA 151, pre- or corequisite GRA 202 or permission of the Graphic Design coordinator. coordinator [Graduation Requirement: Fine Arts; STEM Related Course; Digital Literacy; Pathway Related Course]

1 Credit

1 Credit

1 Credit

1 Credit

World Languages

Expectations for Each Level in All World Lanauages

- Level 1 The beginning course emphasizes the fundamental skills of listening, speaking, reading and writing. These skills are developed through a thematic approach that stresses themes such as sports, family, shopping, school, travel, and meals. Geography is also included. Individual cultural projects will be assigned at the teacher's discretion.
- Level 2 Continuation of the beginning course deals with fundamental skills with greater emphasis on the natural use of the language in everyday situations. Reading selections are used to enhance vocabulary skills. Culture is further developed. Students will complete individual projects on selected topics. Prerequisite: Level1.
- Level 3 The intermediate course reinforces and advances fundamental skills. There is a greater emphasis on reading, listening, and speaking. Cultural themes are developed. Writing becomes expository and less structured. Prerequisite: Level 2.
- Level 4 Continuation of the intermediate course deals with fundamental skills relative to general study of literature, history, and culture. Emphasis is placed on conversational approach using language in practical solutions. Refinement of grammatical skills is pursued. Works of representative authors will be read and reported on in writing. Discussion periods will be provided. Individual and/or group projects will be accomplished during the year. Prerequisite: Level3.
- Level 5 This course entails conversation, culture, grammar, oral reporting, selected readings, and writing samples. In this course, there are higher expectations on the mastery of the linguistic skills. More extemporaneous speaking in the classroom is required. Prerequisite: Level 4.

Spanish Level 1 Grades 9, 10, 11, 12 1 Credit

The beginning course emphasizes the fundamental skills of listening, speaking, reading and writing. These skills are developed through a thematic approach that stresses themes such as sports, family, shopping, school, travel, and meals. Geography is also included. [Graduation Requirement: World Language]

Grades 9, 10, 11, 12

Spanish Level 2

Honors Spanish 3

Continuation of the beginning course deals with fundamental skills with greater emphasis on the natural use of the language in everyday situations. Reading selections are used to enhance vocabulary skills. Culture is further developed. Students will complete individual projects on selected topics. Prerequisite: Level 1. [Graduation Requirement: World Language]

Honors Spanish 2	Grades 9, 10, 11, 12	1 Credit
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This accelerated course is a continuation of the beginning course dealing with fundamental skills with greater emphasis on the natural use of the language in everyday situations. Reading selections are used to enhance vocabulary skills. Culture is further developed. Students will complete individual projects on selected topics. Prerequisite: Level 1. [Graduation Requirement: World Language]

Spanish Level 3 Grades 10, 11, 12

This intermediate course reinforces and advances fundamental skills. Students review previous structures as well as learn more advanced structures. More emphasis is placed on developing a proficiency of expression using a variety of tenses with more expanded vocabulary and grammatical structures. Emphasis is placed on using the language in a meaningful way through continued use of paired/group activities, cooperative learning, hands on projects, presentations, discussion, games, music, and communicative activities. Prerequisite: Level 2. [Graduation Requirement: World Language]

Level III Honors is an advanced course that focuses on the continued development of fluency, reading of authentic texts, development of conversational ease, and understanding and use of more complex grammatical structures. Increased emphasis is placed on the use of idioms, on the mastery of tense usage, and on the enhancement of independent writing skills. In addition, Level III Honors stresses oral/aural proficiency, the ability to manipulate language structures, to define vocabulary, identify derivations, to use grammar functionally and accurately, to understand written texts, to think in the

Grades 10, 11, 12

1 Credit

1 Credit

chosen language, and complete original writing with reasonable facility. This course is taught at an accelerated pace. Prerequisite: Level 2 Honors. [Graduation Requirement: World Language]

