

BUSINESS/COMPUTER SCIENCE DEPARTMENT

Each student must complete the following requirements in Business/Computer Science:

<i>Fundamentals of Technology</i>	<i>.5 unit</i>
<i>Intro. to Computers</i>	<i>.5 unit</i>
<i>Elective</i>	<i>1 unit</i>

Required

FUNDAMENTALS OF TECHNOLOGY .5 unit (3)

Grade: Freshman, Sophomore, Junior, Senior
Prerequisites: None

This full year, one credit course is designed to provide students with the skills needed to use the computer as a tool for improving personal productivity. This course will introduce students to basic keyboarding techniques, word processing, spreadsheet, database and presentation software. Correct computer usage and maintaining personal integrity in the use of computers will be emphasized and practiced.

INTRODUCTION TO COMPUTERS .5 unit (3)

Grade: Sophomore, Junior, Senior
Prerequisites: Fundamentals of Technology

This course is designed to provide students with the skills needed to use the computer as a tool for improving personal productivity. Students experience hands-on instruction in word processing, spreadsheet and database programs. Significant events in the development of the computer and basic computer technology will be discussed. Correct computer usage and maintaining personal integrity in the use of computers will be emphasized and practiced. Most significant computer applications and technologies in present use or being developed are discussed according to the interests and background of each class.

Business/Computer Science Department

Electives

INTRO. TO OCCUPATIONS AND THE WORKPLACE .5 unit (2)

Grade: Sophomore, Junior, Senior
Prerequisites: None

This course is designed as an introduction to the world of business and work. Topics include the working citizen, personal resource management, human relations/decision making, and the skills required in today's job market.

MARKETING .5 unit (2)

Grade: Sophomore, Junior, Senior
Prerequisites: None

This course is an overview of the important role that marketing plays in our economic system. Emphasis is on the role of marketing in our economy, advertising, consumer behavior, and product research and development.

INTRODUCTION TO BUSINESS LAW .5 unit (3)

Grade: Sophomore, Junior, Senior
Prerequisites: None

This course focuses on contract, civil, and basic business law concepts and how they apply to business and everyday life. Case illustrations, law games, and a mock trial help the student better understand the fundamentals of business law. *This course is recommended for all students planning to major in business or pre-law in college.*

INTRODUCTION TO LAW .5 unit (3)

Grade: Sophomore, Junior, Senior
Prerequisites: None

This is a course designed to provide the student with the understanding of the parameters of legal rights and obligations. The acquisition of knowledge about law is approached as a means for expanding one's ability for responsible citizenship. Topics include law and the individual, criminal, and civil law. Law games, a mock criminal investigation and guest speakers enhance the curriculum.

BUSINESS PRINCIPLES AND MANAGEMENT .5 unit (3)

Grade: Sophomore, Junior, Senior
Prerequisites: None

This course is an overview of management practices and principles. Major topics include management functions of planning, organization, and staffing. The intra-personal and human relations aspects of management are considered. *This course is recommended for all students planning to major in business in college.*

ENTREPRENEURSHIP – OWNING YOUR OWN BUSINESS .5 unit (3)

Grade: Sophomore, Junior, Senior
Prerequisites: None

This course will help prepare students to carry out the entrepreneurial process. Students will gain an understanding of production, marketing, finance, human resources, and social and environmental issues affecting entrepreneurs. In addition, students will create their own business plan and develop growth strategies to expand the business. Social and ethical responsibilities of entrepreneurs will also be explored.

FASHION MERCHANDISING AND MARKETING .5 unit (3)

Grade: Sophomore, Junior, Senior
Prerequisites: None

This course explores the relationships between fashion design, merchandising, and marketing. Students will learn about the history, development, promotion, advertising, and retailing of fashion. Students will also develop and design their own fashion line and explore various distribution and sales alternatives.

COLLEGE ACCOUNTING 1 unit (5)

Grade: Senior
Prerequisites: None

This course covers the concepts and principles of accounting as they relate to financial statements of a single proprietorship. Financial statement analysis and an introduction to cost accounting are also investigated. Students are required to purchase related accounting workbooks. *This course is recommended for students who will be pursuing a business major in college and to prepare the student for the CLEP exam for college credit, if they choose to take it.*

Business/Computer Science Department

INTRODUCTION TO PROGRAMMING .5 unit (4)

Grade: Junior, Senior
Prerequisites: 80% in Introduction to Computers

This course is designed for those students who are interested in pursuing a career (science, math, engineering, technology) requiring programming skills. This course develops the basic ideas of problem solving, structured programming and top down design. Topics include problem definition, step-wise refinement, algorithmic solutions, program structure and elementary data structures.

ADVANCED STUDIES IN PROGRAMMING .5 unit (4)

Grade: Junior, Senior
Prerequisites: 85% in Introduction to Programming

The student will build his/her level of computer competency through additional programming experience. Advanced concepts such as loops and classes will be mastered. Program documentation, friendliness and structure will be emphasized. Students will write programs suitable for future college courses.

AP COMPUTER SCIENCE 1 unit (6)

Grade: Junior, Senior
Prerequisites: 85% in Advanced Studies in Programming and Department Approval

The student will acquire the computer science knowledge and skills necessary for further education in computer science and engineering. Programming is done in Java with heavy emphasis placed on computer science theory and program development. "Interesting" and involved programming projects will be the norm. Topics will closely follow those in the Advanced Placement curriculum. Students will take the Advanced Placement exam in Computer Science in May. A fee for the exam is paid in the spring.

ENGLISH DEPARTMENT

Each student must complete a minimum of 4 units in English inclusive of the following required courses:

English 9 - Introduction to Literature	1 unit
English 10 - Literature, Composition, and Speech	1 unit
English 11 - American Literature or AP English Language	1 unit
English 12 - English Elective Series or AP English Literature	1 unit

ENGLISH 9

1 unit (3)

Grade: Freshman

Prerequisites: Passing grade in English 8

This course is intended to develop vocabulary, grammar and writing skills so that by the end of the school year the student will be able to write a well-constructed and grammatically acceptable composition. The Freshman year is the initial stage of a student's high school experience and, therefore, the material covered will encompass a broad range of topics, with a focus on the fundamentals of style and form. Throughout the year vocabulary will be assigned. The composition of the novel, short story, poem and play will be examined. Students will be expected to master the fundamentals of research, culminating in a research paper.

