Illinois Mathematics and Science Academy®

igniting and nurturing creative, ethical scientific minds that advance the human condition

LEARNING OPPORTUNITIES 2008/2009

GRADUATION REQUIREMENTS AND COURSE LOAD

The graduation requirements of the Illinois Mathematics and Science Academy are in concert with those maintained by the State of Illinois with additional requirements as established by the IMSA Board of Trustees. Each semester students must take a minimum of 2.5 credits and a maximum of 3.5 credits. One-semester classes generally receive .5 credits and two semester classes (e.g., World Languages) generally receive 1.0 credit. Most students will take between 5 and 7 academic classes per semester. Fine Arts, Wellness, and Independent Study courses do not count towards the 2.5 credit minimum. However, if a student wishes to take 3.5 credits of academic classes, he/she may choose to enroll in a Fine Arts or Independent Study course on a Pass/Fail basis (see below).

Credit in courses taken at the Academy must total a minimum of 17 units in three years. The credit distribution is:

- **Eight (8.0) credits in Science and Mathematics**, which include:
  - a) **Minimum four credits (4.0) in Science**.
    The Core Science Program consists of four one semester courses: SCI105, Scientific Inquiries - Chemistry; SCI115, Scientific Inquiries - Physics; SCI125, Scientific Inquiries - Biology; and SCI135, Methods in Scientific Inquiry. **All students are required to complete SCI135, Methods in Scientific Inquiry**. Students new to IMSA who demonstrate an exemplary past academic record in biology, physics, or chemistry may choose to take a placement exam in that particular subject. A satisfactory placement exam score will demonstrate competency in the subject matter of that particular course and the student will then be enrolled in an appropriate elective course. Completion of the Science core program or its equivalent, i.e. satisfactory grades in the appropriate placement exams allows students to enroll in a large number of electives in earth/space science, biology, chemistry, physics, and applied sciences.
  - b) **Minimum three (3.0) credits in Mathematics**, which include core courses that move toward completion of AB or BC Calculus (including Geometry). **Students must be enrolled in at least one core Mathematics course each semester**. (Once the Calculus core sequence is completed, then any approved mathematics elective taken for grade will be considered to satisfy the core course enrollment requirement). All students are mandated to successfully complete the equivalent of a high school geometry course prior to graduation. This requirement can be met in one of the following ways:
    i) A student completes geometry in own home school, prior to admission to IMSA; or
    ii) A student completes an IMSA-approved geometry course by the end of junior year.
    Students who have not completed a geometry course prior to admission will automatically be placed into geometry in their sophomore year.
  - c) **One additional (1.0) credit (2 courses) in either Mathematics or Science**.
- **Three (3.0) credits in English**, which include Literary Explorations I, II and III and three English electives. **Students must be enrolled in an English course each semester**.
- **Two and one-half (2.5) credits in Social Science**, which include American Studies (1.0) and Topics in World Studies (1.0) and one Social Science elective.
- **Two (2.0) credits (four semesters) in World Languages** taken two out of the three years at the Academy including completion of an Academy Level II course or higher. All World Languages courses are year long courses and cannot be dropped at the end of the fall semester unless the student receives approval from the instructor and the Principal's Office.
- **One-half (0.50) credit in Fine Arts** taken in the performing arts or the visual arts.
- **One (1.0) credit in Wellness** including a one-semester course of Moving and Learning and one elective.

All students are also required to:

1. Be enrolled in a minimum of 2.5 credits each semester in which all are taken for a grade.
2. Successfully complete one hundred (100) hours of Academy approved community service by graduation.
3. Successfully complete campus work service.
4. Participate and successfully complete three Intersessions.
5. Participate in Leadership Development programs (i.e. LEAD, Synergy, and Navigation).

Modification of these requirements can be made only with prior approval of the Principal.
Previous high school, virtual high school, or college credits earned at another institution will not earn graduation credit at IMSA.

MATHEMATICS

MAT101 (Fall)
MAT102 (Spring)

Geometry I/II (core)

Grade Level: Sophomore/Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisite: Initial Placement by Math Department

This is a one semester accelerated course in Euclidean Geometry for students with a solid background in algebra. In addition to content from a standard year long geometry course, problem solving, algebra review, conjecture, and proof are emphasized. Students will also have the opportunity, using computers, to explore geometry dynamically.

MAT110 (Year Long)

Mathematical Investigations I/II (core)

Grade Level: Sophomore/Junior
Length: Two Semesters
Credit: 1.0
Prerequisite: Initial Placement by Math Department

The Mathematical Investigations courses integrate topics from all areas of pre-calculus mathematics. In these courses, students will be expected to explore mathematical concepts, make conjectures and present logical, valid arguments for mathematical assertions. Both written and oral forms of communication are emphasized. Mathematical Investigations I/II is a two-semester sequence of courses. The first semester emphasizes advanced algebraic skills, linear relationships, equations and applications, data analysis and modeling, and an introduction to functions. The second semester concentrates on the study of matrices, beginning sequences, functions and function transformations, and exponential functions.

MAT121 (Fall)
MAT122 (Spring)

Mathematical Investigations II (core)

Grade Level: Sophomore/Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisite: Initial Placement by Math Department

The Mathematical Investigations courses integrate topics from all areas of pre-calculus mathematics. In these courses, students will be expected to explore mathematical concepts, make conjectures and present logical, valid arguments for mathematical assertions. Both written and oral forms of communication are emphasized. MI-2 focuses on the study of matrices, linear relationships, functions and function transformations, while also introducing exponential functions and combinatorics.

MAT131 (Fall)
MAT132 (Spring)

Mathematical Investigations III (core)

Grade Level: Sophomore/Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisite: Mathematical Investigations II or Initial Placement by Math Department

The Mathematical Investigations courses integrate topics from all areas of pre-calculus mathematics. In these courses, students will be expected to explore mathematical concepts, make conjectures and present logical, valid arguments for mathematical assertions. Both written and oral forms of communication are emphasized. MI-3 builds on MI-2, extending the concept of function and applications to include logarithmic functions, polynomial functions, rational functions, and trigonometric functions.

MAT141 (Fall)
MAT142 (Spring)

Mathematical Investigations IV (core)

Grade Level: Sophomore/Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisite: Mathematical Investigations III or Initial Placement by Math Department

The Mathematical Investigations courses integrate topics from all areas of pre-calculus mathematics. In these courses, students will be expected to explore mathematical concepts, make conjectures and present logical, valid arguments for mathematical assertions. Both written and oral forms of communication are emphasized. MI-IV focuses on the study of sequences and series, vectors, advanced trigonometry, polar coordinates, complex numbers, and mathematical induction.

MAT211 (Fall)

AB Calculus I (core)

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisite: Mathematical Investigations IV and recommendation of MI Instructors

AB Calculus is a two-semester sequence, which includes the concepts presented in the Advanced Placement AB Calculus syllabus. The first semester course discusses limits, derivatives and their applications.

MAT222 (Spring)

AB Calculus II (core)

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisite: AB Calculus I

The second semester of this sequence will include additional topics from the Advanced Placement AB Calculus syllabus with a concentration on the integral and its applications. Students completing AB Calculus I and II will have completed the equivalent of a semester of college level calculus.

MAT311 (Fall)
MAT312 (Spring)

BC Calculus I (core)

Grade Level: Sophomore/Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisite: Mathematical Investigations IV and recommendation of MI Instructors

BC Calculus is a three-semester sequence, which includes the material covered in the Advanced Placement BC Calculus syllabus. This course will cover the foundations of calculus including concepts and applications of rates of change, derivatives, antiderivatives, and limits. With help from technology, these will be seen from graphical, numerical, and analytic points of view.

MAT321 (Fall)
MAT322 (Spring)

BC Calculus II (core)

Grade Level: Sophomore/Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisite: BC Calculus I

This second course will continue the study of derivatives and begin work on concepts and applications of integrals. Technology will be an important part of the development of the course.

MAT331 (Fall)
MAT332 (Spring)

BC Calculus III (core)

Grade Level: Sophomore/Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisite: BC Calculus II

The third course of the sequence will conclude the material covered in the Advanced Placement BC Calculus syllabus. Topics will include sequences and series, differential equations, and polar graphs.

MAT402 (Spring)

Advanced Geometry

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisites: Mathematical Investigations III or recommendation of Instructor

This course is a study of advanced topics in geometry selected from such areas as: points of concurrence, pedal triangles, Miquel points, Wallace lines, non-Euclidean Geometries, the theorems of Ceva, Menelaus, Pascal, Desargues, and Pappus. The course emphasizes mathematical connections through individual and group explorations, discussions and problem solving.

MAT422 (Spring)

Polyhedra and Geodesics

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisites: Mathematical Investigations IV

This course focuses on the theory and design of polyhedra (three-dimensional figures with planar sides, such as a cube) and geodesic domes. Emphasis is on the construction of models, as well as studying their metrical properties using spherical trigonometry (and there's lots of trigonometry here!). Study of other areas of geometry, as time and student interest permits, will include: taxicab geometry, geometrical inversion, graph theory, coordinate geometry in three dimensions, linear algebra, and four-dimensional polytopes.

MAT411 (Fall)

Statistical Exploration and Description

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Mathematical Investigations III and Methods in Scientific Inquiry

This course will serve as an introduction to college level statistical thinking. It is built around two broad conceptual themes: 1) Exploring Data: observing patterns and descriptions from patterns; 2) Anticipating patterns in advance and introducing probability distributions, random variables and simulation. It will serve as an introductory course to Statistical Experimentation and Inference

MAT412 (Spring)

Statistical Experimentation and Inference

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Statistical Exploration and Description

This course provides college-level work in statistics. It will engage students in the major concepts and tools for collecting, analyzing, and drawing conclusions from data. It will emphasize sound statistical thinking rather than routine procedures and prepare students to take the Advanced Placement exam in Statistics.

MAT415 (Fall or Spring) ***Mathematica* and Mathematics**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Mathematical Investigations IV OR Mathematical Investigations III and permission of instructor.

Students will learn how to use *Mathematica* computer software to help model and explore mathematical topics. Much of the course will be project oriented, including creating interactive notebooks and programming, depending upon individual student backgrounds and interests. Students will work with 2D and 3D graphics, colors, and animations. No prior experience with *Mathematica* or with computer programming is necessary.

MAT421 (Fall) **Number Theory**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: BC Calculus I (which in exceptional cases may be taken concurrently) and permission of Instructor and Mathematics Operational Coordinator

Number Theory challenges students to question the number systems they have used all their lives. The integers are defined axiomatically, and familiar properties of arithmetic are proven. Exploration then turns to divisibility, primes, and the Fundamental Theorem of Arithmetic, the GCD, and linear diophantine equations. Linear congruence problems and multiple congruences (Chinese Remainder Theorem) are followed by special congruences (Theorems of Wilson and Euler-Fermat). This is then used to study decimal expansions of rational and real numbers. Further topics may include primality testing, continued fractions, introductory cryptography, and quadratic reciprocity. This course is centered around a dual emphasis on calculation techniques and rigorous proof.