Spanish Level 4 Grades 10, 11, 12 1 Credit

Continuation of the intermediate course places emphasis on developing speaking and writing skills. Students review previously learned structures and more emphasis is placed on developing a proficiency of expression using a variety of tenses with more expanded vocabulary and grammatical structures. Appreciation and knowledge of the Spanish-speaking world is emphasized in a meaningful way through continued use of reading, paired/group activities, cooperative learning, hands-on projects, presentations, discussion, games, music, and communicative activities. Students continue with writing assignments designed to improve proficiency to a higher level. Senior students can take the Seal of Biliteracy Exam. Prerequisite: Level 3. [Graduation Requirement: World Language]

Honors Spanish 4 Grades 10, 11, 12	1 Credit
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Level IV is an advanced course that stresses oral/aural proficiency, the ability to manipulate language structures, to define vocabulary, identify derivations, to use grammar functionally and accurately, to understand written text, to think in the chosen language, and complete original writing with reasonable facility. Using excerpts from Spanish, Italian, and/or French literature along with other selected cultural and historical readings, students are expected to write original compositions using vocabulary appropriate to the materials. In this course, students continue with a focus on listening, speaking, reading and writing at the intermediate ACTFL proficiency level. This course is taught at an accelerated pace. Senior students can take the Seal of Biliteracy Exam. [Graduation Requirement: World Language]

Spanish 5 Grades 12 1 Credit

In this course, much time is devoted to developing oral proficiency with major emphasis on reading, listening, and writing skills. In this course, Spanish & French cinema, and current events from the Hispanic & Francophone world are studied extensively. This course reviews basic grammatical structures, with a focus on listening, speaking, reading and writing at the intermediate ACTFL proficiency level. Senior students can take the Seal of Biliteracy Exam. Prerequisite: Level 4. [Graduation Requirement: World Language]

This college-level course provides opportunities for students to demonstrate their proficiency in the modes of communication (Interpretive, Interpersonal, and Presentational) from the Intermediate to the Pre-Advanced range. When communicating, students in the AP Spanish Language and Culture course will demonstrate an understanding of the culture(s), incorporate interdisciplinary topics, make comparisons between the native language and the target language and between cultures, and use the target language in real-life settings. The AP Spanish Language and Culture course is conducted exclusively in Spanish. Students are expected to take the Advanced Placement exam. Advanced Placement (AP) classes are rigorous college courses that are offered in the high school setting. AP courses require summer assignments that are due on the first day of school. The student is responsible for obtaining his or her summer assignments will receive a failing grade. [Graduation Requirement: World Language]

AP Placement Spanish Literature and Cultur@rades 12

The AP Spanish Literature and Culture course uses a thematic approach to introduce students to representative texts (short stories, novels, poetry, and essays) from Peninsular Spanish, Latin American, and United States Hispanic literature. Students develop proficiencies across the full range of communication modes (interpersonal, presentational, and interpretive), thereby honing their critical reading and analytical writing skills. Literature is examined within the context of its time and place, as students reflect on the many voices and cultures present in the required readings. The course also includes a strong focus on cultural connections and comparisons, including exploration of various media (e.g., art, film, articles, literary criticism). Students are expected to take the Advanced Placement exam. Advanced Placement (AP) classes are rigorous college courses that are offered in the high school setting. 154 AP courses require summer assignments that are due on the first day of school. The student is responsible for obtaining his or her summer

assignments and submitting the completed work on time. Any student who fails to meet the due date for summer assignments will receive a failing grade. [Graduation Requirement: World Language]

Native Language Spanish 1	Grades 9, 10, 11, 12	1 Credit
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This course is for students who are fluent speaking Spanish but have basic skills in reading and writing and require support in those areas. Students will build on their competency in speaking, writing and reading their native language. To further enhance their understanding of the culture, special activities are developed. Students read-translate exercises, read-analyze stories and write Latin sentences. Emphasis is placed on Greek myths and daily life in ancient Rome. The impact of Latin and classical literature and history upon modern literature and current events is emphasized in all sequences of Latin Study 1-4. [Graduation Requirement: World Language]

Native Language Spanish 2	Grades 10, 11, 12	1 Credit

This course is designed to further develop the students' basic four literacy skills: Reading, Listening, Speaking, and Writing. This course aims to strengthen students' ability to communicate orally and in writing through an intensive grammar review, vocabulary building, spelling and punctuation rules of the Spanish Language. At the end of the course, students present small research projects on different aspects and issues related to the linguistic and cultural variation of the Hispanic World. [Graduation Requirement: World Language]

