ACADEMY FOR INFORMATION TECHNOLOGY

ACADEMIC PROGRAM GUIDE 2015-2016

Dear Parents/Guardians and Students:

The Academic Program Guide is designed to help you select an appropriate course of study for the next academic year. Inside you will find course descriptions detailing the contents and requirements for all of the courses offered at the Academy for Information Technology. In addition, this Guide contains important information regarding academic policies and procedures, including our grading policy, QPA calculation, and graduation requirements. Please look over this guide carefully, and feel free to contact me or your child's school counselor any questions or concerns you may have.

Sincerely,

Colleen Gialanella

Principal
Academy for Information Technology

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SCHEDULING

Students will register for courses via the PowerSchool Parent Portal and complete a course registration form which must be returned to the appropriate school counselor. Students and parents should carefully read over all course descriptions and pre-requisites before selecting classes. Students will only be allowed to request courses for which they meet the pre-requisite requirements.

Every attempt will be made to honor a student's course requests; however, conflicts may occur due to scheduling constraints, in which case, students will be enrolled in the courses selected as alternates. Therefore, alternate choices should be selected carefully when planning a schedule of courses and ranked in order of preference.

ELECTIVE COURSE SCHEDULING

Classes that do not fulfill a specific graduation requirement are considered elective courses. Students may choose elective courses from any of the following three categories:

1. Core Content Courses (Vocational Education, Social Studies, Mathematics, Science, World Language)
2. Interdisciplinary Courses
3. Vocational Courses at another UCVTS School*

*Scheduling priority is given to students in the school where the vocational course is offered. Students wishing to enroll in a vocational course outside of AIT may do so only if space permits and the course is educationally beneficial to the student. Vocational courses in other UCVTS schools are available to AIT students on a limited basis. Please keep this in mind when making elective and alternate choices.

SCHEDULE CHANGES

Schedule changes will **not** be made for reasons of convenience or because of teacher preference. Only changes which are educationally beneficial to the student will be considered**.**

Scheduling changes will **not** be considered for any of the following reasons:

1. Course content or standards differing from student expectations.
2. Inability of a student to relate well to a given teacher.
3. Dropping a course in order to lighten one's load.
4. Participation in extra-curricular activities and/or athletics.

DROP/ADD PERIOD

Students have two weeks from the start of a semester to request a schedule change. All requests must be made in writing to the student's school counselor and will only be made if the change is educationally beneficial to the student.

ADVANCED PLACEMENT (AP) COURSE REQUIREMENTS

Advanced Placement (AP) courses are college-level courses that give students the opportunity to earn college credit or placement while still in high school. Due to the academic rigor of these courses, enrollment in an AP course has the following eligibility requirements:

1. Students **must** attend an AP Information Session for the course(s) of their choice in the spring of the preceding year.
2. Students and parents/guardians **must** read and sign a contract outlining course policies and expectations.
3. Students **must** have earned a grade of 85 or above in all prerequisite courses or have obtained a recommendation from the subject area instructor.

All AP courses are designed for those wishing to work diligently in order to prepare for the AP Exam administered by the College Board in May.

GRADING POLICY

Grades may be interpreted as follows:

A	90-100
B	80-89
C	70-79
D	65-69
F	64 or below

For full year courses, each marking period grade counts for 20% of the student's final course grade. Midterm and final examinations each count for 10% of the final course grade.

For semester courses, each marking period grade counts for 40% of the student's final course grade. The final semester examination counts for 20% of the final course grade.

QUALITY POINT AVERAGE

A Quality Point Average (QPA) will be calculated for each student. The final course grade is multiplied by the number of credits received for the course. The total credits and the total quality points are then divided to produce the QPA as in the example below:

Subject	Grade	Credits	Quality Points
Vocational	95	5	475
English	90	5	450
Social Studies	94	5	470
Math	87	5	435
Science	90	6	540
World Language	90	5	450
Fitness	98	3.75	367.5
Health	99	1.25	123.75
Total		36	3311.25

3311.25 / 36 = 91.9792

QPA is calculated only when a course has been completed.

The QPA appearing on the high school transcript is **unweighted** and includes all subjects with the exception of repeated coursework. An official QPA can be obtained from the student's school counselor.

FAILURES

Students that fail a course that is required for graduation must attend summer school and successfully complete the course before the next course in that subject area's sequence can be taken. It is the student's responsibility to find and enroll in an approved equivalent of the failed course. The transcript will show the student's failing grade in the course, which will be included in the QPA. The transcript will also show that the student repeated the class and the grade that was earned. Grades earned in repeated coursework are not included in the QPA**.**

ACADEMIC PROBATION

Students whose work falls below acceptable standards of achievement (70%) may be placed on academic probation. A conference with a school administrator, counselor, parent(s), and student may be required so that the academic expectations of the Academy for Information Technology may be reviewed. Options to help a student, such as peer tutoring, individualized instructional plans, or extra assistance from the faculty may be implemented. The school administrator may also take action on a case-by-case basis, including limiting a student's co-curricular options and participation in extra- curricular activities.

GRADUATION REQUIREMENTS

Students must earn 120 credits to graduate with a high school diploma endorsed by the New Jersey Department of Education. The **required** coursework for Academy for Information Technology is as follows:

Subject Area	Freshmen Year	Sophomore Year	Junior Year	Senior Year
Vocational Education *4 years*	Computer Applications in Business	Intro to Info Systems **and** Financial Literacy in the 21st Century Economy	Database Management I **and** Java Programming I	*Two Semester Courses – Choose From*: AP Computer Science Database Management II Data Integrity/Security Project Management Web Design
English *4 years*	World Literature	American Literature	Modern American Literature	British Literature *or* AP Literature & Composition
Social Studies *3 years*	World History	United States History I	United States History II	
Mathematics* *4 years*	Combined Algebra	Geometry/Trigonometry	Math Analysis	Calculus *or* AP Calculus I/AB *or* Probability & Statistics *or* AP Statistics
Science *4 years*	Biology **and** Scientific Inquiry & Analysis	Chemistry	Physics	Additional Science Course
World Language* *3 years*	Spanish I	Spanish II	Spanish III	
Fitness/Health *4 years*	Fitness I & Health I	Fitness II & Health II	Fitness III & Health III	Fitness IV & Health IV
Visual and Performing Arts *1 year*		Dance Appreciation		

*Initial placement determined by UCVTS.

AWARDS AND HONORS

Honor Roll: Awarded each Marking Period to students earning an 80 or above in all subjects.

High Honor Roll: Awarded each Marking Period to students earning a 90 or above in all subjects.

National Honor Society: Open to junior and senior students who meet the Society's standards for academics, character, leadership, and service. Students must have a QPA of 92 or above in order to be considered.