MAT425 (Fall or Spring) **Problem Solving**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Mathematical Investigations III or recommendation of Instructor

In this course, students will learn how to apply a broad range of problem solving techniques and strategies while making inter and intra-disciplinary mathematical connections. The course will emphasize both individual and group investigations and explorations. Students will not receive credit for Problem Solving if they have prior credit in Advanced Problem Solving.

MAT431 (Fall) **Advanced Problem Solving**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: BC Calculus I, or permission of Instructor; and Mathematics Operational Coordinator. Student should have a very strong score on the AMC contest, though need not be a mathlete.

The course will emphasize advanced problem solving techniques and strategies used on the AIME, ARML, Mandelbrot and AVASC level contests. Methods of proof, derivation, and validation will be highlighted in solutions to non-routine problems. The course content will focus upon topics from advanced geometry, combinatorics, theory of equations, series, sequences, trigonometry and number theory, etc.

MAT435 (Fall or Spring)

Discrete Mathematics

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Mathematical Investigations III or recommendation of Instructor

This course is a study of topics that are based on concepts, ideas, and algorithms in mathematics that can, in some manner, be divided into "separate" or "discontinuous" (and thus, *discrete*) parts. Major areas of mathematical content addressed in the course can include social applications and decision making (such as voting theory), techniques of counting, permutations, combinations, probability, graph theory (including applications of paths and circuits in graphs, graph coloring, and spanning trees), recursion, algorithm development, pattern generation and recognition in a variety of contexts, Pascal-type triangles and their connection to other mathematical content, modular math, and modeling. Individual and group investigations and explorations are emphasized throughout the course.

MAT441 (Fall)
MAT442 (Spring)

Multi-Variable Calculus

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: BC Calculus III and recommendation of Instructor

Multi-Variable Calculus will apply the tools of calculus to functions of several variables. Topics will include the algebra and geometry of vectors, a study of functions of several variables, applications of partial derivatives, multiple integrals, line and surface integrals, and (time permitting) Green's, Stokes' and Gauss' Theorems.

MAT445 (Fall or Spring)

Theory of Analysis

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Multi-variable Calculus or Advanced Problem Solving or Number Theory and permission of the Instructor and Mathematics Operational Coordinator.

This course provides a theoretical look at many of the important concepts studied in the BC Calculus sequence. The emphasis in this course will be upon rigorous mathematical proof. Major ideas addressed in this course include: mathematical proof, theory of sets, sequences, topology of the real numbers, limits, continuity, and differentiation. Enrollment in this course requires a high degree of mathematical maturity along with a deep understanding of the concepts covered in the BC Calculus sequence. There will be opportunity for the class to take excursions into related theory when students in the class take the lead. There will be an emphasis on group work and student presentations to the class.

MAT451 (Fall)
MAT452 (Spring)

Differential Equations

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: BC Calculus II (or AB Calculus II with permission of Instructor)

The theory of differential equations is interesting as a mathematical topic and has special relevance because it describes a surprising diversity of real world situations. In this course, we will investigate the behavior of solutions to linear and nonlinear differential equations. Special emphasis will be given to applications in the physical and biological sciences. Upon completion of this course, a student will be able to choose, trouble-shoot, customize, or develop a variety of differential equation modeling schemes to suit his or her own particular needs.

MAT462 (Spring) **Introduction to Algebraic Structures I**
MAT472 (Spring) **Introduction to Algebraic Structures II**
(Use MAT472 only if enrolled in MAT462 last year.)

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Multi-variable Calculus or Advanced Problem Solving or Number Theory **and** permission of the Instructor and Mathematics Operational Coordinator.

Algebraic Structures I and II are advanced course offerings for students working at a level beyond Calculus. One of the two course options described below will be chosen by the mathematics department to be taught each spring semester. Students taking the course for the first time should sign up for enrollment in Algebraic Structures I (MAT462). Students who have already received credit for course number MAT462 should sign up for enrollment in Algebraic Structures II (MAT472) after discussion with instructor or department coordinator.

OPTION 1 (Linear Algebra)
This course concentrates on the theory of simultaneous linear equations. Gaussian elimination is used as a tool to solve linear systems and to investigate the subspace structure of a matrix (kernel, range, etc.) Extensions of these ideas include orthogonality and least squares. Determinants are examined from several perspectives. Eigenvalues and eigenvectors are introduced, including a discussion of special matrices (symmetric, unitary, normal, etc.). Applications may include singular value decomposition and the Fast Fourier transform.

OPTION 2 (Abstract Algebra)
The content of this course is flexible, but is generally an introduction to abstract algebra. Students learn about groups, subgroups, homomorphisms, and the structure of various groups (such as the structure theorem for finitely generated Abelian groups, the Sylow theorems, etc.) Students also investigate the basics of rings. Ring topics include ideals and homomorphisms; PIDs, UFDs, and Euclidean domains; fields and (time permitting) field extensions including applications such as constructibility. All aspects of the course are presented with full mathematical rigor, and students are expected to produce proofs of equivalent quality to mathematics majors at a university.

MAT705 (Fall or Spring) **Computer Science in Emerging Technology**

Grade Level: Sophomore/Junior/Senior
Length: One semester
Credit: 0.50 Pass/Fail option
Prerequisites: None

This course is designed to advance the student's understanding of computer science through a breadth-first survey of the field. Topics covered range from the fundamentals of the field (basic discrete mathematics and logic) to today's emergent technologies. Actual content of the course changes from semester to semester to reflect the nature of the field. Modern computing application will be examined, and the social implications of the use of technology will be explored. The course will conclude with an introduction to the current tools used by computer scientists to model real-world applications such as programming constructs and design principles.

MAT 711 (Fall) **Web Technologies**

Grade Level: Sophomore/Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisites: None

This is an introductory course into the key technology utilized on the World Wide Web. It introduces the learner to HTML & Web Page design, programming in JavaScript, client vs. server side computing, VBScript/ASP, multimedia web pages, and web servers.

MAT715 (Fall or Spring) **Introduction to Visual Basic**

Grade Level: Junior/Senior
Length: One semester
Credit: 0.50 Pass/Fail option
Prerequisites: Mathematical Investigations III or permission of instructor AND no previous computer science coursework.

This course is an introduction to computer programming using the Visual Basic computer language. Visual Basic is intended specifically for students who wish to learn about computer programming but do not have aspirations in computer science related fields. (Any student wishing to take AP Computer Science or Computer Seminar must take Introduction to Computer Science)

MAT725 (Fall or Spring) **Object Oriented Programming**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail Option
Prerequisite: Mathematical Investigations III or recommendation of Instructor

Intro to C.S. is an introduction to programming and computer science using the current APCS language (Java). The course emphasizes programming methodology concentrating on problem solving and algorithm development, using object oriented programming. It is intended to feed naturally into AP Computer Science (MAT732).

MAT731 (Fall) **Computer Seminar**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Introduction to Computer Science or recommendation of Instructor

This course will study advanced computer science topics including object oriented programming. Students will be expected to complete several individual and group projects that will involve research, programming, and presentation of results.

MAT732 (Spring) **Advanced Programming Computer Science**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Introduction to Computer Science or recommendation of Instructor

This course will complete the AP Computer Science AB syllabus. Topics may include: recursion, stacks, queues, trees, linked lists, and advanced programming techniques including advanced sorts and searches. A major focus of the course will be an analysis of the AP Computer Science case study.

MAT735 (Fall or Spring) **Assembly Language Programming**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Introduction to Computer Science or recommendation of Instructor

This course will introduce the students to the mathematics of computing and the specifics of assembly language programming in the context of the 80x88 family of computers. Approximately half of the semester will be spent learning the language by writing programs that manipulate text and numeric data. The remainder of the semester will be spent writing more difficult programming activities. Possibilities include, but are not limited to, specific hardware interfaces, direct screen manipulation, and interfacing assembly language routines with high-level programs.

MAT801 (Fall)
MAT802 (Spring)

Advanced Topics in Mathematics

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisites: Multi-Variable Calculus and one of Advanced Problem Solving, Number Theory, or Algebraic Structures I and permission of Instructor and Mathematics Operational Coordinator

Students who have finished the core mathematics program and for whom there is no other appropriate mathematics course available can petition for this as an option. Student and instructor will select topics jointly. Course may be used as core mathematics course.

SCIENCE

SCI105 (Fall or Spring) **Scientific Inquiries - Chemistry**

Grade Level: Sophomore
Length: One Semester
Credit: 0.50
Prerequisite: None

Scientific Inquiries – Chemistry is a one semester course required of all IMSA sophomores who have not taken a high school level chemistry course or who have not passed the IMSA chemistry placement exam. The course is a one semester course designed to engage the students in foundational concepts in chemistry and to prepare them for advanced study in science. The content explored includes: the periodic table and periodic trends, inorganic nomenclature, writing and balancing equations, stoichiometric relationships and their applications, phases of matter, solutions, chemical equilibria, acids and bases, reduction and oxidation and energetics. This content is encountered through a combination of lab-based activities, guided inquiry, group discussion and direct instruction.

SCI115 (Fall or Spring) **Scientific Inquiries - Physics**

Grade Level: Sophomore
Length: One Semester
Credit: 0.50
Prerequisite: None

Scientific Inquiries – Physics is a one semester course required of all IMSA sophomores who have not taken a high school level physics course or who have not passed the IMSA physics placement exam. The course addresses four broad conceptual areas: kinematics and the equations of motion, Newton's first and second laws, the conservation of energy, and Newton's law of gravitation. These laws are used to explain the mechanics of the solar system. Students encounter concepts and materials in this course through a combination of lab-based activities, guided inquiry, group discussion, and direct instruction.

SCI125 (Fall or Spring) **Scientific Inquiries - Biology**

Grade Level: Sophomore
Length: One Semester
Credit: 0.50
Prerequisite: None

Scientific Inquiries - Biology is a one-semester course that is required of all IMSA sophomores who have not taken a high school level biology course or who have not passed the IMSA biology placement exam. The course addresses four broad conceptual areas: cell structure and function, evolution, heredity, and metabolism.

SCI135 (Fall or Spring) **Methods in Scientific Inquiry**

Grade Level: Sophomore
Length: One Semester
Credit: 0.50
Prerequisite: None

Methods in Scientific Inquiry is a one-semester course that is required of all IMSA sophomores. The course explicitly addresses three broad areas encompassed by the nature of science: data acquisition and analysis, experimental design, and written and oral communication. Activities will support the development of basic skills across the science disciplines and promote an understanding of scientific inquiry and the nature of research.