ENGLISH 9 HONORS

1 unit (4)

Grade: Freshman

Prerequisites: 90% in English 8 with Department approval

This course is basically a more intensive English 9 course with added emphasis on the study of literary topics. Traditionally the ninth grade honors class reads a more challenging novel selection in the spring semester, either Great Expectations or A Separate Peace. Geared toward the highly motivated student, the course includes a greater number of reading and writing projects highlighted by the necessity to construct more advanced essays. Throughout the year vocabulary will be assigned. Students will be expected to master the fundamentals of research, culminating in a research paper.

English Department

ENGLISH 10

1 unit (3)

Grade: Sophomore

Prerequisites: Passing grade in English 9

The emphasis of English 10 is on literature, as well as written and oral communication. The course is designed to strengthen the background of students and to foster creativity through the interpretation of literature. The class offers a wide range of literary works by international authors. Students are encouraged to critically evaluate material, reflect and respond to literature through a number of expressive means. Students will be called upon to demonstrate critical and creative understanding of literature through writing. Technology and cooperative work is infused throughout the course. Students will complete the research process, writing a paper based on the work of a non-American author. Work on vocabulary development and grammatical usage in writing permeates the course. In addition to the two required texts, students will be expected to obtain supplemental novels through their public library or bookstore.

ENGLISH 10 HONORS

1 unit (4)

Grade: Sophomore

Prerequisites: 85% in English 9H with Department approval, OR
90% in English 9 with Department approval

Essentially the same course as English 10, this course is appropriate for the more advanced student with a serious interest in English. Students can expect a greater number of reading and writing activities, with more extensive investigation of literary elements and more rigorous attention to superior writing.

READING AND STUDY SKILLS

1 unit (3) - 9th grade
(2) - 10th grade

Grade: Freshman, Sophomore

Prerequisites: Guidance Department approval

This course is designed for the student who needs to improve competence in applying reading skills to daily assignments. The course includes remediation, compensatory, and developmental techniques, which the student will find helpful throughout his/her academic career. Special attention is given to the writing of essay questions, reports, and research papers. Vocabulary and comprehension are emphasized.

ENGLISH II

1 unit (3)

Grade: Junior

Prerequisites: Passing grade in English 10

This course will cover selected writers and major themes which constitute the culture and thinking of the American people. The final objective of the course is for the students to better understand the process by which American literature has matured during the nineteenth and twentieth centuries. In addition to reading textbook selections and two novels, students will be engaged in extensive essay writing. Vocabulary will be covered on a weekly basis. Students will also be required to write a research paper.

ENGLISH II HONORS

1 unit (4)

Grade: Junior

Prerequisites: 85% in English 10H with Department approval OR
90% in English 10 with Department approval

Similar to English II in format, this advanced course has higher priority placed on the development of a "polished" writing style. The eleventh grade American Literature class will also read two additional novels in the spring semester, traditionally The Red Badge of Courage and The Moon Is Down. Their vocabulary work will also be expanded.

AP ENGLISH LANGUAGE

1 unit (6)

Grade: Junior

Prerequisites: 90% in English 10H with Department approval

This course will be taught on the level of College Freshman English. It is designed to engage students in becoming skilled readers of prose written in a variety of periods, disciplines and rhetorical contexts, and in becoming skilled writers who compose for a variety of purposes. Both their reading and writing should make students aware of the interactions among a writer's purposes, audience expectations, and subjects as well as the way generic conventions and the resources of language contribute to effectiveness in writing. A perspective on American Literature is integrated where applicable. An extensive list of challenging works in both fiction and non-fiction genres will be studied by the students. The course will culminate in the administration of the May Advanced

Placement Exam which all students are required to take as well as a final exam in June. Students must maintain an average of 85 in order to remain in the course. A fee for the exam is paid in the spring.

English Department

SENIOR ENGLISH ELECTIVE SERIES

AP ENGLISH LITERATURE 1 unit (6)

Grade: Senior
Prerequisites: 90% in English I/H with Department approval OR
85% in AP English Language with Department approval

This course will be taught on the level of College Freshman English. It is designed to prepare the interested student for the skills in literary analysis and expository writing which are inherent in upper level college courses. The course includes a study of English Literature from the Anglo-Saxon Period to the present. An emphasis will be placed on the study of classic literary models from which the student can sharpen his critical standards and understanding of the writer's craft. The course will culminate in the administration of the May Advanced Placement Exam, which all students are required to take as well as a final exam in June. Students must maintain an average of 85 in order to remain in the course. A fee for the exam is paid in the spring.

MAJOR BRITISH WRITERS .5 unit (5)

Grade: Senior
Prerequisites: Successful completion of English II

This course is designed to expose the college-bound high school senior to an overview of the development of English literature (499-21st century). The content of the class will be presented in a chronological perspective; included among the time periods covered will be the Elizabethan, Miltonic, Romantic, Victorian and Contemporary. Students will be encouraged to develop standards of critical evaluation in order to better comprehend the motivation of the author in his given period of history.

CREATIVE WRITING .5 unit (5)

Grade: Senior
Prerequisites: Successful completion of English II

This course is specifically designed for students who have an avid interest in expressing themselves through prose and poetry. A review of the basic literary forms and styles will serve as an introduction to the various units of composition, criticism, poetry, drama, and short story. Emphasis will be placed on the ability of the students to work independently in a "workshop" atmosphere, as well as on the sharing and editing of the writing samples of others.

COMMUNICATIONS IN THE REAL WORLD .5 unit (4)

Grade: Senior

Prerequisites: Successful completion of English courses and Department approval

This course is designed to develop student skills in the field of verbal communications. Course content includes experiences in such diverse topics as public speaking, group dynamics, debate, counseling, college/career interviews, sales presentations, motivation, humor, and use of communications technology. Students will assist in the design of the course to ensure practical application to their lives. Guest presenters and field trips will augment our interactive teaching-learning process.

FINE ARTS DEPARTMENT

Each student must complete a minimum of one and one-half units in performing and/or visual art. Students are encouraged to fulfill their requirement by taking courses in both performing and visual arts.