Spanish Honor Society: Open to junior and senior students earning a 92 or above in Spanish, and an overall QPA of 85 or above. Students must meet the Society's standards for academics, character, leadership, and service.

VOCATIONAL EDUCATION

** Courses marked with an asterisk may be available to students from other UCVTS schools based on availability. Academy for Information Technology students are given priority enrollment in these courses.*

Course Title: Computer Applications in Business **Credits**: 5
Grade Level: 9

Computer Applications in Business is a course designed to provide first year AIT students with a solid foundation on which to build. Students, through project oriented lessons, will learn how to use Microsoft Office applications and the Internet, fundamentals of computer hardware and computer operations, and will also examine the relationship between technology and society. Students will have the opportunity to obtain their Microsoft Office Specialist certification in Word, PowerPoint, and Excel upon completion of the course.

Course Title: Financial Literacy in the 21st Century Economy **Credits**: 5
Grade Level: 10
Pre-Requisite: Successful completion of Computer Applications in Business

This full year course is designed as a survey course to expose students to foundational concepts in personal financial literacy, investments, finance and entrepreneurship. Its purpose is to introduce basic personal finance principles, elementary terms, and essential calculations in a variety of business fields. Once mastered, these building blocks provide a solid footing for more in-depth classes either in high school or college. Course work will consist of readings, problems, and supplemental outside readings. Students will be engaged in both individual and group projects designed to apply their knowledge and use critical thinking skills to support their course of action. Students will have an online summer learning requirement.

Course Title: Introduction to Information Systems **Credits**: 6
Grade Level: 10
Pre-Requisite: Successful completion of Computer Applications in Business

This second year technology course is fueled with project-based learning experiences that are designed to prepare students for the CompTIA A+ certification. This is an international industry credential that validates the knowledge of computer service technicians with the equivalent of 500 hours of hands-on experience. Major hardware and software vendors, distributors, and resellers accept CompTIA A+ as the standard in foundation-level, vendor-neutral certification for service technicians. The course covers a broad range of hardware and software technologies. Students will have the opportunity to obtain their A+ certification upon completion of the course.

Course Title: Database Management I **Credits**: 2.5
Grade Level: 11
Pre-Requisite: Success completion of Introduction to Information Systems

Database Management I is a semester course which introduces students to the fundamentals of database design and data modeling. Students will identify patterns and connections between data and develop solutions to efficiently store and report information. In this course, students will gain an understanding of Oracle's newest structured query language (SQL 11g) which will be used in creating, querying, and manipulating data in relational databases.

Course Title: Database Management II **Credits**: 2.5
Grade Level: 12
Pre-Requisite: Successful completion of Database Management I

Database Management II is a semester course which is designed to prepare students for the "Oracle - Database Design and Programming" certification test. Students become proficient in database programming by using

PL/SQL (11g). Students learn to create and maintain database objects such as tables, indexes, views, constraints, and sequences. Numerous SQL commands, functions, and operators supported by Oracle are thoroughly reviewed. Students practice SQL using Oracle Application Express which is available via a web browser to access information and generate reports. The course strongly emphasizes a hands-on approach to database programming and administration.

Course Title: Java Programming I **Credits**: 2.5
Grade Level: 11
Pre-Requisite: Successful completion of Introduction to Information Systems

This course will be an introduction to computer science and object-oriented programming through the vehicle of programming in the Java language. The emphasis of this course is teaching programming that centers on the using objects as building blocks for program development. Students will develop elegant and efficient code from an abstract specification. An emphasis is placed on literate programming, writing a program that can be read by a human as well as a machine. Programming methodology is the foundation of the course and includes: thinking about the best way to plan out the design using object-oriented design and appropriate features of Java; methodical and efficient development of the implementation using step-wise refinement and incremental testing and debugging (using appropriate debugging tools); being able to convince yourself of the correctness of the implementation by mathematical reasoning.

Course Title: AP Computer Science A **Credits**: 2.5
Grade Level: 12
Pre-Requisite: 85 or above in Java Programming I or teacher recommendation

This semester course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using Java language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. The AP Computer Science A course curriculum is compatible with many CS1 courses in colleges and universities.

Course Title: Web Design **Credits**: 2.5
Grade Level: 11, 12

Web Design is a business course that provides hand-on activities instruction in using Dreamweaver, Flash and Photoshop. You will first learn how to get started with Dreamweaver and how to develop a Web page. Then, you will work with text, images, links and tables. With Flash, you will learn how to create and play a movie, work in the Timeline, create symbols, plan a Web site, use the drawing tools, create objects and text, work with libraries, buttons, actions, and animation, as well as work with masks, sounds, and scenes. In Photoshop, you will learn the most important topics of Adobe Photoshop CS4. You will first learn how to get started with Photoshop. Next, you will learn how to work with layers, make selections, incorporate color techniques, and place type in an image. Finally, you will learn how to integrate all three programs.

Course Title: Data Integrity/Security **Credits**: 2.5
Grade Level: 11, 12

The Data Integrity course focuses on communication security in computer systems and networks. The course is intended to provide students with a comprehensive introduction to the field of network security. The course covers critical network security services such as authentication and access control, integrity and confidentiality of data, routing, firewalls, virtual private networks, and web security. Where appropriate, we examine threats and vulnerabilities to specific architectures and protocols.

Course Title: Project Management **Credits**: 2.5
Grade Level: 11, 12

The Project Management course will explore the terminology, processes, and tools used in project management. It will include the nine knowledge areas designated by the Project Management Institute (PMI): Managing a project's integration, scope, time, cost, quality, human resources, communications, risk and procurement. Students will assess themselves as project leaders by exploring project leader competencies, roles, responsibilities and business relationships. Course topics will include introduction to project management, interpersonal skills and communication, beginning a project, planning a project, budgeting for a project, scheduling and execution of a project, leadership skills, monitoring and controlling a project, and tools to help manage a project.

Course Title: Senior Internship **Credits**: 5 half-year; 10 full-year
Grade Level: 12

The senior experience establishes liaisons to provide valuable learning opportunities and bridge the world beyond the campus. Mentorship opportunities will further educational pursuits in the Information Technology and/or Business fields. There will be both a full-year and half-year option for students who wish to participate in this out-of-school work experience. Students will attend their internship daily, periods 7-10. The internship will provide the opportunity for the student to experience "work-based learning" by placing them in an Information Technology and/or Business career setting at local facilities. Placement locations should be identified by the student with assistance of the internship coordinator. Students will have to provide their own transportation and a student/parent/guardian permission slip must be completed.