SCI201 (Fall)

Advanced Chemistry - Matter and Molecules

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Scientific Inquiries - Chemistry or equivalent

Advanced Chemistry – Matter & Molecules is a fast-paced, challenging class that exposes students to the major topics of inorganic chemistry. The course complements and furthers many of the concepts that students encountered in SI Chemistry. The topics studied in Matter & Molecules include molecular structure and how structure affects molecular properties, stoichiometry, phases of matter, solutions, and gas-phase and solubility equilibrium. A significant portion of the class time is spent in the laboratory. In keeping with the philosophy of the Academy, students in Advanced Chemistry are expected to construct knowledge through their laboratory experiences, readings, homework assignments, and questions.

SCI202 (Spring)

Advanced Chemistry - Reactions and Qualitative Analysis

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Scientific Inquiries - Chemistry or equivalent

Advanced Chemistry – Reactions & Qualitative Analysis is a fast-paced, challenging class that exposes students to the major topics of inorganic chemistry. The course complements and furthers many of the concepts that students encountered in SI Chemistry. The topics studied in Reactions & Qualitative Analysis include thermochemistry, kinetics, acid-base equilibrium, electrochemistry, and qualitative analysis. A significant portion of the class time is spent in the laboratory. In keeping with the philosophy of the Academy, students in Advanced Chemistry are expected to construct knowledge through their laboratory experiences, readings, homework assignments, and questions.

SCI215 (Fall or Spring)

* Organic Chemistry I

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Scientific Inquiries – Chemistry or equivalent

SCI222 (Spring)

* Organic Chemistry II

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Organic Chemistry I

* These courses are designed as an introduction to the main functional groups of organic chemistry and their reactions. Emphasis is placed on understanding the theory behind organic reactions that includes discussion and problem solving. Experiments are included to introduce laboratory techniques as well as to demonstrate concepts introduced in the classroom. State-of-the-art instruments will be utilized in the laboratory.

SCI235 (Fall or Spring) **Biochemistry**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Scientific Inquiries - Chemistry or equivalent and Scientific Inquiries - Biology or equivalent

This is a one-semester course that extends fundamental concepts in chemistry, such as equilibrium, acid/base and thermodynamics into an exploration of biology. Students will investigate the structure of protein, enzymatics and kinetics, and metabolic processes. An encounter with various metabolic diseases will conclude this course as students apply what they have learned of the biochemistry of the human system to common disease states.

SCI401 (Fall) **Physics: Applied Mechanics**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Scientific Inquiries - Physics or equivalent

The purpose of this course is to provide students with the tools needed to understand the behavior of the physical world. The curriculum includes a study of mechanics, including two dimensional and rotational motions. This course presents physics as a unified approach to explaining and predicting the behavior of the world, rather than as a collection of unrelated topics. The course is a hands-on, inquiry-based course, with heavy emphasis on lab and project work. Applications of the lab and homework problems will be incorporated into the various projects assigned throughout the semester.

SCI402 (Spring) **Physics: Light and Sound**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Scientific Inquiries - Physics or equivalent

The purpose of this course is to provide students with the tools needed to understand the behavior of the physical world. The curriculum includes a study simple harmonic motion and wave characteristics, including audio and optic properties. This course presents physics as a unified approach to explaining and predicting the behavior of the world, rather than as a collection of unrelated topics. The course is a hands-on, inquiry-based course, with heavy emphasis on lab and project work. Applications of the lab and homework problems will be incorporated into the various projects assigned throughout the semester.

SCI411 (Fall) **Physics: Calculus-based Mechanics**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Scientific Inquiries - Physics or equivalent <u>and</u> Mathematical Investigations IV. Successful completion of AB I or BC I Calculus is strongly recommended.

Calculus-based Physics/Mechanics follows the typical sequence of a university physics course. The semester is devoted to topics in classical mechanics. The major emphasis of the course is on problem-solving and calculus is used throughout. The course is strongly recommended for students who intend to take the AP Physics C Mechanics exam.

SCI412 (Spring) **Physics: Calculus-based Electricity/Magnetism**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Scientific Inquiries - Physics or equivalent and AB I or BC I Calculus. Successful completion of Calculus-based Physics – Mechanics is strongly recommended.

Calculus-based Physics/Electricity and Magnetism follows the typical sequence of a university physics course. Topics will include electrostatics, circuits, magnetism, and induction. At the end of the semester, the equations which describe electromagnetic phenomena, Maxwell's equations, will be compiled in order to understand the wave nature of light. The major emphasis of the course is on problem-solving and calculus is used throughout. This course is strongly recommended for students who intend to take the AP Physics C Electricity and Magnetism exam.

SCI425 (Fall or Spring) **Planetary Science**

Grade Level: Sophomore/Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: None

This course will introduce the student to basic concepts in planetary science and the methods that are used to determine what we know about the dynamic processes of planetary formation and evolution. A history of astronomy up through the Big Bang along with selected topics from modern physics is covered as background material before the students explore what we know and understand about the Earth and other planets in our Solar System. Some topics that are covered in more detail include global climate change, asteroid/comet impacts, and possibility of life on other planets.

SCI435 (Fall or Spring) **Electronics**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Scientific Inquiries - Physics or equivalent

Electronics is a one-semester introductory course designed for students with an interest in hands-on experience with basic electronics. Students are encouraged to discover basic electrical concepts through laboratory-based discovery, problem-solving and laboratory analysis. Projects, incorporating the knowledge gained through guided discovery, provide a culminating experience for the students. The course will address topics in both analog and digital electronics.

SCI445 (Fall or Spring) **Modern Physics**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Scientific Inquiries - Physics or equivalent

Topics in Modern Physics is a one-semester course designed to allow students to learn through lecture, interactive web sites, activities and experiments involving post-Newtonian physics concepts. This begins with a review of light, then the Michelson-Morley experiment and the Ultraviolet Catastrophe, both originating in the late nineteenth century. Students will study general relativity and special relativity during the first quarter and then continue to quantum mechanics and particle physics in the second quarter. Students will do a research papers, focused on focused phenomena of one of the major topics.

SCI455 (Fall or Spring) **Applied Engineering**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Successful completion of or concurrent enrollment in Advanced Physics – Motion and Forces or Calculus-based Physics – Mechanics
Students need special permission to enroll in both Applied Engineering and an on-campus Student Inquiry and Research project.

Applied Engineering's curriculum is centered on two major goals. First, students will explore the many branches of engineering and the highly diverse opportunities within the field. They will investigate this through several opportunities and assignments. Students interview engineers, take field trips to universities and/or businesses and attend guest speaker lectures. Students write reflective narratives after each of their experiences. The second goal of the course is to give students hands-on experience studying problems, working on teams to design solutions and constructing their designs through group projects. Reflection on projects is integral to this process. This course meets on Inquiry Days.

SCI605 (Fall or Spring) **Evolution, Biodiversity, and Ecology**

Grade level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Scientific Inquiries - Biology or equivalent and Methods in Scientific Inquiry

This is a one-semester course that explores the diversity of living organisms and their interactions with each other and the environment. Students will investigate the biological species concept, mechanisms for evolution and speciation, causes of extinction, and patterns of biological diversity across geographic space and time. They will also study the varied ways that organisms interact with members of their own species, with different species, and with their physical surroundings. Some field trips and/or outdoor activities will be included as a part of this course.

SCI615 (Fall or Spring) **Molecular and Cellular Biology**

Grade level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Scientific Inquiries - Biology or equivalent, Scientific Inquiries – Chemistry or equivalent and Methods in Scientific Inquiry

This is a one-semester course that explores modern molecular and cellular biology as well as its basis in Mendelian genetics. Students will investigate transmission genetics, biomolecule structure and function, control of the cell cycle, cellular signaling pathways, and emerging genetic and molecular techniques.

SCI625 (Fall or Spring) **Microbes and Disease**

Grade level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Scientific Inquiries - Biology or equivalent, Scientific Inquiries – Chemistry or equivalent and Methods in Scientific Inquiry

This is a one-semester integrated course that explores topics related to microbes and the relationship between infection and human defense mechanisms. Topics include the germ theory, microbial structure and function, invasiveness and pathogenicity, the human immune system, epidemiology, and an introduction to emerging infectious diseases. Microbial life will be studied in the laboratory setting by using non-pathogenic microbes so that students attain the appropriate laboratory skills.

SCI635 (Fall or Spring) **Physiology and Disease**

Grade level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Scientific Inquiries - Biology or equivalent, Scientific Inquiries – Chemistry or equivalent and Methods in Scientific Inquiry

This is a one-semester integrated course that explores topics of human physiology and the changes in human physiology that result from non-infectious disease or physiological conditions. Topics include cellular physiology, metabolic functions and nutrition, and systems homeostasis. A significant student inquiry opportunity is presented through simulations. The course ends with student-led seminars that detail their understanding of the etiology and physiology of different non-infectious diseases and conditions.

SCI671 (Fall) **Seminar in Biology: Issues in Stem Cell Research**

Grade level: Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Letter grade of 'A' in both Molecular and Cellular Biology and Physiology and Disease or permission of instructor.

Stem cell research has the potential to lead to new medical therapies. This seminar course will explore the biology of stem cells, including origins of stem cells, development, and medical use. Ethical issues raised by their use will be addressed as well. Many of the seminars will be developed and led by students and will be based in traditional and current scientific literature.

SCI661 (Fall) **Seminar in Biology: Autoimmune Diseases**

Grade level: Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Letter grade of 'A' in both Molecular and Cellular Biology and Microbes and Disease or permission of instructor.

The human immune system has the means to safeguard the body from foreign invaders through random genetic changes in specific white blood cells. Because the changes are random, it is possible for the immune system to mount a response to self, called autoimmunity. The seminar topics in this course will focus on control of immune response so that self is not attacked, as well as the cause, symptoms and treatment of autoimmune disease. Many of the seminars will be developed and led by students and will be based in traditional and current scientific literature.

SCI681 (Offered Fall of 2009) **Seminar in Biology: Animal Behavior**

Grade level: Senior
Length: One Semester
Credit: 0.5 Credits Pass/Fail option
Prerequisite: Evolution, Biodiversity, and Ecology

This seminar course will explore animal behavior and will focus on the ecological and evolutionary processes that shape behavior. Topics will include behavioral genetics, social behavior, communication, aggression and territoriality, courtship, parenting, foraging, defense against predators, navigation and migration, and behavioral rhythms or cycles. Many of the seminars will be developed and led by students and will be based in classic and current scientific literature.

SCI691 (Offered Fall of 2009) Seminar in Biology: Bioinformatics

Grade level:	Senior
Length:	One Semester
Credit:	0.5 Credits Pass/Fail option
Prerequisite:	Molecular and Cellular Biology

This seminar course will explore Bioinformatics, a growing field where computer technology and biology intersect. It will focus on the use of computer programs that employ databases and algorithms to analyze DNA sequences, genes, and proteins to answer biological questions through comparisons and predictions. Topics will include the use of this technology for research in evolutionary study and disease, and other areas as dictated by student interest and current literature.