Symphonic Band, String Orchestra, Concert Choir, and Dance are considered Performing Groups. Students enrolled in these courses should be scheduled for the entire year

The curriculum structure for art is:

I.	High School Foundation Course	
	Design	1 unit
II.	Intermediate Courses	
	Ceramics/Sculpture I	.5 unit
	Ceramics/Sculpture II	.5 unit
	Computer Graphics I	.5 unit
	Computer Graphics II	.5 unit
	Creative Crafts I	.5 unit
	Creative Crafts II	.5 unit
	Drawing & Painting	1 unit
III.	Advanced Courses	
	Advanced Art Lab	1 unit
	Drawing & Painting	.5 unit

PERFORMING ARTS COURSES

SYMPHONIC BAND 1 unit (3)

Grade: Freshman, Sophomore, Junior, Senior

Prerequisites: Audition with the Director

The Symphonic Band is the most advanced instrumental group. An in-depth study of music and its mechanics is accomplished through the performance of a wide variety of band music with emphasis placed on the standard concert repertoire. Students must own or rent their own instruments. Rentals may be arranged through the school. Public performances and lessons are required.

STRING ORCHESTRA 1 unit (3)

Grade: Freshman, Sophomore, Junior, Senior

In accordance with New York State music education standards, students participating in the String Orchestra will actively engage in the processes that constitute creation and

performance of orchestral music, thereby exposing students to orchestral music of varied genres and periods. This class of students will be treated as a professional ensemble; therefore, the student's musical vocabulary and appreciation for music will grow. Additionally, each student is required to participate in all school concerts and pursue private lessons on their orchestra instrument. Soloist selections are at the discretion of the Director. A textbook is required, which is purchased through the school bookstore.

CONCERT CHOIR .5 unit (2)

Grade: Freshman, Sophomore, Junior, Senior

This course includes the study of a variety of music, both sacred and secular, from different periods of music history. Attention is given to fundamentals of music, rhythm reading, and vocal techniques. We will also look at the music of today. Public performances and lessons are required.

DANCE .5 unit (3)

Grade: Freshman, Sophomore, Junior, Senior
Prerequisites: Prior Dance History

This course will provide all students the opportunity to acquire a comprehensive knowledge of dance as an art form. Students will learn and refine dance skills and techniques in class and in performance, study the historical and cultural significance of dance and its evolution as an art form, evaluate personal work and the work of others.

FUNDAMENTALS OF MUSIC .5 unit (2)

Grade: Freshman, Sophomore, Junior, Senior
Prerequisites: None

This course provides an introduction to the basic elements of music theory and note reading, music appreciation, music history and composition. Also covered will be aesthetics. Students may be required to purchase supplementary materials.

MUSIC THEORY .5 unit (3)

Grade: Freshman, Sophomore, Junior, Senior
Prerequisites: Fundamentals of Music or Department approval

This class goes deeper into Fundamentals of Music concepts, studying elements of music theory, listening analysis, composition and basic harmony. Students may be required to purchase supplementary materials.

Fine Arts Department

AP MUSIC THEORY

1 unit (6)

Grade: Junior, Senior

Prerequisites: Completion of Fundamentals of Music and Music Theory with 85% or better average and Departmental Approval

AP Music is a full year course that is equivalent to one year of a college program. This course provides an opportunity for students who have an active interest in writing and analyzing music to expand their high school experience. The main focus of the course is eighteenth century Bach-style writing. A contract signed by the student, parent/guardian, and teacher is required. All students take the Advanced Placement exam in May, for which a fee is paid in the spring.

VISUAL ARTS COURSES

DESIGN

1 unit (3)

Grade: Freshman, Sophomore, Junior, Senior

Prerequisites: None

This is the full-year introductory art course for the high school level program. The focus of Design is on the study of the Elements and Principles of Design and how they relate to each other in a composition. The Elements of Design (line, shape/form, color, texture/pattern, space) are the "Building Blocks" of a work of art. The Principles of Design (balance, rhythm, unity, contrast, emphasis) deal with how you arrange the Elements of Design in a work of art. Exercises and projects are presented to emphasize a specific Element or Principle with the understanding that more than one is involved in a composition. Sample projects would be the following: toothpick sculpture, scratch art, mixed media, tissue collage, two dimensional and three dimensional drawings, tempera and watercolor paintings and clay relief. A variety of media will be used, such as: toothpicks, cut paper, ink, craypas, wire sculpture, drawing pencils, colored pencils, pastel, tissue, markers, clay, glazes, watercolor and tempera paint. Artists and art styles will be related to our study. Various media will be shown. Written critiques and homework are an integral part of our learning. Sketchbook, pencil and eraser are required for each class.

CERAMICS/SCULPTURE I

.5 unit (3)

CERAMICS/SCULPTURE II

.5 unit (3)

Grade: Sophomore, Junior, Senior

Prerequisites: Art Department approval and completion of Design with 80% or better average

Ceramics/Sculpture is an intermediate level course. Function and/or artistic intent, as well as design and decoration will be emphasized in all work. Two and three-dimensional design, open and closed forms, spatial relationships, texture and movement will be covered. Technique and construction methods will be explored in varied media such as clay, wood, plaster, metal and paper. Projects differ each semester. Courses need not be taken consecutively. An average of 85% or better is expected.

<u>COMPUTER GRAPHICS I</u>	.5 unit	(3)
<u>COMPUTER GRAPHICS II</u>	.5 unit	(3)

Grade: Sophomore, Junior, Senior

Prerequisites: Art Department approval, completion of Introduction to Computers, and completion of Design with 80% or better average. Students are encouraged to broaden their background in other intermediate level courses before undertaking Computer Graphics. Computer Graphics I is a prerequisite for Computer Graphics II.

This one-semester intermediate course introduces the serious art student to the uses of Photoshop and Illustrator in art production. Students will undertake design projects using appropriate software. Students will be required to purchase supplementary books. Students wishing to continue in Computer Graphics II must maintain at least an 85% average, and will be expected to perform at a more advanced level.

<u>CREATIVE CRAFTS I</u>	.5 unit	(3)
<u>CREATIVE CRAFTS II</u>	.5 unit	(3)

Grade: Sophomore, Junior, Senior

Prerequisites: Art Department approval and completion of Design with 80% or better average.