Course Title: The Psychology of the Organization **Credits**: 5
Grade Level: 11, 12

An introduction to individual and group behavior in organizations. Individual perception, motivation, and leadership attributes and mindsets will be examined in the context of how each pertains to technology-based organizations. Students enrolled in this course will gain insight into individual innovation and creativity and the methodology by which technical professionals are best managed in the organizational structure.

This is a proposed new course for the 2015-2016 school year. The availability of the course is not guaranteed. Please keep this in mind when making course selections.

Course Title: Business Communications* **Credits**: 2.5
Grade Level: 11, 12

Business Communications evaluates the business models of various media industries as well as encourages the cultivation of communication skills essential for success in the business world. The coursework focuses on analyzing the relationship between society and business as well as practicing forms of communications regularly used by business people. Students will examine the viability of various media industries like movies, television, the Internet, video games, newspapers, books, and magazines in today's society. Students also will learn to conduct meaningful research and use it to effectively and persuasively communicate ideas in presentations, emails, and proposals. Students taking this course will learn and apply information in a plethora of ways that include, but are not limited to, reading, discussing, writing, as well as individual and collaborative projects.

Course Title: Marketing* **Credits**: 2.5
Grade Level: 11, 12

Marketing is a business course designed to introduce fundamental marketing concepts. The class will delve into essential marketing skills, sales, and promotional strategies including visual merchandising and advertising,

marketing research, product management, and entrepreneurship. Many "real-world" examples breathe life into the concepts. Creativity is encouraged in class discussions, individual and group projects designed to emphasize how marketing works in business and global economies.

Course Title: Accounting* **Credits**: 5
Grade Level: 11, 12

The course will introduce students to the basic principles, concepts, and procedures of accounting. Emphasis is placed on the accounting cycle, from analyzing and recording transactions to preparing financial statements. An automated accounting computerized instructional program will be utilized to help students make the transition from manual to computer-based accounting. Business ethics will be covered to focus students' attention on ethical issues in accounting and in the business environment. The goal of this course is to develop an understanding of the accounting skills needed in the financial management of goods and service businesses organized as sole proprietorships and partnerships as well as preparation for accounting or finance in college or as a career.

Course Title: AP Economics (Macro/Micro)* **Credits**: 5
Grade Level: 11, 12
Pre-Requisite: 85 or above in Combined Algebra or concurrent enrollment in a level 3 math course

This full year course covers both Macroeconomics and Microeconomics. Macroeconomics is the study of the economy in the aggregate so it focuses on how consumers and businesses respond to changes collectively. Microeconomics is the study of economic behavior for individuals and individual businesses. It is a challenging, rigorous, and fast paced course. This class is both conceptual and quantitative. Most concepts are covered both numerically and graphically. Students who take this class are expected to be self-directed learners who have an interest in the economy, or plan to pursue a business oriented program in college. Students will be expected to complete the readings and problems assigned as well as supplement their understanding of the material with outside sources.

ENGLISH

Course Title: English I: World Literature **Credits**: 5
Grade Level: 9

The World Literature course is designed to expose students to a variety of countries and forms of literature. While participating in individual and class assignments, students will have an opportunity to explore a multitude of cultures. This experience is further enhanced by joint projects and activities which occur between the World History and World Literature classes. A large emphasis is placed on common themes to help students understand and appreciate the similar human conditions that exist in all cultures. These themes include the struggle with intolerance, love, coping with death, metamorphoses, and communion with nature. Many of the selections read and discussed in class come from China, India, Africa, Egypt, the Middle East, Greece, Rome, and Europe during the Middle Ages and Renaissance period. Types of literature covered include the novel, epic poem, poetry, critical essays, editorials, short stories, drama/plays, and several classical selections. In addition to reading, students will be required to write several different forms of literature, essays, and one major research paper.

Course Title: English II: Early American Literature **Credits**: 5
Grade Level: 10
Pre-Requisite: Successful completion of English I: World Literature

The Early and Modern American Literature courses are designed to take the students through an in-depth study of the individual writings that shape and document the American literary tradition. Students will have an opportunity to explore primary texts, novels, poems, and other artistic productions through participation

in both individual and group assignments. This experience is further developed through an integrated curriculum with United States History I. A major goal of the course is for the student to come to understand the culture and history of expression of our nation and his or her place within that tradition. Writing and language arts skills are stressed throughout the year's course of study. Many of the selections read and discussed in class come from the conventional cannon of American Literature, but extend beyond to art, dance, writings, and other materials gleaned from pop-culture, cultures excluded from traditional studies, and other sources. The outline for the course of study is chronological. Early American Literature begins with the Native American cultures and their initial contact with European explorers and settlers, continues through Colonial and Revolutionary America, all the way through the end of the Nineteenth Century. Specific units also deal with Growth and expansion of the 1820s to 1850s, the Civil War, Reconstruction, Industrialization and Immigration, and the Gilded Age.

Course Title: English III: Modern American Literature **Credits**: 5
Grade Level: 11
Pre-Requisite: Successful completion of English II: American Literature

Modern American Literature closely parallels US History II in its chronological, psycho- social, thematic-based approach to the continuation of the American literary experience through intense individual and group readings and analyses of literary works spanning American Literature from 1865 (Twain) through the 20th Century (World Wars I and II, Post-War 1950's, the 1960's, 1970's, 1980's, 1990's) to Contemporary works of the 21st Century. Novels include, but are not limited to, *The Sun Also Rises*, *To Kill a Mockingbird*, *Catcher in the Rye*, *Fahrenheit 451*. The drama *A Streetcar Named Desire* may also be read and the film viewed for additional immersion in the study of play-writing and producing for the student who possesses a penchant for the genre. Independent studies are strongly encouraged and instructor-facilitated. Emphasis is placed upon further developing and mastering of grammatical techniques and continued exposure to the Writing Process Approach employed to enhance student written production (i.e. narrative, persuasive, informational, creative writing), as well as to facilitate successful outcomes on standardized test-taking. Through advanced study and immersion in a myriad of learning environs, the student will independently select a literary research topic, develop a thesis, and produce a research paper following MLA Documentation Style guidelines. Focus is on student integration of the relationship between literacy and the world as an impetus for developing a continuing appreciation for the acquisition of knowledge

Course Title: English IV: British Literature **Credits**: 5
Grade Level: 12
Pre-Requisite: Successful completion of English III: Modern American Literature

English IV will focus on a chronological study of British Literature from its Anglo-Saxon period to the present. Emphasis will be placed upon reading and interpreting works of the great masters, from Chaucer and Shakespeare to Joyce and Eliot in thematic units which compare and contrast works from various time periods. The student will be exposed to various forms of literature from poetry and short stories to dramas and novels. In addition, students will be expected to demonstrate a strong command of their writing skills through essay writing, critical writing, creative writing, and a research paper, and to focus on clear development of literary analysis. Class participation and public speaking will be essential to the group dynamic of the course and will be used to enhance the information of the texts with personal interpretation and discussion.