ENGLISH

ENG101 (Fall) **Literary Explorations I**
ENG102 (Spring) **Literary Explorations II**

Grade Level: Sophomore
Length: Two Semesters
Credit: 0.50 per semester
Prerequisite: None

This course introduces students to a variety of genres in literature, to the processes of effective aesthetic reading, to the work of discussion and performance as a response to literature, and to the processes of writing in various forms for different purposes. Students will explore readings of aesthetic and cultural significance from American and world literature, focusing in particular on their thematic and historical connections. Commonly taught authors include Shakespeare, Hawthorne, Thoreau, Douglass, Whitman, Dickinson, Twain, London, Fitzgerald, Vonnegut, and Jhumpa Lahiri.
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ENG201 (Fall) **Literary Explorations III**

Grade Level: Junior
Length: One Semester
Credit: 0.50
Prerequisite: Literary Explorations II

Students continue to develop their skills in reading, writing, discussion, and performance. Juniors will explore readings of aesthetic and cultural significance from medieval to early nineteenth-century British literature, focusing in particular on their thematic and historical connections. Commonly taught works include Geoffrey Chaucer's Canterbury Tales, William Shakespeare's Hamlet, and John Milton's Paradise Lost.

ENG 212 (Spring) **Creative Writing Workshop**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisite: Literary Explorations III

This class offers you and your peers an opportunity to experiment with a variety of written genres and hone your creative writing skills in the hopes of helping you produce work of publishable quality. As with many English classes, we'll do a lot of reading, examining the work of successful artists for "what makes them tick." Ultimately, though, the heart of this class is student work and workshopping, a system by which an author receives informed, constructive feedback from a group of readers.

ENG 222 (Spring) **Romantic Poetry and Prose**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisite: Literary Explorations III

Romantic Poetry and Prose will investigate the major authors, texts, issues, and historical context of the Romantic movement, which occurred in the late 18th and early 19th centuries. We will begin with William Blake (1757-1827), considered by many scholars to be the first Romantic, and trace the developments of the movement through such authors as Wordsworth, Coleridge, Keats, Byron, Percy Shelley, Mary Shelley, Dorothy Wordsworth, and others.

Romanticism was a philosophical and literary position; the Romantics privileged the Imagination, valued the unseen and irrational over the visible and rational, saw all men as equal, and focused heavily on man's relationship with--rather than dominance over--nature. In keeping with their respect for each man's creativity and essential value, they participated in political activities that tried to

make the world more equal. As we study the literature, we will pay particular attention to its social and political context, which is inseparable from the values articulated in Romantic poetry and prose.

ENG 232 (Spring) **20th Century Poetry**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisite: Literary Explorations III

In this class students will analyze poems and develop arguments about them. The class will draw primarily from 20th century poets writing in English, though the class may read some late 19th and early 21st century poetry as well as a few poems in translation. The course will investigate both the *meanings* and *means* of poetry – that is, what poems mean and how they manage to mean those things. At its best, the class experience will draw from both the laboratory and the debate hall, with students drawing up competing poetic interpretations and pitting them against each other. The course will engage with some technical elements of poetry (figurative language, meter, structure) so that students can best develop their arguments. In addition, students will occasionally write their own poems in order to approach poetry from the inside out. Some topics within the class are highly interdisciplinary, and may be taught through the lens of other subjects.

ENG 351 (Fall) **Graphic Novels: Image and Text**

Grade Level: Senior
Length: One Semester
Credit: 0.50
Prerequisite: Literary Explorations III

Since the 1980s, the so-called graphic novel, or long-form comic, has become a popular and accomplished literary and artistic form. Transcending its origins in pulp fantasy and adolescent entertainment, this evolving and hybrid medium represents, in the words of author and artist Eddie Campbell, "an emerging new literature of our times in which word, picture, and typography interact meaningfully and which is in tune with the complexity of modern life . . . ." This course offers a survey of some of the best graphic novels of the last thirty years, and it provides the skills for reading comics critically in terms of what they say and how they say it.

ENG 242 (Spring) **Modern Theater**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisite: Literary Explorations III

Modern Theater will provide students with exposure to exemplars of a primary literary genre, as it has been presented to the public in the last 100+ years. Theater is, in a literal sense, the "voice of its time"; by examining the origins of modern theater in the late 19th century, we can understand the evolution of 20th century drama as expressive of a world in flux. We will begin with the revolutionary theatrical creations of Henrik Ibsen, then the works of such playwrights as Eugene O'Neill, Berthold Brecht, Tennessee Williams, Philip Barry, Edward Albee, Harold Pinter, Samuel Beckett, August Wilson and Ntozake Shange.

ENG301 (Fall) **Topics in World Literature: Modern World Fiction**

Grade Level: Senior
Length: One Semester
Credit: 0.50
Prerequisite: Literary Explorations III

We will read a selection of texts spanning the twentieth century (and samples from the turn of the millennium), and the globe. We will look at this literature (mostly in the form of short fiction, ranging from such writers as Borges, Faulkner and Kafka, to Achebe, Bei Dao and Akutagawa) as defining and expressive of modernism and post-modernism, in their many facets. More specifically, we will consider kinds of, approaches to, and functions of realism; challenges to realism; what constitutes a "modern aesthetic sensibility," and what ends such a sensibility serves; and some major thematic issues particularly relevant to the twentieth century.

ENG311 (Fall)
ENG312 (Spring)

Belief in Question in Modern Literature

Grade Level Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisites: Literary Explorations III

In this course we will raise the human experience of belief as a complex of attitudes that has stimulated the literary imagination. Works by Jorge Luis Borges, Graham Greene, Bernice Rubens, John Updike, William James, and Sigmund Freud, among others, will allow us to look at belief as a phenomenon that has served to radicalize thought as well as enslave it. We will see that while belief is commonly conceived and often expressed in religious terms, it is also a human stance secured by non-sacral tethers.

ENG322 (Spring)

Portraits of Creativity

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisite: Literary Explorations III

We will examine the lives and work of creative people in several of the arts (including literature, music, and painting) and the sciences, posing questions concerning the nature of artistic and scientific work, the roles of the artist and scientist in our culture, and the relationship between Apollonian order and Dionysian spontaneity in creative work. Through discovery, students will consider issues of creativity in their own lives.

ENG331 (Fall)

Film Study: History and Criticism

Grade Level: Senior
Length: One Semester
Credit: 0.50
Prerequisite: Literary Explorations III

In this class, students will study the following: the development of film as an art form and method of documentation; the language of film; a selection of influential American and international films and filmmakers; genres of film criticism; methods of adapting prose to film; and cultural influences of popular cinema. Students can expect to be tested on their knowledge of film history and language, to read and write critical reviews, to research an aspect of film production, to compare print and film texts, and to demonstrate understanding of film language through a creative project. In addition to the regular daytime schedule, the course scheduling requires students to be free twice a month on Tuesday evenings between 6:00 and 9:00 P.M. for film screenings.

ENG341 (Fall)

Gender Studies

Grade level: Senior
Length: One semester
Credit: 0.50
Prerequisite: Literary Explorations III

This course will examine gender as a social construction--i.e., roles, assumptions, and beliefs that are built up by societies over time. These constructions become particularly visible and important when conflicts arise; we'll examine some of these conflicts in literature and history for what they can tell us about how our ideas of gender arose. This class requires an openness to questioning many of your long-held, most-cherished assumptions about sex, gender, and sexuality. You'll also be required to read and write carefully and critically, questioning the assumptions of the authors we study.

ENG502 (Spring) **The Idea of the Individual**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisite: Literary Explorations III

The focus of this course is the individual: what is this being we call the individual? What is the self? What is the relationship of society, culture, and the self? Is there any such thing as a fully free individual? What forces threaten our individuality? These are just some of the many questions we will consider as we read works as diverse as Dostoevsky's Crime and Punishment, Joyce's Portrait of the Artist as a Young Man, Kafka's Metamorphosis, Shakespeare's King Lear, and a variety of poetry and short fiction, as well as supplemental selections from theologians, philosophers, psychologists and natural scientists. The whole notion of the self, from its roots in antiquity, to the revolution of evolution, to today's possibilities of genetic manipulation in human beings, certainly suggests that we need to consider this topic if we are to make meaningful, powerful choices about what we want to be, and can be, both for ourselves and in our relations with others.

ENG512 (Spring) **Topics in World Literature: Victorian Fiction**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisite: Literary Explorations III

This course will focus specifically on Victorian fiction, literature written between 1837 and 1901. One of our main objectives will be to explore the parallels between Britain of the nineteenth century and America of the new millennium. Much like our society today, Britain during this time was a nation facing unprecedented economic and technological growth. Through the study of the novel and the short story, this course will examine the social, political, and cultural ideology of Britain during an era in which it rose to dominance as both a nation and an empire. Some of the issues we will investigate include the effects of the industrial revolution and urbanization, the implications of advances in science and technology such as the railroad and the telegraph, and the ethics of imperialism. We will look at works by Emily Brontë, Charles Dickens, George Eliot, and H. G. Wells, among others.

ENG522 (Spring) **Modern Irish Literature**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50
Prerequisite: Literary Explorations III

Irish artists sing songs of rage and rapture that are a forming force in modern literature. In listening to them we engage with an often-comic cultural vision that is oddly energized by a fear of sex and a love of death. The course explores the fiction and poetry of seminal authors James Joyce and W.B. Yeats, and the drama of Synge and O'Casey. In addition we read, discuss and write about some of their descendents in contemporary Irish literature: fiction writers William Trevor, Edna O'Brien, Roddy Doyle; poets Seamus Heaney, Eavan Boland, Michael Longley; dramatists Brian Friel, Marina Carr and Martin McDonough. Students are provided with information about the historical scaffolding of Irish culture in order to develop an understanding of the transformative change in a society that has moved from enervating famine to the economic feasting of the "the Celtic tiger." Some of the resultant tensions are examined in class in the flowering of Irish film and Irish rock music. Written work in the course ranges from short writes to full essays, and the final exam consists of oral presentation and/or performance.

ENG542 (Spring) **IMSATube: Non-Fiction Film Study**

Grade level:	Junior/Senior
Length:	One Semester
Credit:	0.50
Prerequisite:	Literary Explorations III

In learning to become critical viewers and effective, versatile communicators, students will study the definition, history, and types of non-fiction film, and critically examine the theoretical and cultural issues of non-fiction film. In addition to reading film and media theory and writing critical reviews of documentary films, students will learn to communicate in this medium by planning, shooting, and editing their own non-fiction videos. Skills involved in making non-fiction videos include the technical aspects of production and also planning and composing skills such as choosing a topic, shaping a focus, researching, scripting, narrating, interviewing, and editing. Students will write descriptive and reflective reports on their video work.