	Honors Native Language Spanish 2	Grades 10, 11, 12	1 Credit
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This course aligns to the AP Language and Culture (NHS) and IB (BMHS) course outlines. This course is designed to further develop the students' reading and writing skills. Native 2 Honors is a reading and composition course that engages Native/Heritage learners in exploring social and contemporary topics with a variety of readings from newspapers, magazines, essays and online media. One of the main objectives of this course is to develop strong writing & reading skills in Spanish. Students will practice not only argumentative writing, but also practical writing, such as writing a letter or an article. In this course, students will continue reviewing and recycling the most challenging grammar topics and vocabulary to continue building confidence and skill in writing & reading in Spanish. This course is taught at an accelerated pace. [Graduation Requirement: World Language]

Native Language Spanish 3	Grades 10, 11, 12	1 Credit

This course is designed to expand the students' knowledge of Spanish through readings, written essays, and oral presentations. This course aims to strengthen students' ability to communicate orally and in writing through an intensive grammar review, vocabulary building, spelling and punctuation rules of the Spanish Language. At the end of the course, students present small research projects on different aspects and issues related to the linguistic and cultural variation of the Hispanic World. [Graduation Requirement: World Language]

Honors Native Language Spanish 3	Grades 10, 11, 12	1 Credit
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This course aligns to the AP Language and Culture (NHS) and IB (BMHS) course outlines. Students are expected to engage in spoken interpersonal communication, engage in written interpersonal communication, synthesize information from a variety of authentic audio, visual, and audiovisual resources, synthesize information from a variety of authentic written and printed resources, plan, produce, and present spoken presentational communication; and plan and produce written presentational communication. This course is significantly more demanding to develop those skills measured on the Advanced Placement Examination in Spanish Language. This course is taught at an accelerated pace. Senior students can take the Seal of Biliteracy Exam. [Graduation Requirement: World Language]

Native Language Spanish 4Grades 10, 11, 121 Credit

This course is designed to focus on the development of techniques for written and oral formal public presentations in a variety of contexts and themes: organizing and presenting information for clear and successful presentations in Spanish. This course aims to strengthen students' ability to communicate orally and in writing through an intensive grammar review, vocabulary building, spelling and punctuation rules of the Spanish Language. At the end of the course, students present small research projects on different aspects and issues related to the linguistic and cultural variation of the Hispanic World. [Graduation Requirement: World Language]

Chinese 1 (Mandarin)

This beginning course stresses the fundamental skills: listening, speaking, reading, and writing. Cultural aspects are explored at all levels. Students will complete individual projects on selected cultural topics. [Graduation Requirement: World Language]

Chinese 2 (Mandarin)	Grade 10, 11, 12	1 Credit
Continuation of the beginning cour	se stresses the fundamental skills with greater emphasis	on the natural use of the
language in everyday situations. Re	eading selections are used to enhance vocabulary skills.	Students further develop
their cultural understanding. Stude	nts will complete individual projects on selected cultural top	oics. Prerequisite: Chinese
1. [Graduation Requirement: World L	_anguage]	

American Sign Language 1	Grades 9, 10, 11, 12	1 Credit

This full-year course will introduce students to the basics of American Sign Language. It counts as a World Languages credit and is offered as an additional pathway related course. [Graduation Requirement: World Language]

American Sign Language 2	Grades 10, 11, 12	1 Credit
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This course continues the study and practice of basic skills initiated in American Sign Language 1. It emphasizes comprehending, signing, and developing receptive skills. The course will focus on grammar and syntax, vocabulary, and culture of the Deaf. Prerequisite: American Sign Language 1 with a grade of C or better. [Graduation Requirement: World Language]

American Sign Language 3	Grades 11, 12	1 Credit

This course builds on skills learned in American Sign Language 2, adding more complex ASL grammatical features and vocabulary, short stories, narratives and dialogues. Learn discourse skills including description of general surroundings, appropriate sequencing, temporal aspects and conditionals, the deaf community and culture. Prerequisite: American Sign Language 2 with a grade of C or better. [Graduation Requirement: World Language]

Grade 9, 10, 11, 12