Creative Crafts I and II are intermediate level courses specializing in crafts. Students will complete a variety of projects. Examples of possible projects are linoleum block printing, plaster wrap branch mobile, string art, wooden Christmas sled, monoprint Christmas card, paper mache animal, plaster wrap mask, German paper cutting, wooden Decoupage box, Ukrainian egg dying, ceramics project, paper mache project. Projects differ each semester. Courses need not be taken consecutively. Pencil and eraser are required for each class.

<u>DRAWING AND PAINTING</u>	1 unit	(4)
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Grade: Sophomore, Junior, Senior

Prerequisites: Art Department approval and completion of Design with 80% or better average.

This is the full year intermediate level course specializing in various drawing and painting media and techniques. Emphasis is placed on representation of still life, landscapes, animals and human form. Art history is incorporated into the curriculum. Art media include pencil, pen and ink, charcoal, pastel, watercolors and paint. Each student is required to purchase his/her own sketchbook, drawing pencils, colored pencils, "Reading Pictures" workbook, Art History workbook, three-ring binder and dividers.

Fine Arts Department

ADVANCED ART LAB

DRAWING & PAINTING I-IV

.5 unit

(4 or 5)

Grade: Junior or Senior

Prerequisites: Art Department approval, completion of Design with 80% or better average and completion of Drawing and Painting with 85% or better average.

Art Lab is an advanced level course. It is designed to encourage students to further develop their talents and abilities in drawing and painting. In addition to above average artistic abilities, the student must demonstrate an acceptable level of maturity required for self-directed classroom study. Students are required to purchase supplementary supplies and book. Continuation of Art Lab is dependent upon an 85% or better overall grade and Department approval.

Foreign Language Department

FRENCH IV or SPANISH IV

1 unit (5)

Grade: Junior, Senior

Prerequisites: 85% in Level III and/or Department approval

At this level, students will begin to prepare for the SAT II in Language. Students will be encouraged to take the exam during the latter part of the course or in the fall of the following school year. They will also begin preparations for the Advanced Placement Examination in Language, which is given after the AP level. Grammatical concepts from previous levels will be reviewed in depth and advanced grammar will be introduced. Vocabulary will be greatly expanded through literature and cultural readings. Oral skills will be enhanced via various media and the language lab.

AP FRENCH or AP SPANISH

1 unit (6)

Grade: Senior

Prerequisites: 90% in Level IV and Department approval

In this course, students will continue to prepare for the SAT II and for the Advanced Placement Exam in French/Spanish Language. The target language will be used exclusively in the classroom. All grammar and verb tenses will be reviewed and mastered. Vocabulary will be expanded through discussions, reading and media. Speaking and listening skills will be practiced on a regular basis in the language lab. In addition to the course work, students will be required to read several novels, write essays, and prepare recorded assignments at home. All students will be required to take the AP exam at the end of the course. A fee for the exam will be paid in the spring. Note that a grade of 80% is required to remain in the course.

HEALTH/PHYSICAL EDUCATION DEPARTMENT

Each student must take Physical Education each year of attendance at Long Island Lutheran High School. One-half (.5) unit is given for Physical Education each semester. Also, a gym uniform from Long Island Lutheran High school is required for each student. Physical Education grades will be Pass/Fail.

HEALTH .5 unit (2)

Grade: Sophomore, Junior

Prerequisites: None

Throughout the course, students will participate in simple experiments, self-inventories, and activities that help them learn how to make healthy decisions in all areas of their daily lives - physical, mental, and social. As they acquire knowledge and decision-making skills, they also grow in the confidence they need to take responsibility for their own health. By the end of the course, students will have an understanding of health and wellness and how to make it a lifelong habit. Certification in American Red Cross Standard First Aid/CPR is also part of the class.

9th GRADE CO-ED P.E. .5 unit (2)

Grade: Freshman

Prerequisites: Satisfactory N.Y. State Physical Fitness Test

Introduction to a variety of individual and team physical activities, designed to promote interpersonal and social development along with cardiovascular fitness, muscular strength and endurance. The student will experience and develop an appreciation for the skills, as well as the rules and strategies of each activity.

PHYSICAL EDUCATION FOR LIFETIME FITNESS .5 unit (2)

Grade: Sophomore, Junior, Senior

Prerequisites: Satisfactory N.Y. State Physical Fitness Test

A variety of sports, weight training and conditioning, and recreational activities are covered including the skills, rules, and strategies. Physical fitness is also incorporated into the class in order to condition the student as well as encourage and teach the value of lifetime fitness. The students will have the opportunity to experience the following:

- Ultimate Frisbee, Softball, Volleyball, Badminton
- Tennis, Bocce/Baggo/Horseshoes, Table Tennis, Pickle Ball
- Weight Training and Conditioning

Health/Physical Education Departments

ADAPTIVE PROGRAM .5 unit (2)

Grade: Freshman, Sophomore, Junior, Senior

This is a one-semester course required of all students whose score on the New York Physical Fitness Test falls below the accepted minimal level as established by the Physical Education Department. Other students may enter this course based on recommendations by the Physical Education instructors. Students in the Adaptive Program will develop a fitness program tailored to meet each individual's needs.

PHYSICAL EDUCATION THROUGH SPORTS .5 unit (2)

Grade: Sophomore, Junior, Senior

This program is designed for the Varsity Athlete in grades 10-12, and the "Outside of School" athlete. These students will be given the option of taking a study hall or an elective instead of their P.E. class, if certain criteria is met, and will still receive their P.E. credit. All alternative programs must be approved by the Physical Education Department Chair.

PHYSICAL EDUCATION INDEPENDENT STUDY .5 (2)

Grade: Sophomore, Junior, Senior

Prerequisite: Department chairperson approval is required. This is a semester elective.

This course is designed for the student interested in the field of physical education and/or wellness education as a career. The student will function as a teaching intern under close supervision of the physical education instructor during class and also assist with some of the administrative responsibilities such as facility preparation. Required work by the student will include a journal, development and implementation of a personal fitness plan, and quarterly projects.