HISTORY AND SOCIAL SCIENCE

HSS100 (Full Year)

American Studies

Grade Level: Sophomore
Length: Two Semesters
Credit: 0.50 per Semester
Prerequisite: None

The American Studies survey serves a dual function at the Academy. Through a rigorous curriculum, it introduces students to college-level reading, research, and writing skills. Through compelling historical content, it seeks to foster such values as citizenship, patriotism, and stewardship. American history is an unfinished drama, an experiment unlike any that has come before. Through the use of primary documents, quantitative data, and narrative, the course seeks to enlist the students into that experiment by showing them its origins and challenging them to carry it forward into their own time.

HSS200 (Full Year)

Topics in World Studies

Grade Level: Junior
Length: Two Semesters
Credit: 0.50 per Semester
Prerequisite: American Studies

Modern culture, society and politics have assumed an increasingly global character, and this course examines the world's history and the major issues confronting its people. Selected topics include ideologies, political events, social trends, economic systems, and creative expressions drawn from major world cultures. Integrative thinking, critical analysis, research skills, and ethical awareness all play a role in students' exploration of the human past.

HSS301 (Fall)

European History

Grade Level: Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisites: Topics in World Studies

Our contemporary world was forged in the heat of Europe's twentieth century wars. By 1900, Europe stood astride the globe, and from this apex she slid into a fiery maelstrom of extremism, greed, and horror sucking the rest of the world with her. Fed by the blood of tens of millions, the fires of two great wars and the hammers of dictatorship destroyed Europe and changed the world. Phoenix like she rose from the ashes but now, yielding much to others, reclaimed only part of her former position of power and glory in a very different world. In this world, from East Jerusalem to England's once again green and pleasant hills, the "White Man's Burden" has made boom boxes everyman's bittersweet joy. The course will explore several dimensions of the birth, and development of the modern Europe, and its purported death at the hands of a global and non-national, nomadic power elite. Both the history and the historiography of these phenomena will be addressed. Moreover, the investigation of this specific subject matter will lead into an exploration of the nature of the historical process and will facilitate students in their acquisition of a historical consciousness, a prerequisite for leadership in any field.

HSS302 (Spring)

International Relations

Grade Level: Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Topics in World Studies

Nation-states play a "Great Game," to use Kipling's expression, sometimes cordial, sometimes deadly. This course will explore that game, its spirit, and its players, in the context of historical and contemporary events. Students will confront diplomatic problem through source analysis and simulation, and they will have the opportunity to attempt to resolve some of the world's most pressing problems. The course places special emphasis on the truly global issues that transcend the interests of any single state.

HSS311 (Fall)

Political Theory

Grade Level: Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisites: Topics in World Studies

Political Theory will survey the most significant theoretical and philosophical contributions made to Western political thought starting with the Classical Greeks. Students will be required to understand and speak of the formulation of ideas, as they concern society and politics, over the past 3,000 years. In doing so the student can see the continuities and failures in the Western effort to balance the need for security with a desire for political and individual freedoms. The introduction to these specific political theories will also potentiate the student's experience and knowledge gained in the American and World Studies courses. Students will accomplish this by reading excerpts from the actual writers, looking at the historical background, and through extensive class discussion.

HSS321 (Fall)

Macroeconomics

Grade Level: Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Topics in World Studies

Macroeconomics is an issues oriented course in which basic macroeconomics concepts and theories (scarcity, supply and demand, inflation, unemployment, fiscal and monetary policy) are presented through the exploration and analysis of specific political and social realities. The issues themselves are ordered so as to facilitate a logical and systematic development of macroeconomics principles, concepts and theories. An exploration of economic thought provides the background for debates, discussions, simulations, and research that will be the tools for analysis. Students will also have an opportunity to participate in a mock international currency and interest rate vehicle trading exercise that should give their newly acquired knowledge of macroeconomics concepts certain immediacy.

HSS322 (Spring)

Microeconomics

Grade Level: Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Topics in World Studies

Microeconomics is an issues oriented course in which basic microeconomics concepts and theories (demand and consumer choice, the firm, monopoly, oligopoly, capital, interest, profits, labor unions and collective bargaining) are presented through the exploration and analysis of specific political and social realities. The issues themselves are ordered so as to facilitate a logical and systematic development of microeconomics principles, concepts, and theories. An exploration into the historical development of the modern corporation and capitalism provides the background for debates, discussions, simulations and research that will be the tools for analysis. Students will have an opportunity to guide the fortunes of a fictitious multinational conglomerate through the hazards of a simulated international business environment that should give their newly acquired knowledge of microeconomics concepts certain immediacy.

HSS331 (Fall)

Topics in Recent United States History

Grade Level: Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Topics in World Studies

This course will focus on the years 1945 to the present. Recent U.S. History will present many of the topics, themes, issues, personalities, and events which are often not covered because time runs out in regular History courses. Therefore, this course will permit greater flexibility within the IMSA American Studies curriculum. The teacher and students will select units from among various themes and topics, a few of which include: The Cold War, Diversity: Counter-culture movements, Justice and Equality: Civil Rights and Civil Liberties in Post-War America, Power: Who Runs America?, The Seventies and the Issues of Scarcity and Limitations, The Significance of the Vietnam War in American History, American Post-War Popular Culture, Literature, and Movies, Evaluating the Reagan-Bush 80's: The Good or Bad Decade and many other possible options. The themes and topics will be presented, in many instances, from an inter-disciplinary perspective incorporating Science, Literature, Political Science, International Relations, Sociology, Economics, and Art and Music.

HSS332 (Spring)

The Second World War and the Cold War, 1937-1991

Grade Level: Senior
Length: One semester
Credit: 0.50 Pass/Fail option
Prerequisite: Topics in World Studies

The Second World War (1937-1945) and the immediately following Cold War (1945-1991) have critically shaped the way our modern world works. Both conflicts were truly world ranging, and touched the lives of everyone on the globe. However, the Second World War has fallen prey to numerous myths and misconceptions, while the Cold War remains relatively unknown – expect as a political-academic issue. The goal of this course is to facilitate the student's knowledge of the many events and ideologies that struggled across the globe for over 50 years. Much of the material covered will also potentiate the student's experience and knowledge gained in American and World Studies. Students will accomplish this by reading excerpts from the actual writers, looking at the historical context, and through extensive class discussion and debate. Knowledge gained in this course will enable the student to be an effective and intelligent participant in present political and historical discourse.

HSS341 (Fall)

Mind and Cosmos: A Cultural History of Astronomy

Grade Level: Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Topics in World Studies

Astronomy serves as the perfect vehicle for the examination of the history of science and its relationship with culture as a whole. Humanity has sought to explain the phenomena of the heavens for thousands of years, and those explanations have taken a variety of forms: mythological, philosophical, and scientific. In addition, many of the scientific revolutions that have transformed humanity's views of physical nature have centered on astronomical and cosmological questions. This course will concentrate on three major themes: the study of developments in astronomy, cosmology, and physics from antiquity to the 20th century; the analysis of different approaches to truth, certainty, and method; and the relationship of astronomy and physics to philosophy, society, and religion.

HSS352 (Spring)

A History of Technology and Culture

Grade Level: Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Topics in World Studies

Technology defines culture; it shapes human interactions and mediates the relationship of humanity to the physical environment. Conversely, culture defines technology; existing social structures and intellectual systems determine the nature of technical innovation. This course will examine the complex dialogue between technology and culture through a series of case studies, distributed in time and space. In the process, we will explore a number of dominant themes in the history of technology: the role of science, the impact of warfare, the significance of economic forces, and the importance of custom and class. The course will conclude with an extended problem-based unit, as students construct a case study of their own.

HSS362 (Spring)

Genesis Rewritten: A Cultural History of Biology

Grade Level: Senior
Length: One semester
Credit 0.50 Pass/fail option
Prerequisite: Topics in World Studies

This course will trace the varied attempts to explain the living world from the late Renaissance to the 21st century. We will examine varied religious, philosophical and scientific approaches to the questions of life and the complex interrelationships of living things. We will study the links between physiology and chemistry, and we will pay special attention to the ideas of Darwin and the influence of Darwinian evolution on the way we view nature (and ourselves). We will explore the human drive to order the living world, and the effect of recent notions mass extinction on such systems of order. Finally, we will consider the changing views of the relationship of mind and body and the effect of such notions on culture and social policy.

HSS375 (Fall or Spring)

Topics in American Multiculturalism

Grade Level: Senior
Length: One semester
Credit 0.50 Pass/fail option
Prerequisite: Topics in World Studies

Topics in American Multiculturalism will confront a number of pressing historical problems and some contemporary issues. The course will be concerned with the historical differences between race and ethnicity as factors in assimilation and discrimination, as well as how issues of gender and class intersect these. Discussions will confront issues of agency and victimization of various groups in American history. That means the course will include discussions of both lynching and white supremacy, but also of contributions and assimilative histories of various ethnic and racial groups. In short, this course will serve as a forum for research and inquiry into the history of some of the country's most pressing social issues.

WORLD LANGUAGES

WLG110 (Full Year) **French I**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: None. This course is not open to students with prior experience in French.

In this course, students begin to develop proficiency in listening, speaking, reading, and writing. Topics revolve around the students' immediate world, including self, family, friends, school and home communities, interests, food, professions, health, transportation, holidays, seasons, and clothes. Students build good pronunciation and listening skills, and read simple authentic texts. In addition this course seeks to develop and enhance an understanding of the diverse cultures of the francophone world.

WLG120 (Full Year) **French II**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: French I and recommendation of Instructor **or** Proficiency Exam and recommendation of Instructor

Students build upon the skills developed in French I (with appropriate review of previously learned material). They develop greater proficiency in listening, speaking, reading, and writing. The topical context is expanded from the students' immediate world to the world of the target cultures. Topics may include shopping, cuisine, geography, travel, wellness, leisure time activities, and careers. Students will be required to write compositions on a regular basis.

WLG130 (Full Year) **French III**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: French II and recommendation of Instructor **or** Proficiency Exam and recommendation of Instructor

In Level III, students continue to build communication skills developed in Levels I and II. Specifically, students participate actively in extended oral and written discourse, using compound and complex sentences to provide information in a coherent and fluent manner. Students narrate and describe past and present events; they predict future events. They develop critiquing skills. Students explore options in a given situation, and handle difficulties and unexpected events. They also learn to initiate and sustain a conversation, discussion, or debate. Students demonstrate these language functions in various contexts (personal, social, political, socio-economic, scientific, literary, artistic, historical and philosophical). Students keep a journal throughout the school year as a reflective process and assessment tool. During second semester students examine the social, psychological, and cultural implications of fairy tales. Reading selections include three famous French novels: Le Petit Nicolas, La Belle et la Bête, and Le Petit Prince.

WLG140 (Full Year) **French IV**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: French III and recommendation of Instructor **or** Proficiency Exam and recommendation of Instructor

WLG150 (Full Year) **French V**

Grade Level: Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: French IV and recommendation of Instructor

Students of French IV and V are in the same class and follow the same curriculum for the academic year. The curriculum is a two-year cycle, alternating every other year. The first quarter of each year is devoted to an in-depth grammar review, and new grammatical structures will be introduced and reviewed throughout the year. Students read authentic texts that include advanced grammatical structures (i.e. passive voice, subjunctive and conditional moods, indirect discourse), and topics that are technical, scientific, philosophical, and literary.