Course Title: AP English Literature & Composition **Credits**: 5
Grade Level: 12
Pre-Requisite: 85 or above in English III: Modern American Literature or teacher recommendation

The AP English Literature and Composition class will be a combination of preparation for the AP English Literature and Composition Exam to be taken in May as well as a collegiate level study of literature and writing. Through a curriculum outlined by the College Board, the class will enable students to read and

understand complex texts and demonstrate this understanding through mature and effective writing. The literature of the course can be broken down into three genres: poetry, drama, and fiction (novel and short story). Close reading will revolve around the experience, interpretation, and evaluation of literature. Students will be expected to read deliberately and thoroughly, taking time to understand a work's complexity, to absorb its richness of meaning, and to analyze how that meaning is embodied in literary form. Concurrently, students will be expected to have a strong background in grammar in order to focus intense concentration on enhancing their abilities in analytical and critical writing. Various forms of writing will be emphasized and frequent writing assignments of varying lengths with several drafts should be expected.

SOCIAL STUDIES

Course Title: World History **Credits**: 5
Grade Level: 9

This course explores the world history, economics, and geography from 1450 C.E. to the present. Geographic influences on history will be explored, as will political boundaries that developed with the evolution of nations. Significant attention will be given to the ways in which scientific and technological revolutions created new economic conditions that in turn produced social and political changes. Noteworthy people and events of the nineteenth and twentieth centuries will be emphasized for their strong connections to contemporary issues. The course utilizes various elements of technology and interdisciplinary philosophies to meet the needs of the students as well as the goals of the instructor.

Course Title: United States History I **Credits**: 5
Grade Level: 10
Pre-Requisite: Successful completion of World History

This course involves the study of the development of the North American continent from the late 16th century through the late 19th century. The course analyzes the political, economic, and social factors that led to the creation of modern democracy and the struggle to keep this grand experiment alive. Specific topics that are discussed start with the arrival of the British, Spanish, and French in the 1500's, their interaction with the native populations, Colonial America, the Revolutionary War, the writing of the United States Constitution, the Civil War, Slavery, and Industrial Growth in America. The course utilizes various elements of technology and interdisciplinary philosophies to meet the needs of the students as well as the goals of the instructor.

Course Title: United States History II **Credits**: 5
Grade Level: 11
Pre-Requisite: Successful completion of United States History I

In this course, students will study the social, political, and economic characteristics of the United States from 1880 to the present. Topics will include American Imperialism, Progressivism, the United States at War, the Great Depression, the Sixties, and the Vietnam Conflict, among others. Students will take part in a variety of activities geared to accommodate different learning styles. These activities include simulations, writing exercises, cooperative learning, and visual and audible expression.

Course Title: AP United States History **Credits**: 5
Grade Level: 12
Pre-Requisite: 85 or above in US History II or teacher recommendation

The AP United States History course is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the problems and materials in U.S. history. The course prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by full year introductory college courses. Students should learn to assess historical materials – their relevance to a given interpretive problem, reliability, and importance – and to weigh the evidence and

interpretations presented in historical scholarship. An AP U.S. History course should thus develop the skills necessary to arrive at conclusions on the basis of an informed judgment and to present reasons and evidence clearly and persuasively in essay format. Topics covered will include: American diversity, American identity, culture, demographic changes, economic transformations, environment, globalization, politics and citizenship, reform, religion, slavery and its legacies in North America, and war and diplomacy.

Course Title: AP Government and Politics: United States **Credits**: 5
Grade Level: 12
Pre-Requisite: 85 or above in US History II or teacher recommendation

This course will give students an analytical perspective on government and politics in the United States. The course includes both the study of general concepts used to interpret U.S. politics and the analysis of specific examples. It also requires familiarity with the various institutions, groups, beliefs, and ideas that constitute U.S. politics. Topics of discussion include: The U.S. Constitution, political parties, interest groups, mass media, public policy, civil rights, and civil liberties. Students are expected to be up-to-date on current events in order to facilitate discussion.

Course Title: AP European History **Credits**: 5
Grade Level: 12
Pre-Requisite: 85 or above in US History II or teacher recommendation

The goals of the AP European History course are for students to gain knowledge of basic chronology of major events and trends from approximately 1450 to the present. Also, students will develop an understanding of some of the principal themes in modern European history including intellectual and cultural history, political and diplomatic history as well as social and economic history. Finally, the students will gain an ability to analyze historical evidence, as well as express historical understanding in writing. This is a demanding course for students with a serious interest in history. Students will be expected to interpret and analyze historical documents as well as identify trends over time.

MATHEMATICS

Course Title: Combined Algebra **Credits**: 5
Grade Level: as determined by UCVTS Placement Test

Combined Algebra is an in-depth coverage of all topics in a traditional Algebra I course and most topics in a traditional Algebra II course. These topics include the study of linear equations, absolute value equations, quadratic equations and parabolas, functions, basic matrix operations, linear inequalities, systems of equations and inequalities, polynomial and rational equations, and powers, exponents, and radicals. This is a rigorous course with an emphasis on problem solving, working collaboratively, and communicating mathematically in both written and oral form.

Course Title: Geometry **Credits**: 5
Grade Level: 10
Pre-Requisite: Successful completion of Algebra I
Students scheduled for course based on teacher recommendation ONLY.

Geometry is an in-depth coverage of plane and solid geometry with an additional study of right triangle trigonometry. Geometry topics include the study of reasoning and logic, proof writing, constructions, lines, triangles, polygons, circles, similarity, right triangle trigonometry, congruence, transformations, planar and space measurements. Real-life problems are a major component in the curriculum. Geometry is a rigorous course with an emphasis on problem solving, working collaboratively, and communicating mathematically in both written and oral form. Appropriate computer software, such as *The Geometer's Sketchpad*, as well as

educational media is used to introduce and reinforce concepts visually. Additionally, students will discover concepts through hands-on activities and technology.

Course Title: Geometry/Trigonometry **Credits**: 5
Grade Level: as determined by UCVTS Placement Test
Pre-Requisite: Successful completion of Combined Algebra

Geometry/Trigonometry is an in-depth coverage of plane and solid geometry with additional study of selected topics from plane trigonometry and discrete mathematics. Geometry topics include the study of reasoning and logic, proofs, constructions, lines, triangles, polygons, circles, similarity, congruence, transformations, planar and space measurements. Trigonometry topics include trigonometric ratios as defined for the right triangle and unit circle, reciprocal, quotient and Pythagorean identities, inverse trigonometric functions, Law of Sines and Law of Cosines. Discrete mathematics topics include basic principles of iteration, recursion, and mathematical induction, which are used to solve combinatorial and algorithmic problems. Geometry/Trigonometry is a rigorous course with an emphasis on problem solving, working collaboratively, and communicating mathematically in both written and oral form. Appropriate computer software as well as educational media is used to introduce and reinforce concepts visually.