MATHEMATICS DEPARTMENT

Each student must have four (4) units in Mathematics. The four-unit requirement is arranged with the individual student depending upon his or her score on the entrance exam, past performance in Math, individual ability, and Department recommendations. Some students satisfy the requirement by taking Algebra I/Algebra I Honors, followed by Geometry/Geometry Honors, Algebra II with Trigonometry, and Precalculus. Another four-unit sequence might be Algebra I, Geometry, Intermediate Algebra, and Function Theory with Trigonometry. Additional years in Math are always encouraged. Some students are able to complete five or six years of Math by beginning Algebra I in the Middle School and ending with AP Calculus AB or BC. It is the philosophy of the Mathematics Department that students in sixth grade Mathematics through Algebra should not be allowed the use of any calculator due to the courses' content. Calculator use begins in Geometry where students are taught the use of the TI 84 Plus graphing calculator. The students use the TI 84 Plus in Geometry, Algebra II with Trigonometry, and Intermediate Algebra. The students are then taught the use of the TI 89 Titanium graphing calculator with CAS (Computer Algebra Systems). This calculator is used in Precalculus, Function Theory with Trigonometry, Calculus AB and Calculus BC.

ALGEBRA I

1 unit (3)

Grade: Freshman

Prerequisites: Math 8

This is a first year course in Algebra. Topics include operations in algebra, equations, proportional reasoning, linear functions, inequalities, absolute value function and equations, solving systems of equations and inequalities, exponents, polynomials, factoring, quadratic functions, radicals, and coordinate geometry.

ALGEBRA I HONORS

1 unit (4)

Grade: Freshman

Prerequisites: 90% or better in Math 8, placement exam and Department approval

The same course as Algebra I with more rigorous studies and additional topics related to the course content.

GEOMETRY

1 unit (3)

Grade: Sophomore

Prerequisites: Algebra I

This is a full year course in plane geometry. Topics include points, lines, planes, angles, deductive reasoning, parallel lines and planes, congruent triangles, quadrilaterals, inequalities for triangles, similar polygons, right triangles including basic trigonometry, circles, loci and areas of plane figures. Problem solving skills learned in Algebra will be reinforced and implemented into a Geometric setting. Students will become proficient in beginning operations with the TI 84 Plus graphing calculator including graphing lines and parabolas.

Math Department

GEOMETRY HONORS

1 unit (4)

Grade: Freshman, Sophomore

Prerequisites: 85% in Algebra I Honors or 90% in Algebra I and Department approval

The same course as Geometry with more rigorous studies and additional topics related to the course content. Problem solving skills learned in Algebra will be reinforced and implemented into a Geometric setting. Students will become proficient in beginning operations with the *TI 84 Plus* graphing calculator including graphing lines and parabolas.

ALGEBRA II with TRIGONOMETRY H

1 unit (5)

Grade: Freshman, Sophomore, Junior

Prerequisites: 85% in Geometry Honors or 90% in Geometry and Department approval (prior Algebra grades will be used in the evaluation – 85% in Algebra IH or 90% in Algebra I)

This is a second year course in Algebra with a study of Trigonometry. Topics include data and linear representations, numbers and functions, systems of linear equations and inequalities, quadratic functions, exponential and logarithmic functions, polynomial functions, rational functions, conic sections, trigonometric functions, the laws of sines and cosines, fundamental trigonometric identities and trigonometric equations. Students will use the *TI 84 Plus* graphing calculator to graph functions, find solutions to systems of equations, and the zeros of polynomial equations.

INTERMEDIATE ALGEBRA

1 unit (4)

Grade: Sophomore, Junior

Prerequisites: Geometry

This is a second year course in Algebra. Students study the same topics in algebra as the Algebra II with Trigonometry class, but less rigorously, and without trigonometry. Students will use the *TI 84 Plus* graphing calculator to graph functions, find solutions to systems of equations, and zeros of polynomial equations.

FUNCTION THEORY WITH TRIGONOMETRY

1 unit (4)

Grade: Junior, Senior

Prerequisites: Intermediate Algebra or Algebra II with Trigonometry

This course follows the Precalculus syllabus but is less rigorous and excludes the topics covered in Calculus. Students will learn the advanced capabilities of the *TI 89 Titanium* graphing calculator, including graphing functions, solving systems of equations, finding zeros of polynomial equations, and uses in Trigonometry.

PRECALCULUS

1 unit (5)

Grade: Sophomore, Junior, Senior

Prerequisites: 85% in Algebra II with Trigonometry with Department Approval OR
90% in Function Theory with Trigonometry and Department approval

This course is designed to prepare the student to take an advanced placement calculus course in high school or a college calculus course. Topics include functions, function theory, types of functions such as polynomial, rational, trigonometric, exponential and logarithmic, the study of conics, sequences and series and an introduction to calculus which includes limits, derivatives, critical points, continuity, rules for derivatives and integration. Students will learn the advanced capabilities of the *TI 89 Titanium* graphing calculator, including graphing functions, solving systems of equations, finding zeros of polynomial equations, uses in Trigonometry, finding derivatives, the numerical derivative, and integrating functions.

AP CALCULUS AB

1 unit (6)

Grade: Junior, Senior

Prerequisites: 85% in Precalculus and Department approval

Calculus AB is an advanced placement course in Mathematics consisting of a full academic year of work in calculus and related topics. One semester of college calculus credit can be achieved based on the result of the AP examination in May. Topics covered include properties of functions, limit theory, differential and integral calculus. AP students will use their skills learned in Precalculus on the *TI 89 Titanium* to answer actual past AP questions in order to best prepare them for the May exam. An average of 85 must be maintained in order to remain in the course. A fee for the exam is paid in the spring.

AP CALCULUS BC

1 unit (6)

Grade: Senior

Prerequisites: 85% in Calculus AB

Calculus BC is an advanced placement course that continues the study of calculus. A second semester of college calculus can be achieved based on the result of the AP examination in May. The topics include parametric, polar and vector functions, geometric interpretation of differential equations via slope fields, numerical solution of differential equations using Eulers method, Series, sequences and Taylor series. AP students will use their skills learned in Precalculus on the *TI 89 Titanium* to answer actual past AP questions in order to best prepare them for the May exam. A fee for the exam is paid in the spring.

RELIGION DEPARTMENT

Each student must successfully complete two (2) quarters of Religion during each year of attendance at Long Island Lutheran High School. One-half (.5) unit is given for each semester of satisfactory work in grades 9-12. Grading will be on a Pass/Fail basis.