Learning experience designs for French IV and French V include:

Slice of Time--an interdisciplinary approach to the study of a selected period of history, beginning with a piece of literature, a film, a historical period, a philosophical movement, or an art movement, etc. as a focal point. Examples of learning experiences are: Life in the Middle Ages and Renaissance; French Presence in Indochina; French Presence in Africa; Questions of the Individual, Identity, and Existentialism; Questions of Religion, War and Death, and the Loss of Innocence; etc.

Visual Thinking--Visual Thinking--based on the belief that art reflects the perspectives, practices and products of a culture. The study of art from the Spanish-speaking world involves careful observation and analysis. It encourages deductive reasoning, speculation about possible meaning, interpretation, and judgment.

Le Septième Art—French cinéma is appreciated and renowned throughout the world. Within France, cinema is held in such high esteem that it has been called “The Seventh Art”. Students will explore a particular theme as it is developed through film. Film selections may include classics, and more recent productions, as well as films from francophone countries beyond France. Examples of themes: Revolution; and, Liberty, Equality, and Fraternity.

Current Events - Newsworthy events regarding France, the francophone world, the European Union, and the United States will be discussed as they present themselves throughout the year. The instructor will present topics for discussion and students are encouraged to do so as well. Every effort will be made to find readings in French about current events, but some may be in English.

Level IV students continue to build on the skills from the first three levels of their study of French by developing and refining the five major skills of listening, speaking, reading, writing, and cultural competency. As the year progresses, students’ written and oral French is expected to reflect advanced grammatical structures and an ever-expanding, sophisticated, precise, and eloquent vocabulary. Students become more adept at comprehending the speech of native speakers, speaking at a normal rate of speed, in most situations.

Expectations for performance and progress are higher for French V students. Students at level V of French continue to build on the five skills. Due to their experience with and exposure to the language and francophone cultures, they are expected to access and demonstrate greater mastery of the grammar and vocabulary in their written and oral communication. As the year progresses, students will be expected to demonstrate increasingly effective communication through the creative use of vocabulary in context, and grammatical and syntactical accuracy. For example, their written French will demonstrate increasing fluency, more concise expression when necessary, and greater control of the mechanics of the written and spoken language. Spoken French will reflect more accurate pronunciation, increasing fluency, and authentic French intonation.

WLG220 (Full Year)

Spanish II

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: Spanish I and recommendation of Instructor **or** Proficiency Exam and recommendation of Instructor

Students build upon the skills developed in Spanish I (with appropriate review of previously learned material). They develop greater proficiency in listening, speaking, reading, and writing. The topical context is expanded from the students' immediate world to the world of the target cultures. Topics may include shopping, cuisine, geography, travel, education, wellness, leisure time activities, careers, and the 21st century. Students will also keep a journal to improve their writing.

WLG230 (Full Year)

Spanish III

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: Spanish II and recommendation of Instructor **or** Proficiency Exam and recommendation of Instructor

In Level III, students continue to build communication skills developed in Levels I and II. Specifically, students participate actively in extended oral and written discourse, using compound and complex sentences to provide information in a coherent and fluent manner. Students narrate and describe past and present events; they predict future events. They develop critiquing skills. Students explore options in a given situation, and handle difficulties and unexpected events. They also learn to initiate and sustain a conversation, discussion, or debate. Students demonstrate these language functions in various contexts (personal, social, political, socio-economic, scientific, literary, artistic, historical and philosophical). Students keep a journal throughout the school year as a reflective process and assessment tool. Some of the topics covered in Spanish III are music, death, family, friendship and love, politics, environment, and poetry.

WLG240 (Full Year)

Spanish IV

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: Spanish III and recommendation of Instructor **or** Proficiency Exam and recommendation of Instructor

In Level IV students continue to develop and refine the major skills of listening, speaking, reading and writing. They read and comprehend authentic texts that include advanced grammatical structures (i.e. passive voice, subjunctive and conditional moods, indirect discourse), and topics that are technical, scientific, philosophical and literary. Students' writing and speaking also reflect advanced grammatical structures and an ever-expanding, sophisticated, and eloquent vocabulary. Students become more adept at comprehending the speech of native speakers, speaking at a normal rate of speed, in most situations.

Learning experience designs include:

Slice of Time--an interdisciplinary approach to the study of a selected period of history, beginning with a piece of literature, a film, a historical period, a philosophical movement, or an art movement, etc. as a focal point. Some recent learning experiences have been: Medieval Spanish Literature, The Origins of the Spanish Language, Surrealist Spanish Painting, Revolutionary Movements in Twentieth Century Latin American, and Immigration: Myths and Reality.

Visual Thinking--Visual Thinking--based on the belief that art reflects the perspectives, practices and products of a culture. The study of art from the Spanish-speaking world involves careful observation and analysis. It encourages deductive reasoning, speculation about possible meaning, interpretation, and judgment.

Science and Ethics--designed so that students can examine a scientific problem that affects individuals and society as a whole. The choice of "problem" may vary from year to year; however, the problem must reflect an ethical dilemma. Examples of topics are: the pros and cons of nuclear energy, the effects of oil spills, genetics engineering, euthanasia, forestry management, use/misuse of the information superhighway, the political role of environmental groups, the responsibility of the scientist in society, etc.

WLG250 (Full Year) **Spanish V**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: Spanish IV and recommendation of Instructor **or** Proficiency Exam and recommendation of Instructor

In Level V, students build on the skills developed in previous years of study in order to enhance all aspects of communicative and cultural competency. The goal is to acquire greater proficiency in conversation, reading, writing, and listening comprehension. There is an in-depth review of grammar. Throughout the course, we examine aspects of Spanish culture and civilization through the study of history, literature, art and cinema.

WLG310 (Full Year) **German I**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: None. This course is not open to students with prior experience in German.

In this course, students begin to develop proficiency in listening, speaking, reading, and writing. Topics revolve around the students' immediate world, including self, family, friends, school and home communities, interests, food, health, holidays, and clothes. Students build good pronunciation and listening skills, and read simple texts. In addition this course seeks to develop and enhance an understanding of the diverse cultures of the German-speaking world.

WLG320 (Full Year) **German II**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: German I and recommendation of Instructor **or** Proficiency Exam and recommendation of Instructor

Students build upon the skills developed in German I (with appropriate review of previously learned material). They develop greater proficiency in listening, speaking, reading, and writing. The topical context is expanded from the students' immediate world to the world of the target cultures. Topics may include shopping, cuisine, geography, travel, wellness, leisure time activities, and careers.

WLG330 (Full Year) **German III**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per year Pass/Fail option
Prerequisite: German II and recommendation of Instructor **or** Proficiency Exam and recommendation of Instructor

In Level III, students continue to build communication skills developed in Levels I and II. Specifically, students participate actively in extended oral and written discourse, using compound and complex sentences to provide information in a coherent and fluent manner. Students narrate and describe past and present events; they predict future events. They develop critiquing skills. Students explore options in a given situation, and handle difficulties and unexpected events. They also learn to initiate and sustain a conversation, discussion, or debate. Students demonstrate these language functions in various contexts (personal, social, political, socioeconomic, scientific, literary, artistic, historical and philosophical). Each semester students will be expected to complete a project that requires them to gather and process information in the target language. Students may be asked to keep a journal

throughout the school year as a reflective process and assessment tool. They will read selected authentic texts (fiction and non-fiction) that will provide the impetus for discussions. Typical topics for German III include: Germany in the Middle Ages, The Age of Goethe, Environmental Issues, Contemporary Sociological Issues, From Aachen to Zwickau: Germany's Urban Landscape, Germany's Pop Culture, A Philatelist's Tour Through German Culture and History.

WLG340 (Full Year) **German IV**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: German III and recommendation of Instructor **or** Proficiency Exam and recommendation of Instructor

WLG350 (Full Year) **German V**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: German IV and recommendation of Instructor

In Levels IV and V students continue to develop and refine the major skills of listening, speaking, reading and writing. They read and comprehend authentic texts that include advanced grammatical structures (i.e. passive voice, subjunctive and conditional moods, indirect discourse), and topics that are technical, scientific, philosophical and literary. Students' writing and speaking also reflect advanced grammatical structures and an ever-expanding, sophisticated, and eloquent vocabulary. Students become more adept at comprehending the speech of native speakers, speaking at a normal rate of speed, in most situations.

Learning experiences include: Slice of Time--an interdisciplinary approach to the study of a selected period of history, beginning with a piece of literature, a film, a historical period, a philosophical movement, or an art movement, etc. as a focal point. Some recent learning experiences have been: The Weimar Republic, literary selections such as Deutschstunde and Der Richter und Sein Henker, 40 Year DDR / BRD and Politics and Contemporary Germany. Other topics include:

Visual Thinking--based on the belief that art reflects the perspectives, practices and products of a culture. The study of art from the Spanish-speaking world involves careful observation and analysis. It encourages deductive reasoning, speculation about possible meaning, interpretation, and judgment.

Science and Ethics--designed so that students can examine a scientific problem that affects individuals and society as a whole. The choice of "problem" may vary from year to year; however, the problem must reflect an ethical dilemma. Examples of topics are: the pros and cons of nuclear energy, the effects of oil spills, genetics engineering, euthanasia, forestry management, use/misuse of the information superhighway, the political role of environmental groups, the responsibility of the scientist in society, etc.

WLG410 (Full Year) **Japanese I**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: None. This course is not open to students with prior experience in Japanese.

In this course, students begin to develop proficiency in listening, speaking, reading, and writing. Topics revolve around the students' immediate world, and include self, family, friends, school and home communities, interests, food, transportation, holidays, seasons, and clothes. Students build good pronunciation and listening skills, and learn to read and write in both katakana and hiragana (phonetic writing systems) and a small number of kanji/Chinese characters. In addition this course seeks to develop and enhance an understanding of Japanese culture.

WLG420 (Full Year) **Japanese II**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: Japanese I and recommendation of Instructor

Students build upon the skills developed in Japanese I (with appropriate review of previously learned material). They develop greater proficiency in listening, speaking, reading, and writing. The topical context is expanded from the students' immediate world to the world of the target culture. Topics may include shopping, cuisine, geography, travel, education, wellness, leisure time activities, careers, and the 21st century. Students will continue to develop their hiragana and katakana writing skills, and will learn more kanji.

WLG430 (Full Year) **Japanese III**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per year Pass/Fail option
Prerequisite: Japanese II and recommendation of Instructor

The overall theme for Level III is "Living in Japan". Students imagine going to Japan as part of an exchange program, and within that context, they develop practical, real-world skills that they would need if they were to travel to Japan and live with a host family. They also learn more about the Japanese lifestyle and culture so that they can interact and speak appropriately with Japanese people. Level III continues the patterns established at Levels I and II. The main emphasis is still on spoken communication and communicative competency; however, students will be expected to do more reading and writing than at Level II. Furthermore, students will tackle some challenging ideas and grammatical structures, including the passive construction (which is significantly different from passive in English), the verbs of giving and receiving (which reveal much about Japanese society and mindset), and provisional, conditional, and potential tenses.