Course Title: Algebra II/Trigonometry **Credits**: 5
Grade Level: 11
Pre-Requisite: Successful completion of Algebra I and Geometry I
Students scheduled for course based on teacher recommendation ONLY.

Algebra II/Trigonometry is the gateway course to higher, college-level mathematics. This course will deepen the study of Algebra and increase problem-solving abilities by practicing strategies, sharpening logical reasoning skills and employing modeling methods. Key topics in the course include linear equations and functions, quadratic equations and functions, inequalities, matrices and determinants, polynomial equations and functions, exponential and logarithmic functions, rational functions and trigonometry. Emphasis will be on making mathematical connections to the real world and solving problems independently and collaboratively. Communication of mathematical ideas, both orally and in writing, will be practiced. Calculations and graphing will be performed using paper and pencil, graphing calculators and computer software.

Course Title: Math Analysis **Credits**: 5
Grade Level: as determined by UCVTS Placement Test
Pre-Requisite: Successful completion of Geometry/Trigonometry

Math Analysis is an in-depth coverage of advanced algebra as well as the rigorous study of pre-calculus. Topics include real numbers, exponents and radicals, polynomials and factoring, fractional expressions, solving equations and inequalities, functions and their graphs, polynomial and rational functions, complex numbers, exponential and logarithmic functions, trigonometric functions, analytic trigonometry, analytic geometry/conic sections, series and sequences, probability, statistics and data analysis, linear algebra and matrix mathematics and determinants. Connections between algebra, geometry, and trigonometry will be made. These topics form the foundation for the successful study of calculus. Math Analysis is a rigorous course with an emphasis on developing problem-solving and reasoning abilities, the use of graphing calculators, communicating mathematically in both written and oral form, and solving real life problems.

Course Title: Advanced Mathematics **Credits**: 5
Grade Level: 12
Pre-Requisite: Successful completion of Algebra II/Trigonometry and teacher recommendation.
Students scheduled for course based on teacher recommendation ONLY.

Advanced Mathematics is an in-depth coverage of advanced algebra as well as the rigorous study of pre-calculus topics. Topics include real numbers, exponents and radicals, polynomials and factoring,

their graphs, polynomial and rational functions, complex numbers, exponential and logarithmic functions, trigonometric functions, analytic trigonometry, series and sequences, probability, statistics and data analysis, linear algebra and matrix mathematics and determinants. Connections between algebra, geometry, and trigonometry will be made. These topics form the foundation for the successful study of a college algebra, trigonometry or calculus course. Advanced Mathematics is a rigorous course with an emphasis on developing problem-solving and reasoning abilities, the use of graphing calculators, communicating mathematically in both written and oral form, and solving real life problems.

Course Title: Calculus **Credits**: 5
Grade Level: as determined by UCVTS Placement Test
Pre-Requisite: Successful completion of Math Analysis

The Calculus course is an alternative to the AP Calculus I/AB course. It is designed specifically for students not planning on taking the AP Calculus Exam. However, most of the topics covered in the college-level AP course will also be covered here at a slower pace. The course emphasizes a multi-representational approach to calculus, with concepts, results, and problems being expressed geometrically, numerically, analytically, and verbally. Topics covered include the initial review of pre-calculus topics, limits, differentiation and its applications, and integration and its applications. There is an emphasis on problem solving, working collaboratively, and communicating mathematically in both written and oral form. Even though this is not an Advanced Placement course, students are still expected to spend a considerable amount of time outside of class on homework preparation and daily studying.

Course Title: AP Calculus I/AB **Credits**: 5
Grade Level: as determined by UCVTS Placement Test
Pre-Requisite: 85 or higher in Math Analysis or teacher recommendation

AP Calculus I/AB is a rigorous college-level course which emphasizes a multi- representational approach to calculus, with concepts, results, and problems being expressed geometrically, numerically, analytically, and verbally. Topics covered include the initial review of pre- calculus topics, limits, differentiation and its applications, and integration and its applications. There is an emphasis on problem solving, working collaboratively, and communicating mathematically in both written and oral form. Since this is an Advanced Placement college-level course, students are expected to spend a considerable amount of time outside of class in homework preparation and daily studying.

Course Title: AP Calculus II/BC **Credits**: 5
Grade Level: as determined by UCVTS Placement Test
Pre-Requisite: 85 or high in AP Calculus I/AB or teacher recommendation

AP Calculus II/BC is a rigorous college level course that emphasizes a multi-representational approach to calculus. Students learn to express mathematical concepts geometrically, numerically, analytically, and verbally. As a continuation of Calculus I, topics covered in this class include applications and techniques of integration, L'Hopitals' Rule, improper integrals, an introduction to differential equations, infinite series and sequences, conic sections, parametric and polar equations. Students who enroll in Calculus II will be expected to participate in a collaborative learning environment. As in Calculus I, problem solving and mathematical communication in written and oral form are an essential component of this course. All students are expected to spend considerable time outside of class in homework preparation and daily study.

Course Title: Calculus III: Multivariable **Credits**: 5
Grade Level: as determined by UCVTS Placement Test
Pre-Requisite: 85 or higher in AP Calculus II/BC or teacher recommendation

Multivariable calculus is a rigorous college level course which emphasizes a multi- representational approach to calculus. Students learn to express concepts geometrically, numerically, analytically and verbally. As a

continuation of AP Calculus II/BC, students will need a strong working knowledge of differentiation and integration techniques. Topics include an introduction to linear algebra, vector functions and the geometry of space, differentiation and integration of functions with several variables, multiple integrals, partial derivatives, directional derivatives, line integrals, Green's Theorem, vector analysis, and related applications. Students who enroll in Calculus III will be expected to participate in a collaborative learning environment. Problem solving and mathematical communication in written and oral form are an essential component of this course. Any student who chooses to enroll in this class will be expected to spend considerable amounts of time outside of class in homework preparation and daily study. High expectations of student performance will be maintained.