The object of Religion 9 through 12 is the effective formation of a faith relationship between the young person and God. Each course consists of a series of experiential learning activities, group-sharing sessions, and mini-lectures. All religion classes include a service component. The focus of each course will be as follows.

RELIGION 9

.5 unit

1. A comprehensive overview of Scripture – highlighting key stories and messages while emphasizing the impact on modern society.
2. A full study of the Ten Commandments and their application to society today.
3. An introduction to Martin Luther and the Reformation.

RELIGION 10

.5 unit

1. A practical approach to character development, equipping students with the tools needed to make healthy, God-pleasing choices.
2. A study of Paul's letters to the church at Corinth, emphasizing the morals and ethics conveyed in these epistles.
3. A review of the sacraments of Baptism and Holy Communion.
4. A study of the Lord's Prayer based upon the Small Catechism of Luther, emphasizing applications for today.

RELIGION 11

.5 unit

1. A comparative study of world religions and Christian denominations.
2. A study of the Apostles' Creed based upon Luther's Small Catechism.
3. An in-depth study of the Gospels emphasizing Jesus as Prophet, Priest, and King.

RELIGION 12

.5 unit

1. A revealing search for the Truth utilizing the video *Uncovering the Truth About Jesus* and the book *A Case for Christ*.
2. A study of how to become more effective in life, emphasizing goal setting and decision-making.
3. A written a personal mission statement and a plan of discipleship by the end of the semester by each student.

PLEASE NOTE: While the core curriculum for the high school religion courses is listed above, it is hoped that additional course offerings may be made in the form of semester (or portions thereof) electives. Such electives will vary from year to year based upon the collective skills and expertise of the Religion Department and the adjunct instructors of our extended school community.

Electives

WORLD RELIGIONS IN OUR BACKYARD - A
Comparative Class of Understanding and Tolerance .5 unit

Grade: Junior, Senior
Prerequisites: None

This survey course is designed to assist students in the exploration of basic belief systems. Beginning with Lutheranism, students will delve into history, beliefs, tradition, and culture. The course will continue by exploring similar aspects of other Christian denominations, as well as non-Christian religions. Creative delivery methods will involve interactive class discussion and research, supported by guest speakers and field trips to provide tangible learning experiences.

UNDERSTANDING THE BIBLE:
Finding Your Story in God's Story .5 unit

Grade: Junior, Senior
Prerequisites: None

Through storytelling, art and media, discussion and interactive experiences, students will gain a deeper understanding of the great, overarching story of God and see how that story continues with us. Through the unfolding story of the Bible, students will discover what God is like and the way we were created to live. These powerful stories of the Bible draw us into great moral truths that give us insight into who we are, who we could be, and why we are here.

SCIENCE DEPARTMENT

A student must take three courses in Science to meet both the New York State and Long Island Lutheran High School academic requirements for graduation. Additional science courses are strongly encouraged for the college bound student. Most colleges will require at least one year of a laboratory science, and many will require more. Earth Science and Biology are required courses for graduation.

BIOLOGY / BIOLOGY HONORS

1 unit (4)

Grade: Freshman, Sophomore

Prerequisites: None (Freshman), A passing grade in Earth Science (Sophomores)

This class meets as a double period and involves extensive laboratory work and written lab reports. The course emphasizes the cellular approach to biology and the position of humans in the ecosystem. Typical animals and plants are used to explain the mechanics of biology. This course is geared to the average student. Students with an average of 85% or better will be encouraged to take the SAT II in Biology at the completion of this course. Students wishing to earn "Biology Honors" will complete additional labs and other independent work.

EARTH SCIENCE

1 unit (4)

Grade: Sophomore

Prerequisites: A passing grade in Biology

This class meets as a double period. Because of this, the work level is considerably more than most freshman courses and therefore is given a higher weighting. This course involves extensive laboratory work and written lab reports. Analysis and conclusion making skills are stressed throughout the course. Major topics are the structure of the earth, forces that attack the surface, forces that raise the surface, the ocean, earth and the universe, atmospheric science and earth's history. This course will be offered during the 2010 – 2011 school year.

EARTH SCIENCE HONORS

1 unit (5)

Grade: Sophomore

Prerequisites: 95% in Biology AND Guidance approval, along with a HIGH interest in the Sciences

This class meets as a double period. Because of this, the work level is considerably more than most honors courses and therefore it has a higher weighting. This course requires extensive laboratory work and written lab reports. Analysis and critical thinking skills are stressed. Earth Science Honors is designed to challenge the brighter student. Major topics are the structure of the earth, forces that attack the surface, forces that raise the surface, the ocean, earth and the universe, atmospheric science, and earth's history. This course will be offered during the 2010 – 2011 school year.

APPLIED CHEMISTRY

1 unit (3)

Grade: Junior, Senior

Prerequisites: Passing grade in Biology or Biology H

This course provides students with instruction that is directly related to day-to-day living. Topics include: science and measurement; properties, composition, and states of matter; the structure of matter; atoms and the periodic table; chemical reactions; solutions; acids, bases and salts; and nuclear changes. Applied Chemistry is recorded as a non-laboratory science on the student's transcript. It alternates yearly with Environmental Science.

CHEMISTRY

1 unit (4)

Grade: Sophomore, Junior, Senior

Prerequisites: This course has a math and a science requirement. The math requirement is an 85% in Algebra Honors or a 90% in Algebra. The science requirement is an 80% in Biology Honors or an 85% in Biology.

This course provides students with a modern view of the fundamental concepts of chemistry. It includes the following topics: matter and energy, atomic structure, bonding, the periodic table, the mathematics of chemistry, kinetics and equilibrium, acid-base theories, redox and organic chemistry. This class occupies two periods (lecture and lab) and extensive laboratory work and written lab reports are required.

Science Department

CHEMISTRY HONORS

1 unit (5)

Grade: Sophomore, Junior, Senior

Prerequisites: This course has a science and math requirement: 85% in Biology Honors or 90% in Biology AND 85% in Algebra Honors or 90% in Algebra

This course covers the same topics as Chemistry but in greater depth. Chemistry Honors meets as a double period and requires extensive independent laboratory investigations and written lab reports. Within the realm of all topics covered, application of knowledge, problem solving, and critical thinking skills are emphasized. Students must maintain an 80% or better average to remain in this course. Students with a 90% average or better will be encouraged to take the SAT II in Chemistry at the completion of the course. One section of this course is offered each year, therefore the top 22 students who meet the prerequisites will be admitted to the class.