WLG510 (Full Year) **Russian I**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: None. <u>This course is not open to students with prior experience in Russian.</u>

In this course, students are expected to master the Cyrillic alphabet in order to develop proficiency in listening, speaking, reading, and writing. Students are expected to master Russian penmanship. Topics revolve around the students' immediate world, including self, family, friends, home communities, interests, food, professions, health, transportation, holidays, and seasons. In addition this course seeks to develop and enhance an understanding of Russian culture.

WLG520 (Full Year) **Russian II**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: Russian I and recommendation of Instructor

Students build upon the skills developed in Russian I (with appropriate review of previously learned material). They develop greater proficiency in listening, speaking, reading, and writing. The topical context is expanded from the students' immediate world to the world of the target cultures. Topics include cuisine, geography, education, seasons and holidays, family, and character traits. Students build good pronunciation and listening skills, and read simple authentic texts. Russian II students are required to keep a diary throughout the school year.

WLG530 (Full Year) **Russian III**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: Russian II and recommendation of Instructor

In Level III students continue to build communication skills developed in Levels I and II. Students are expected to regularly demonstrate and improve the following language skills: participate actively in class conversations, discussions, and debates; use compound and complex sentences to provide information in a coherent and fluent manner; develop critiquing skills. Students will continue to regularly write in journals for the purpose of mastering reflective thinking skills and grammatical accuracy.
Reading authentic Russian literary texts is at the foundation of the Russian III curriculum. Russian III students will read short stories by Aleksander Pushkin and Anton Chekhov, as well as a selection of Russian fairytales, and poetry by various 19th and 20th century Russian poets. In order to develop better reading skills, students will read abstracts and short articles from Russian newspapers and learn to summarize their content. Written assessments will include short writes, quizzes, and longer essays. Oral performance will be assessed by means of class contributions and in–class presentations.

WL610 (Full Year) **Mandarin Chinese I**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: None. <u>This course is not open to students with prior experience in Mandarin Chinese.</u>

In Chinese I students begin to develop proficiency in listening, speaking, reading, and writing. Topics revolve around the students' immediate world: introducing self, family, friends, school and home communities, interests, food, professions, and holidays. Students build good pronunciation and listening skills, and read simple authentic texts. Students learn Pinyin Romanization system along with the Chinese writing system and progress to recognizing Chinese characters (*hanzi*). In addition, this course seeks to develop and enhance an understanding of Chinese culture.

WLG620 (Full Year) **Mandarin Chinese II**

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 1.0 per Year Pass/Fail option
Prerequisite: Mandarin Chinese I and recommendation of Instructor

Students build upon the skills developed in Mandarin Chinese I (with appropriate review of previously learned material). They develop greater proficiency in listening, speaking, reading, and writing. The topical context is expanded from the students' immediate world to the world of the target culture. Topics may include shopping, cuisine, geography, travel, education, wellness, leisure time activities, and careers. Students will continue to develop their Chinese character (*hanzi*) writing skills, and will learn more hanzi.

Not Offered for 2008-2009

Literature and Language Through Culture

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50; Pass/Fail Option NOTE: This course may not be used to satisfy the 2.0 credit World Languages graduation requirement.
Prerequisite: None

In "Literature and Language Through Culture" students will read, discuss, and analyze literature, originally written in languages other than English. The literary selections will represent different historical periods and cultures. Students will develop deeper and broader cultural competency by reading, comparing, and contrasting exemplars of literature from varied and diverse cultural sources. Students will have numerous opportunities to discern and create connections, discovering universal themes in the literary works read that cross cultural traditions and historical epochs. In the process, they will also grapple with the concept of language. Students will learn to recognize the filters that shape conceptions and personal views of the world. They will develop an aesthetic awareness and capacity. Students will learn about the human experience and its interrelatedness. As a result of this course, students will develop much of the understanding and many of the skills necessary to become global leaders. Students will continue development of communicative competency through writing, speaking, and listening, in small group and whole class activities.

WLG712 (Spring)

Explorations in Linguistics

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50; Pass/Fail Option NOTE: This course may not be used to satisfy the 2.0 credit World Languages graduation requirement.
Prerequisite: None

The course is designed to be a survey of the scientific study of language. Students taking this elective course may earn a grade and credit in World Languages, but credit earned in this course may not be used to satisfy the 2.0 credit graduation requirement in World Languages.

The topics we will discuss during the course include the "core" areas of linguistic theory (morphology, syntax, semantics, and phonology) along with other important areas (phonetics, sociolinguistics, psycholinguistics, language acquisition, and practical applications of the above). These areas will be examined through both readings and problem-based learning activities, and will involve not only English and other European languages, but will take a pluralistic approach common in current linguistics, examining data from languages of Africa, Asia, Polynesia, and the Americas.

Over the course of this class, the student should acquire a sense of what components make up language and what the study of language is about. Students will also become aware of the areas of investigation proper to linguistics and gain an awareness of and acceptable level of proficiency in the basic techniques and objectives of linguistic analysis. Close attention will be paid not only to an analysis of the theoretical aspects of linguistics, but to use the tools of the field to analyze data and make conclusions as a linguist would, with the goal of enabling students to pursue further in-depth study in a topic and subfield of their choice for their final project.

FINE ARTS

FAR101 (Fall)
FAR102 (Spring)

Concert Band

Grade Level: Sophomore / Junior / Senior
Length: One Year
Credit: 0.50 - 1.0 Pass/Fail option
Prerequisite: Audition and approval of instructor

Students enrolled in Concert Band will have the opportunity to study, rehearse and perform several styles of Concert Band literature at the high school music grade 4 and 5 levels. Students will perform in formal concerts, as well as have the opportunity to participate in IHSA contests. Students have the opportunity for auditioning for the IMEA All-District and All-State Organizations.

FAR111 (Fall)
FAR112 (Spring)

Wind Ensemble

Grade Level: Sophomore / Junior / Senior
Length: One Year
Credit: 0.50 - 1.0 Pass/Fail option
Prerequisite: Audition and approval of instructor

Students enrolled in Wind Ensemble are placed in this ensemble through an audition prior to enrolling. Students will play advanced Band literature at the high school music grade 5 and 6 levels. Students will perform in formal concerts, as well as have the opportunity to participate in IHSA Organizational Music contests. Students also have the opportunity for auditioning for the IMEA All-District and All-State Organizations. Principal chairs will have the responsibility of playing in Orchestra. Expectations in this group are extremely high.

FAR121 (Fall)
FAR122 (Spring)

String Orchestra

Grade Level: Sophomore / Junior / Senior
Length: One Year
Credit: 0.50 - 1.0 Pass/Fail option
Prerequisite: Audition and approval of instructor

Students enrolled in String Orchestra will have the opportunity to study, rehearse and perform various styles of music. Music will be the high school levels of grade 3, 4 and occasionally 5. Students will perform in formal concerts each year, and will have the opportunity to participate in IHSA Organizational Music contests and audition for the IMEA All-District and All-State ensembles.

FAR131 (Fall)
FAR132 (Spring)

Chamber Strings

Grade Level: Sophomore / Junior / Senior
Length: One Year
Credit: 0.50 - 1.0 Pass/Fail option
Prerequisite: Audition and approval of instructor

Students enrolled in Chamber Strings are the top 20-25 string players in the Academy. Enrollment is by audition. Students will immerse themselves in both string orchestra and chamber ensembles. Music levels will be the high school music levels of grade 5 & 6. Students will perform in formal concerts each year. Students will have the opportunity to participate in IHSA Organizational contests and audition for the IMEA All-District and All-State. This is a very advanced group. To be in this organization, private lessons are highly recommended.

FAR201 (Fall)
FAR202 (Spring)

Concert Choir

Grade Level: Sophomore/Junior/Senior
Length: One Year
Credit: 0.50 - 1.0 Pass/Fail option
Prerequisite: First Semester: Basic level ability of matching pitches.
Second Semester: Satisfactory completion of one semester of Concert Choir or Chamber Choir or permission of instructor based on audition.

This course provides students with the opportunity to explore choral music on many levels. As performers they will discover and practice multiple aspects of singing including the development of proper vocal technique, the interpretation of music with stylistic and historical accuracy and the synergy of ensemble singing. Students will develop critical thinking and problem solving skills through rehearsal in small and large group settings, score study, regular sight-singing experiences as well as through observation and critiques of both their own and other ensembles' performances. Two major concerts are scheduled each semester. (Students enrolled in the Music Program are eligible to participate in any music sponsored co-curricular activity.)

FAR211 (Fall)
FAR212 (Spring)

Chamber Choir

Grade Level: Junior/Senior
Length: One Year
Credit: 0.50 - 1.0 Pass/Fail option
Prerequisite: Participation in IMSA Concert Choir or by audition, moderate to good music reading skills, and instructor's approval.

This course provides experienced singers with the opportunity to explore and perform advanced-level choral literature. Both semesters provide opportunities for solo, as well as small and large ensemble singing through many diverse performing venues. Emphasis however, is on Renaissance and a cappella music culminating in a series of madrigal concerts. Students will be challenged to continue developing their musical literacy, interpretive performing skills and aesthetic sensitivity through their study of a great variety of choral music. Two to four major concerts are scheduled each semester. (Students enrolled in the Music Program are eligible to participate in any music sponsored co-curricular activity.)

Not Offered for 2008-2009

Music Theory

Grade Level: Sophomore/Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Ability to read in treble and bass clef and a solid instrumental or vocal foundation.

Music Theory is open to any student with a solid music background interested in learning the principles of writing and analyzing music. Students will learn the elements of music theory, including intervals, chord progressions, harmony, transposition, voicing, arranging and ear training. Knowledge of the Sibelius notation system is helpful, but not mandatory, as much work will be completed in the Music Theory lab.

FAR402 (Spring)

Art Design

Grade Level: Sophomore/Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: None

Students will investigate the elements and principals of design by examining various styles and periods of art and art history. Students will create both two and three-dimensional solutions to design problems encountered. An emphasis will be placed on drawing, problem solving, aesthetics and reflection.

FAR405 (Fall or Spring) **Ceramics**

Grade Level: Sophomore/Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: None

This course will provide students with the opportunity to explore methods of working with clay including hand building and throwing on the potter's wheel. Students will solve design problems in clay by considering aesthetic, historical, and technical processes related to ceramics. Students will have the opportunity to investigate traditional as well as new advances in technology with their learning, including firing methods, clay and glaze formulation and function. Demonstration of student learning will take place through production, critique and self-assessment.