Course Title: Probability and Statistics **Credits**: 5
Grade Level: 12
Pre-Requisite: Successful completion of Algebra II/Trigonometry *or* Math Analysis

Probability and Statistics is an introductory course in descriptive statistics and statistical inference including the study of probability. Topics of study include summary statistics, graphical displays of data, sampling, probability distributions, confidence intervals and significance testing. Practical problems involving correlation, linear regression, surveys, experiments and hypothesis testing are also included. There will be an emphasis on developing a critical perspective of data and statistical analyses as they are presented in popular culture. Problem-solving and reasoning abilities will be enhanced. Graphing calculator, written and oral communication and collaboration skills will be employed in solving real-life problems.

Course Title: AP Statistics **Credits**: 5
Grade Level: 12
Pre-Requisite: 85 or higher in Math Analysis or teacher recommendation

AP Statistics is an intensive course that introduces students to the major concepts and tools for drawing conclusions from data. Areas of study include data analysis, regression analysis, probability, sampling and experimentation, and statistical inference. Theory and practice involve summary statistics and graphical displays of data, correlation, linear regression, survey design and implementation, design of experiments, probability distributions, confidence intervals and hypothesis testing. Graphing calculator, statistical software, and written and oral communication skills will be developed by solving real-life problems and interpreting the results using actual data.

SCIENCE

Course Title: Biology **Credits**: 6
Grade Level: 9

Biology is a laboratory based course which will emphasize the scientific method and current biological techniques that will challenge students to think creatively, make critical evaluations of their own work, and provide them with a model for interpreting the world around them. Students will develop the fundamental skills of problem-solving, concise writing, expressing original ideas, reading critically, and public speaking. The course is designed as an introductory course for first year students. However, it will delve into the more complex details by examining biology at a molecular, cellular, organismal and ecological level. Therefore, not only should it complement their previous experience with the life sciences, but also intrigue and entice those students interested in a biology-related career to pursue further studies in the field of Biological Sciences.

Course Title: Scientific Inquiry and Analysis **Credits**: 5
Grade Level: 9

Scientific Inquiry and Analysis is an interdisciplinary full year course. The course emphasizes development of

skills that are common to the various disciplines of science. Students will obtain proficiency in the use of graphing calculators and computers within scientific contexts. In particular, students will utilize technology for scientific data acquisition, mathematical analysis of data, and presentation of data obtained from a wide array of physical, biological, and social science contexts. Skills and procedures that are common to all laboratory sciences will be highlighted such as the scientific method, systems of measurement, unit conversions, significant figures, error analysis, laboratory reports, measurement tools and techniques, and experimental design. Additionally, the course will provide an introduction to the core concepts of physics and chemistry. Students will practice and apply a variety of methods for the collection, organization, description, and presentation of scientific data. In particular, students will use various mathematical models and techniques such as iteration, recursion, and the application of probability and statistics, to solve and analyze problems arising within the context of the sciences. The course will culminate in a student-designed, independent research project, through which students will apply skills and techniques learned in this course to analyze a real-world question.

Course Title: Chemistry **Credits**: 6
Grade Level: 10
Pre-Requisite: Successful completion of Biology and Scientific Inquiry and Analysis

Chemistry is a rigorous course intended to give the serious science student a well-rounded background in general chemistry. The student will be exposed to a variety of experiences both individually and in groups. It is designed on the principle that observation, experimentation, problem solving and reliance on mathematics is central to the development of an understanding of the subject. Hands-on activities emphasize safe laboratory practices and the aspects of applied chemistry. Topics covered include the scientific method, atomic structure, and molecular architecture, physical and chemical behavior of matter, quantitative and qualitative analysis, periodicity, laboratory technique, right-to- know and industrial chemistry. Since an accommodation to a variety of learning styles is stressed, students will be evaluated with a variety of criteria as well. Written homework, reports, class presentations, teacher-designed and standardized tests, class participation and observation of laboratory skills will be used to evaluate the student's general knowledge and academic success.

Course Title: Physics **Credits**: 6
Grade Level: 11
Pre-Requisite: Successful completion of Chemistry

Physics is an in-depth, rigorous course in which students study the behavior of the physical world. The course is designed to help students develop a broad background in general physics. Students will learn about Mechanics (motion, forces, and energy), Thermodynamics, Electricity and Magnetism, Waves, and Optics. Additional topics will be investigated as time permits. Physics emphasizes the development of reasoning and problem-solving abilities. Students will routinely utilize technology such as graphing calculators and computers for data collection and analysis, both in the classroom and in the laboratory. Hands-on laboratory experience is a fundamental part of the course, with algebra and trigonometry used extensively to analyze data. Students will learn to communicate scientifically and mathematically, in both written and oral forms, while investigating real-life phenomena.

Course Title: AP Biology **Credits**: 6
Grade Level: 11, 12
Pre-Requisite: 85 or higher in Biology and Chemistry or teacher recommendation

AP Biology is designed to be the equivalent of a college introductory biology course. Three general areas of biology, molecules and cells, heredity and evolution, and organisms and populations, will be covered in detail. The two main goals of AP Biology are to help students develop a conceptual framework for modern biology and to help students gain an appreciation for science as a process. To gain conceptual understanding students must participate in scientific inquiry, recognize unifying themes that integrate the many parts of

biology, and apply biological knowledge and critical thinking to environmental and social issues.

Course Title: AP Chemistry **Credits**: 6
Grade Level: 11, 12
Pre-Requisite: Successful completion of or current enrollment in Math Analysis; 85 or higher in Chemistry or teacher recommendation

Chemistry is a rigorous course intended to give the serious science student a well-rounded background in general chemistry. The student will be exposed to a variety of experiences both individually and in groups. It is designed on the principle that observation, experimentation, problem solving and reliance on mathematics is central to the development of an understanding of the subject. Hands-on activities emphasize safe laboratory practices and the aspects of applied chemistry. Topics covered include the scientific method, atomic structure, and molecular architecture, physical and chemical behavior of matter, quantitative and qualitative analysis, periodicity, laboratory technique, right-to- know and industrial chemistry. Since an accommodation to a variety of learning styles is stressed, students will be evaluated with a variety of criteria as well. Written homework, reports, class presentations, teacher-designed and standardized tests, class participation and observation of laboratory skills will be used to evaluate the student's general knowledge and academic success.

Course Title: AP Physics C: Mechanics **Credits**: 6
Grade Level: 12
Pre-Requisite: Successful completion of or current enrollment in AP Calculus I/AB; 85 or higher in Physics or teacher recommendation

This is a calculus-based college-level continuation of the Physics course. The course is designed to be equivalent to the first semester of a typical college sequence in physics for science and engineering majors. Major areas of study include kinematics, forces and motion, work and energy, systems of particles, rotational dynamics and statics, gravitation, and oscillations. The main goal of the course is to further develop students' problem solving and critical thinking skills through in-depth investigation of classical mechanics. This course emphasizes problem solving, working collaboratively, and communicating scientifically in both written and oral form. Calculus is used extensively, both in developing and unifying concepts and in problem solving. The laboratory component of this course focuses on the design of experiments, with students developing skill in measuring, organizing, and analyzing data.