ENVIRONMENTAL SCIENCE

1 unit (3)

Grade: Junior, Senior

Environmental Science is a course designed to enable students to gain an understanding of the relationship between humans and the environment, and to realize that life on Earth depends on humans maintaining an environment sustainable to life. Topics include interaction and balance in ecosystems; biomes and the role of biodiversity; people in the global ecosystem; energy resources and alternative energy sources; resources in the biosphere; and managing human impact. Environmental Science is recorded as a non-laboratory science on the student's transcript. It alternates yearly with Applied Chemistry.

PHYSICS

1 unit (5)

Grade: Junior, Senior

Prerequisites: 85% in Algebra II with Trigonometry and 85% in Chemistry

This course provides students with a modern view of the fundamental concepts of physics and is designed for students who are planning to major in the sciences, medicine, or engineering. The major topics covered are mechanics, energy, electricity and magnetism, waves, and modern physics. Additional topics include motion in a plane, internal energy, geometrical optics, and nuclear physics. This class occupies two periods (lecture and lab) and extensive laboratory work and written lab reports are required. Students must maintain a 75% or better average to remain in the course. Students with an average of 90% or better will be encouraged to take the SAT II in Physics upon completion of this course.

AP PHYSICS B

1 unit

(6)

Grade: Junior, Senior

Prerequisites: 85% in Chemistry Honors or 90% in Chemistry and Department Recommendation; Algebra and Trigonometry; Juniors need to have already taken Biology and Earth Science

AP Physics B is an Advanced Placement course in Physics. This course provides a systematic introduction to the main principles of physics and emphasizes the development of conceptual understanding and problem-solving ability using algebra and trigonometry, but rarely calculus. In most colleges, this is a one-year terminal course including a laboratory component and is not the usual preparation for more advanced physics and engineering courses. However, the B course provides a foundation in physics for students in the life sciences, pre-medicine, and some applied sciences, as well as other fields not directly related to science. Students will be required to complete material on their own; i.e. reading and self study. The student will be required to maintain an average of 85 in order to remain in the course. The course will culminate in the administration of the May Advanced Placement Exam. A fee for the exam is paid in the spring. All students will be required to take the final exam in June.

AP BIOLOGY

1 unit

(6)

Grade: Sophomore, Junior, Senior

Prerequisites: Biology / Biology Honors; Chemistry / Chemistry Honors; other admittance by approval of the AP instructor and Department Chair.

The AP Biology course at LuHi is designed to be the equivalent of a college introductory biology course usually taken by biology majors during their first year in college. AP Biology at LuHi includes those topics regularly covered in a college biology course for majors. AP Biology aims to provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapid changing science of biology. Because of the scope of the curriculum and because of time limitations, some areas of biology are skimmed over and others are omitted. Students must assume the responsibility for filling in these gaps with their own outside reading. They are expected to do more homework for this course than they have in many previous science courses. The most important difference between AP and regular/honors biology is that the student is expected to be an independent learner. *Due to the breadth of information covered in this course, students must be prepared for significant independent study during the year, including holidays.*

SOCIAL STUDIES DEPARTMENT

WORLD HISTORY AND GEOGRAPHY I 1 unit (3)

Grade: Freshman

Prerequisites: None

The course is designed to focus on the five Social Studies standards, common themes that recur across time and place, and eight historical eras to be studied in chronological order. Students are provided with the opportunity to explore what is happening in various global regions and civilizations at a given time and investigate issues from multiple perspectives. Over the two years events and themes of the non-western world (including Africa, China, Japan, India, the Middle East, and South America) are studied. The first year core curriculum extends from the ancient world to the modern world. Focus will be placed on world geography, document and thematic based essays, and note-taking skills.

WORLD HISTORY AND GEOGRAPHY I HONORS 1 unit (4)

Grade: Freshman

Prerequisites: 90% in Social Studies 8 with Department approval.

This is an enriched version of the course as described above. The text is supplemented by relevant outside information. This includes primary source documents and biographies. Focus will be placed on analysis and synthesis of these more complex readings.

WORLD HISTORY AND GEOGRAPHY II 1 unit (3)

Grade: Sophomore

Prerequisites: Passing grade in World History & Geography I

The course is designed to continue the focus on the five social studies standards, common themes that recur across time and place, and eight historical eras to be studied in chronological order. Students are provided the opportunity to explore what is happening in various global regions and civilizations at a given time and investigate issues from multiple perspectives. The core curriculum extends from ancient Greece to modern times with the primary focus on the western world. Emphasis will be placed on Document Based Essay (DBQ) writing, and critical thinking skills.

WORLD HISTORY AND GEOGRAPHY II HONORS 1 unit (4)

Grade: Sophomore

Prerequisites: 85% in World History & Geography I H or 90% in World History & Geography I with Department approval

This is an enriched version of the course as described above. The text is supplemented by relevant outside information, including primary source documents, biographies, etc. Focus will be placed on analysis and synthesis of the more complex readings.

AP WORLD HISTORY

1 unit (6)

Grade: Sophomore

Prerequisites: 90% World History & Geography I Honors with Department approval; strong writing skills are essential; must be in English Honors

The purpose of the AP World History course is to develop greater understanding of the evolution of global processes and contacts, in interaction with different types of human societies. This understanding is advanced through a combination of selective factual knowledge and appropriate analytical skills. The course highlights the nature of change in international frameworks and their causes and consequences, as well as comparisons among major societies. The course emphasizes relevant factual knowledge deployed in conjunction with leading interpretive issues and types of historical evidence. The course builds on an understanding of cultural, institutional, and technological precedents that, along with geography, set the human stage. Specific themes provide further organization to the course, along with consistent attention to contacts among societies that form the core of world history as a field of study.

U.S. HISTORY AND GOVERNMENT

1 unit (3)

Grade: Junior

Prerequisites: Passing grade in World History & Geography II

This course examines the emergence and growth of the United States from 1789 to the 20th Century. The class curriculum starts with The Articles of Confederation and concludes with The Clinton Era and a brief discussion of contemporary American politics. Emphasis is placed on political, social, ethnic and international relations. Students will be assessed by a variety of traditional homework assignments along with Document Based Essay (DBQ) writing, quizzes, and unit exams.

U.S. HISTORY AND GOVERNMENT H

1 unit (4)

Grade: Junior

Prerequisites: 90% in World History and Geography II Honors or 85% in AP World History with Department approval

This is an enriched version of the course as described above. Students with a 90% or better class average will be encouraged to take the SAT II upon completion of this course.

Social Studies Department

AP U.S. HISTORY

1 unit (6)

Grade: Junior

Prerequisites: 90% in World History & Geography II Honors or AP World History and Department recommendation

This course is a chronological, college-level survey/seminar approach to American History, with emphasis on interpretation and analysis of significant historiographical material. It is primarily a reading course. Students will be required to purchase Richard Hofstadter's "American Political Traditional" which will be required reading through the school year. The texts and the supplementary readings have been chosen for their collective coverage of specific periods and also because they represent a wide variety of genres of historical writing. It is necessary that students acquire a basic understanding of the factual material before embarking on discussions or venturing opinions. The course will culminate in the administration of the May Advanced Placement Exam, which all students are required to take as well as a final exam in June. A fee for the exam is paid in the spring.

PARTICIPATION IN GOVERNMENT

.5 unit (3)

PARTICIPATION IN GOVERNMENT H

.5 unit (5)

Grade: Senior

Prerequisites: Passing grade in US History & Government
For Honors, 90% in US History & Government H and Department recommendation

The major goal of the 12th year Government course is to help students acquire the knowledge necessary to be an active participant in American society. This course will assist students in becoming aware of their roles as citizens. It will help them to evaluate public issues, make informed judgments, and provide an understanding of how a person's values affect his/her decision-making process. Students will be able to acquire knowledge of how citizens have in the past, and can now and in the future, directly and indirectly interact with the public policy processes.

ECONOMICS

.5 unit (3)

ECONOMICS H

.5 unit (5)

Grade: Senior

Prerequisites: Passing grade in US History & Government
For Honors, 90% in US History & Government H and Department recommendation

The goal of the 12th year Economics course is that the student will be able to demonstrate an understanding of basic economic concepts. Students will become familiar with the economic system of the United States and how it operates. They will also explore the roles of various components of the American economic system. Students will examine their roles as consumer, worker, investor and voting citizen. Topics of discussion will include the Stock Market, comparative economic systems and the impact of political and social decisions on the economy.

AP GOVERNMENT and POLITICS

1 unit

(6)

Grade: Senior

Prerequisites: U.S. History and Government Honors or AP U.S. History and Department recommendation

This course is the traditional, college level survey/seminar elective in the study of American government. The major emphasis is placed on the study of American political ideology and the evolution of its democratic institutions. The course's purpose is to demonstrate the political behavior of the American electorate, the function of its citizens and their involvement in the local, state, and national structures of the American political system. Students will be able to evaluate the role of the national government and its relationship to the concept of liberty in a pluralistic society. Discussions will emphasize the changing political culture of American society and its effect on voting patterns, trends and the processes in government. The structure and strategies utilized with the materials include thematic studies, documentary readings, use of the inquiry method, and a developed, well organized writing style with the ability to synthesize social science data to support an intelligent argument. An average of 85 must be maintained in order to remain in the course. The AP exam in U.S. Government and Politics will be taken in May. A fee for the exam will be paid in the spring.

AP MICROECONOMICS

1 unit

(6)

Grade: Junior and Senior

Prerequisites: none

This college level course provides an understanding of the principles of economics that apply to the individual units of an economic system. Students will learn skills to pass the AP microeconomics exam, apply economic thinking to current and historic events and develop college level reading, thinking and presentation skills. Lessons stress activity-based exercises over lectures. Students are expected to be active in class and to use the knowledge they have gained in a problem-solving manner. Assessments include class work, quizzes, tests, cumulative final and monthly writing assignments. Reading assignments are from Krugman and Wells "Economics", Economic Journals and other current event articles. All students are required to take the AP exam in May and a final about one week before the AP exam.

Social Studies Department

Electives

INTRODUCTION TO PSYCHOLOGY .5 unit (4)

Grade: Senior

Prerequisites: Passing grade in US History & Government

Psychology is an introductory level course that examines the science of human behavior. Students will be exposed to varied topics including adolescent, abnormal and developmental psychology. Included in this survey will be discussion of the major theories and theorists in the fields of modern psychology.

ETHICS AND CHRISTIAN THEOLOGY IN A MODERN WORLD .5 unit (4)

Grade: Senior

Prerequisites: None

The study of Ethics involves consideration of questions about good and evil, right and wrong, and what makes it so. In a world with a population of 6,602,224,175, opinions vary. We will wade into the waders of ethics utilizing philosophy and history as our raft. We will study scenarios, the wisdom of the ancients, the founder's ideals, as well as formulate our own theories on our quest to answer the question of Good and Evil. The second half of the course will focus on the fundamentals of Christian theology with theologians like St. Augustine and Dietrich Bonhoeffer forming the basis of our initial reading assignments. We will then examine different Christian theological principles and their application into the modern world. As part of our modern world application we will examine the influence of religion on the domestic and foreign policy of the United States. Discussions will include such topics as the pro-life movement, the Arab-Israeli conflict, and the relationship between the United States and Israel.

DISTANCE LEARNING

Courses will be offered on a rotational basis according to the Concordia College schedule. Grades, credits and transcripts are issued through Concordia College.

PSYCHOLOGY 181 – General Psychology 3 credits

An introduction to the facts, principles, and theories of psychology. Topics include definitions and historical overview, methods and measurement, learning, memory and forgetting, thinking and problem solving, development, perception, emotion and motivation, personality, adjustment, behavior disorders and therapy, and social psychology.

SOCIOLOGY 151 – Elements of Sociology 3 credits

A scientific introduction to the study of the social world, its origins, institutions, and some pathological aspects. Topics include culture, groups, institutions, social stratifications, social interaction and control, and various social problems such as poverty, dependency, and crime.