Course Title: AP Physics C: Electricity & Magnetism **Credits**: 6
Grade Level: 12
Pre-Requisite: Successful completion of AP Calculus I/AB; 85 or higher in Physics C: Mechanics or teacher recommendation

Electricity & Magnetism is a calculus-based college-level continuation of the Physics I course. The course is designed to be equivalent to the second semester of a typical college sequence in physics for science and engineering majors. Major areas of study include electric forces and fields, Gauss' Law, electric potential, capacitance, DC circuits, magnetic forces and fields, and induction. The main goal of the course is to further develop students' problem solving and critical thinking skills through in-depth investigation of classical mechanics and electricity & magnetism. This course emphasizes problem solving, working collaboratively, and communicating scientifically in both written and oral form. Calculus is used extensively, both in developing and unifying concepts and in problem solving. The laboratory component of this course focuses on the design of experiments, with students developing skill in measuring, organizing, and analyzing data.

Course Title: Agricultural Science **Credits**: 5
Grade Level: 12

Agricultural Science plays a major role in the 21st century agricultural system. This Agriculture, Food, and Natural Resources Program involves the study of communication, the science of agriculture, plant science,

animal science, natural resources and agricultural technology and systems. While surveying the opportunities available in agriculture and natural resources, students will learn to solve problems, conduct research, analyze data, work in teams, and take responsibility for their work, actions and learning. Students will explore career and post-secondary opportunities available in the field of agricultural science and natural resources. The program will provide an overview of the field of agricultural science with a foundation in plant science, focusing on the characteristics of plant science and work on major projects and problems similar to those that plant science specialists, such as horticulturalists, agronomists, greenhouse and nursery managers and producers, and plant research specialists face in their respective careers. Students will learn how Green Technologies can be implemented in the field through recycling, composting and solar energy. In addition, students will explore specific connections between their lessons and Supervised Agricultural Experience, leadership and FFA components that are important for the development of an informed agricultural education student.

The availability of the course is not guaranteed. Please keep this in mind when making course selections.

Course Title: Anatomy & Physiology **Credits**: 5
Grade Level: 12
Pre-Requisite: Successful completion of Biology and Chemistry

The Anatomy and Physiology course is designed to demonstrate a complete picture of the workings of the human body. The course presents mechanics, organization, interaction, and cellular functioning of all the body systems. The physiology component involves opportunities to explore, question, and analyze the many intricate relationships that occur between cells and organs of the human body. The anatomy component involves opportunities to learn the mechanics and positioning of the muscles and bones. The course introduces many major concepts that create the foundation required for college level medical science courses.

Course Title: Introduction to Sustainability **Credits**: 5
Grade Level: 11, 12

This course examines the fundamental concepts and principles of sustainability. The course is informed by a review of key philosophical and ethical principles, and incorporates sociopolitical, ecological, and economic aspects in an interdisciplinary survey of the field. Students learn to evaluate complex challenges in our efforts to balance human needs and activities with the capacities of the natural world and to identify promising solutions.

WORLD LANGUAGE

Course Title: Spanish I **Credits**: 5
Grade Level: 9

This course serves as an introduction to formal language study. Because language learning is a cumulative and cultural experience, the focus of the first level language course is to assist the student in establishing a foundation that he or she may build upon as language study continues. Interest in Hispanic culture will be stimulated by the study of culture, which provides a better understanding of the life, customs and speech of the people.

Course Title: Spanish II **Credits**: 5
Grade Level: as determined by UCVTS Placement Test
Pre-Requisite: Successful completion of Spanish I or placement test results

This intermediate course expands upon the foundations of Spanish 1 continuing the same communicative approach to further develop skills in listening, understanding, speaking, reading and writing of the Spanish language. Activities are used to expand interpersonal communication as well as interpretation and presentation

skills. The course includes cultural experiences that allow students to expand their understanding of the Spanish culture through its products and practices.

Course Title: Spanish III **Credits**: 5
Grade Level: as determined by UCVTS Placement Test
Pre-Requisite: Successful completion of Spanish II or placement test results

This course is designed to continue the communicative approach and objectives of levels I and II, as well as provide for a more in depth study of the structure of the Spanish language. Students will become more proficient in interpersonal communication, interpretation and presentation skills. Cultural experiences are expanded to include more reading of authentic realia.

Course Title: Spanish IV **Credits**: 5
Grade Level: as determined by UCVTS Placement Test
Pre-Requisite: Successful completion of Spanish III

This course is designed to provide the student with a more in depth study of the Spanish language and culture. It will continue the same communicative approach but will focus on the more difficult nuances of the language and will include more reading than previous levels. Cultural experiences will be expanded to include a more in-depth study of the history, literature, art, economics and social issues of the culture. Students will use the language to make connections on topics they have learned in other core content areas. Instruction, as well as student participation, is exclusively in the Spanish language.

Course Title: AP Spanish Language and Culture **Credits**: 5
Grade Level: as determined by UCVTS Placement Test
Pre-Requisite: 85 or higher in Spanish IV or teacher recommendation

The AP Spanish Language course is a rigorous course of study that is equivalent to a college level course. The fundamental objective of this course is for students to achieve a high level of capability in speaking, writing, reading, and listening. Since language and culture are inextricably bound together, cultural understanding should be developed along with these four language skills. Through the year different methods and strategies will be used to practice and develop the four skills. This class is conducted entirely in Spanish and students are encouraged to participate in all classroom activities using Spanish. Students will be exposed to all kinds of materials that will help them to reinforce and expand their knowledge of Spanish. This course offers a large variety of performance options such as dialogues, debates, presentations, and interviews in which students will demonstrate their abilities to communicate proficiently on topics of personal, academic or social nature.

Course Title: Linguistics **Credits**: 5
Grade Level: 11, 12

The knowledge of a World Language is a universal tool that opens gateways to human understanding and presents a new approach to dealing with the everyday realities of life. Linguistics is at the base of every World Language. Student will be introduced to the history of a language, the core of a language, the people who speak different languages and the future of language to enhance those skills honed in World Language studies. Language study enhances understandings in other disciplines: history, geography, sociology, literature, and the arts. Linguistics takes these features, recognizes the connection between each branch of learning and language, and analyzes them further. Linguistics is the bridge between language and culture. An effective World Language program recognizes individual differences in learning patterns and abilities and offers options to students with diverse needs and interests. The study of Linguistics will harness these differences. Students will use their knowledge from previous language courses to build upon different skills. They will reflect on their own language experiences. They will consider the many influences of languages. They will appreciate the entire language-learning experience.

HEALTH AND PHYSICAL EDUCATION

Students will take four years of Health and Fitness. Each year, they will take three marking periods of fitness and one marking period of health education.

Course Title: Fitness I - IV **Credits**: 3.75
Grade Level: 9, 10, 11, 12

This physical fitness course continues to assist students in attaining optimal wellness physically, mentally, emotionally and socially. The program once again offers activities which incorporate the five components of fitness: cardiovascular endurance, muscular endurance, muscle strength, flexibility and body composition. The Fitnessgram will be administered to measure students' fitness levels and help set fitness goals. The students will also be introduced to various sports activities as well as "Project Adventure". These activities are designed to promote enjoyment and foster an interest in sports, physical activity, and teamwork which can last a lifetime. The students will also participate in the annual Marine Corps Youth Physical Fitness Challenge. The top finishers among the boys and girls will go on to represent the school at the annual competition for the state of New Jersey.

Course Title: Health I **Credits**: 1.25
Grade Level: 9

The freshmen health education course is designed to assist the student in attaining optimal wellness physically, mentally, emotionally, and socially. Through discussion and research, the students will become better prepared to make responsible, health-enhancing decisions, communicate effectively, and adopt health practices to reduce preventable health problems for themselves, their families, and their communities. Topics will include nutrition, weight management and eating disorders, human sexuality, conception and birth, contraception, and STDs

Course Title: Health II **Credits**: 1.25
Grade Level: 10
Pre-Requisite: Successful completion of Health I

The sophomore health education course is designed to expose the students to character education. Character education consists of the six pillars of character: trust, respect, responsibility, caring, fairness and citizenship. This will help the students make better choices and decisions in regards to health and personal well-being. Topics covered include healthy relationships, self-esteem and tolerance. Video clips, short reading excerpts and role playing will be used in the class room along with class discussions.

Course Title: Health III **Credits**: 1.25
Grade Level: 11
Pre-Requisite: Successful completion of Health II

The Junior Health course consists of CPR and First Aid training and certification. It is designed to prepare students to recognize signs and symptoms of cardiac and respiratory distress and provide care for the victims of choking, respiratory arrest and cardiac arrest. It will enable students to provide care for victims suffering from severe bleeding, musculoskeletal injuries, sudden illness, soft tissue injuries and poisoning. Principles of anatomy and physiology are integrated to enhance students' understanding of how the human body systems interact and depend on each other. Knowledge of how the human body functions normally will help students identify appropriate care to give to an ill or injured person.

Course Title: Health IV **Credits**: 1.25
Grade Level: 12

Pre-Requisite: Successful completion of Health III

Senior Health will consist of substance use/abuse, mental illness, disabilities and health care. Students will be responsible for explaining the importance of mental and emotional health and determining the emotional, social and financial impact of mental illness on the family, community and state. Students will also determine the effects of accessibility and affordability of healthcare on family, community and the global health. Also, responsible choices will be emphasized as well as a review of sex education.

INTERDISCIPLINARY STUDIES

Course Title: Dance Appreciation **Credits**: 5
Grade Level: 10
Required Sophomore Course

The Dance Appreciation mini-course is designed to provide UCVTS students with an appreciation of world dance forms, social dance, musical theatre, and more specifically how and why dances are created. The course has a total of 10 classes. Students have 6 online classes which delve into basic terms used in choreography for in all dance forms. The online classes will also examine ritual dance and folk dance in several cultures, and include contemporary social dance. Students are given an opportunity to share any part dance has taken in their lives. Students also have 4 in-person classes which give them the tools to create choreography in any style of their choosing. Students will break into groups to create a short dance, 12 counts of 8, which will be performed in front of their class. All classes both online and practical are aligned with the NJ Core Curriculum Content Standards in Performing Arts-Dance, to fulfill the State Requirement in Visual and Performing Arts.

Course Title: Film and Genre Studies **Credits**: 5
Grade Level: 11, 12

Film and Genre is designed for the student as a comprehensive guide to studying the language of film as a visual art form. The student examines and explores cinema through a chronological/historical approach, the introduction of terminology and techniques, the study of genres, selected classics (from the silent era to the digital age), themes, and critical analysis of film in order to attain visual literacy. Coursework focuses on acquiring and honing technical knowledge as well as developing an appreciation of the art by exploring objective and subjective aesthetics, experiences, emotions, and alternative worlds created by filmmakers. Film and Genre is not a filmmaking class per se – rather a critical exploration of visual text. However, the film student does have the opportunity to elect to create, write, direct, and produce a film, as an end-of-the-year performance assessment.

Course Title: Introduction to Humanities **Credits**: 5
Grade Level: 11, 12

The Humanities are those branches of learning concerned with human thought and relations. These branches incorporate the study of the central expressions of human values: fine arts, literature, philosophy, history, culture, and the social sciences. Knowledge of the humanities enables students to understand the present and the future from a historical perspective. Students will also develop skills in critical reading and interpretation, analytical thinking, researching, and writing. This will be accomplished by initiating activities that promote a variety of learning styles, interdisciplinary problem solving, cooperative learning, public speaking, and technological application. These insights and skills provide a foundation for careers in many different professions and for productive and rewarding lives as educated citizens.

Course Title: Communications Media **Credits**: 5
Grade Level: 11, 12

This course will allow students to become acquainted with contemporary media and its effects on their society.

They will be given an opportunity to develop the skills and command the information necessary to function in a high-profile job market. Today, journalists are "in the field" researching and capturing illustrative images. The news media is recreating itself into a features-driven service, and storytelling is valued as highly as straight reporting. News stories are no longer destined only for the metropolitan news editors and television/cable news anchors, but for newswires, blogs, and the Internet at large. By offering a challenging and innovative course such as Communications Media, the students also are learning the skills necessary to work behind and beyond a variety of media outlets. One of the most important real-life skills that the Communications Media class enforces is the need for teamwork.

Course Title: Global Ethics **Credits**: 2.5
Grade Level: 11, 12

Modern societies, such as the United States, are increasingly propelled and changed by advances in science and technology. Sciences and technology are combined in modern societies to provide increasing human control over natural and social environments. Tremendous ongoing achievements have spawned great hopes, fears, and controversies. This semester course examines the sociological implications of particular scientific and technological advances. It explores alternative conceptions of the relationship of science and technology to other aspects of the social order, i.e., to the economics, politics, philosophy, and culture of the times. Specific areas of study include environmental issues, medical ethics, science and religion, the atom bomb, genetic manipulation, space travel, and mass communications. This course will utilize a variety of multi-media resources and is project-based.