FAR415 (Fall or Spring) **Photography**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: None

This course will provide students with the opportunity to obtain a general overview of the uses for and history of photography. The course will involve both black & white and digital photography. Students will learn to use photographic and aesthetic terminology and obtain practice in picture taking, film processing, printing, and professional display techniques. Through these experiences, students will gain confidence in both creating and evaluating photography as an art form. Students must supply their own 35mm SLR cameras and digital cameras and batteries.

FAR425 (Fall or Spring) **Advanced Ceramics**

Grade Level: Junior/Senior
Length: One Semester
Credit: 0.50 Pass/Fail option
Prerequisite: Ceramics and recommendation of Instructor

This course will provide students who have proven themselves proficient in basic Ceramics, an opportunity to perfect basic skills, explore advanced techniques, and express their interests and creativity through individualized projects in clay.

WELLNESS

WEL105 (Fall or Spring) **Moving and Learning**

Grade Level: Sophomore
Length: One Semester
Credit: 0.5
Prerequisite: None

This semester-long course is the core wellness class for all sophomores. It is designed to develop physically educated individuals who have the knowledge, skills, and confidence to enjoy a lifetime of healthful physical activity. This activity-based course emphasizes the kinesthetic concepts and principles of motor learning, motor development, biomechanics, and health-related physical fitness. Learning experiences will focus on tactics and strategies for a variety of physical activities, conceptual understanding of improving motor performance and physical fitness. Additional focus will be placed upon the importance of nutrition and sleep as they relate to overall fitness and stress management. Students will participate in the President's Challenge Fitness pre and posttest.

Wellness Electives

The IMSA Wellness elective program is comprised of beginning level physical activities. Students are eligible to enroll in those courses for which they have no prior formal, professional instruction or coaching. A student is not eligible to enroll in a course even if they have had prior experience in only one of the two learning opportunities provided. The Wellness Team believes in the promotion of and engagement in regular physical activity and as an academic experience should be obtained through varied physical activity learning experiences. We want students to explore new venues for physical movement, seeking breadth in new learning. All Wellness elective include pre and post fitness testing.

WEL201 (Fall) **Tennis and Badminton**

Grade Level: Sophomore/Junior/Senior
Length: One semester
Credit: 0.5 Pass/Fail option
Prerequisite: Moving and Learning and must have instructor permission

This beginning level tennis and badminton course will follow a tactical games approach for students to understand and demonstrate tennis and badminton tactics, skills, and positive sporting behavior, etiquette, safety and fair play. As tactical complexity increases, students will develop understanding and performance of skills that enable them to make successful shot selection and placement and court positioning. Biomechanical principles of movement will be integrated in the learning experiences to enhance the connection between science and sport. Students will participate in game play involving singles, doubles and mixed doubles. All students are encouraged to have fun as they discover the tactical and social aspects of tennis and badminton. Learning experiences begin exploring the game of tennis followed by badminton.

WEL211 (Fall) **Golf and Indoor Games**

Grade Level: Sophomore/Junior/Senior
Length: One semester
Credit: 0.5 Pass/Fail option
Prerequisite: Moving and Learning and must have instructor permission

Golf is part of the wellness required elective program at IMSA that allows students to explore a variety of physical activities and sports in depth. It is a quarter long, beginning level class that is designed to help students develop the tactics and skills necessary to play the game of golf. It includes an understanding of the history, rules, etiquette, strategies, and the social, emotional, and physical values of the game. Students experience practice and play at a driving range as well at actual golf courses.

The quarter-long Indoor Games course is a Wellness Elective that is comprised of multiple motor skills to produce further development and success in games and sports. Students will actively participate in athletic opportunities and leisure-time activities to

build on the skill and health-related fitness experiences introduced in the sophomore curriculum. Activities will include pickleball, floor hockey, multicultural games and team building challenges. The emphasis of skills is placed on how they can be used in real play, real life, and real environments using the tactical approach to game understanding. Outcomes aimed at positive group interaction, collective achievement, culture, change, conflict resolution, cooperation, empathy and tolerance will guide course objectives so that all students can achieve success as physically educated learners in a group situation.

WEL221 (Fall)

Lifeguarding and Water Polo

Grade Level: Sophomore/Junior/Senior
Length: One semester
Credit: 0.5 Pass/Fail option
Prerequisite: Moving and Learning and must have instructor permission

Basic rules, techniques, and strategies of water polo will be discussed, demonstrated, and implemented in game situations. Elements of the tactical games approach to understanding sports will be used. Olympic water polo videos will be shown. Students will be assessed on skill and strategy improvement through use of video-taping. Ability to swim one length of the pool (25 yards) and tread water for at least two minutes is required.

The lifeguarding class is a certification program through the American Red Cross for those students at least 15 years of age on or before the last scheduled session, and wishing to be lifeguards at summer pools or at IMSA for work service. There are two swimming pre-requisites for this course which all students must successfully complete the first class session. They are:

1. Swim 300 yards continuously using breaststroke and front crawl (100 yards front crawl, 100 yards breaststroke, 100 yards front crawl-breaststroke combo).
2. Timed Event: Swim 20 yards using front crawl or breaststroke, surface dive to a depth of 7-10 feet, retrieve a 10 pound object, return to the surface, and swim 20 yards back to the starting point with the object. Exit the pool without using steps or ladder. Timed event must be completed in 1 minute 40 seconds or less.

There are two certifications earned with the successful completion of this course: Lifeguard Training and First Aid (valid for three years), and CPR for the Professional Rescuer (valid for one year). A $14.50 Lab Fee is required for the CPR portion of this class.

WEL231 (Fall)

Outdoor and Indoor Games

Grade Level: Sophomore/Junior/Senior
Length: One semester
Credit: 0.5 Pass/Fail option
Prerequisite: Moving and Learning

This semester long course is comprised of multiple motor skills to produce further development and success in games and sports. Students will actively participate in athletic opportunities and leisure-time activities to build on the skill and health-related fitness experiences introduced in the sophomore curriculum. Activities will include games and activities from invasion, net/wall, striking/fielding and/or target categories. Students will be exposed to the tactical approach to learning games and activities drawing connections of both the strategies and skills associated with the games in each category. They will become thinking players, learning to react to and deal with the challenge presented in a game situation. This approach to learning game play provides quality opportunities for the student to give and receive feedback.

WEL241 (Fall)

Beginning and Intermediate Swimming

Grade Level: Sophomore/Junior/Senior
Length: One semester
Credit: 0.5 Pass/Fail option
Prerequisite: Moving and Learning and must have instructor permission

For students who would like to learn to swim better but need one on one attention to progress beyond non-swimmer status. Starting with basic floats and glides, the student will progress to elementary backstroke and crawl stroke during beginning swimming and will learn sidestroke, backstroke, and breaststroke during the intermediate level. In addition, the swimmer's ability to swim farther continuously will be improved with the idea of using swimming as a fitness activity.

WEL312 (Spring)

Dance: Ballroom and Multicultural

Grade Level: Sophomore/Junior/Senior
Length: One semester
Credit: 0.5 Pass/Fail option
Prerequisite: Moving and Learning

In Ballroom Dance, the basic steps of waltz, fox trot, swing, cha cha, tango, salsa, merengue and other current partner dances will be covered. Good leading and following techniques, dance patterns, transitions, rhythm, tempo and style will be emphasized throughout. Students will move toward creating their own dance patterns. Beginning and intermediate Multicultural dances will allow the students to experience various styles and rhythms along with historical context. Circle, partner, solo, and mixers danced to traditional music will enable participants to cross cultures and participate in the nonverbal language of dance.

WEL322 (Spring)

Badminton and Tennis

Grade Level: Sophomore/Junior/Senior
Length: One semester
Credit: 0.5 Pass/Fail option
Prerequisite: Moving and Learning and must have instructor permission

This beginning level badminton and tennis course will follow a tactical games approach for students to understand and demonstrate badminton and tennis tactics, skills, and positive sporting behavior, etiquette, safety and fair play. As tactical complexity increases, students will develop understanding and performance of skills that enable them to make successful shot selection and placement and court positioning. Biomechanical principles of movement will be integrated in the learning experiences to enhance the connection between science and sport. Students will participate in game play involving singles, doubles and mixed doubles. All students are encouraged to have fun as they discover the tactical and social aspects of badminton and tennis. Learning experiences begin exploring badminton followed by tennis.

WEL332 (Spring)

Basketball and Soccer

Grade Level: Sophomore/Junior/Senior
Length: One semester
Credit: 0.5 Pass/Fail option
Prerequisite: Moving and Learning and must have instructor permission

Basketball is part of the wellness required elective program at IMSA that allows students to explore a variety of physical activities and sports in depth. It is a quarter long beginning level class that is designed to help students develop the skills, tactics, and strategies necessary to play the game of basketball. The tactical approach will be utilized so that students learn the “overall picture” of how basketball is played effectively. Skills and strategies will be taught as they will be used in the game, not in isolation. Basic rules will be learned, and student will gain an appreciation for the history of the game. In addition, the social, emotional, and physical; values of the game are explored. Students will experience half and full court game play throughout the course. Video-tape assessments of skill and understanding will be used.

Soccer, the world’s number one sport, is part of the wellness required elective program at IMSA that allows students to explore a variety of physical activities and sports in depth. It is a quarter long beginning level class, and is paired with basketball because it gives students the opportunity to develop eye-hand and eye-foot coordination in the same semester by engaging in two fast-moving sports which are also excellent for developing cardiovascular endurance. This quarter-long course is designed to help students develop the skills, tactics, and strategies necessary to play the game of soccer. Skills and strategies will be taught as they will be used in game play, not in isolation. Basic rules will be learned and student will gain an appreciation for the history of the game. In addition, the social, emotional, and physical values of the game are explored. Students experience skill drill work, skill assessments, modified soccer games, and full-length field soccer games throughout the course.

WEL342 (Spring) **Current Fitness Trends and Volleyball**

Grade Level: Sophomore/Junior/Senior
Length: One semester
Credit: 0.5 Pass/Fail option
Prerequisite: Moving and Learning

This elective is designed to provide learning experiences that allow students to explore current trends in fitness to enhance ones physical fitness and relevant for managing stress in today's world. Students will experience various methods like kickboxing, step, yoga, and pilates for improved health and wellness. During the semester this beginning level elective also offers an opportunity for students to participate in recreational volleyball. Students will participate in a games-based approach to learning volleyball by integrating tactics, strategies, and skills during game play.

WEL505 (Fall or Spring) **Outdoor Games and Bowling**

Grade Level: Sophomore/Junior/Senior
Length: One semester
Credit: 0.5 Pass/Fail option
Prerequisite: Moving and Learning

Outdoor games is a quarter long course comprised of multiple motor skills to produce further development and success in games and sports. Students will actively participate in athletic opportunities and leisure-time activities to build on the skill and health-related fitness experiences introduced in the sophomore curriculum. Activities will include games and activities from invasion, net/wall, striking/fielding and/or target categories. Students will be exposed to the tactical approach to learning games and activities drawing connections of both the strategies and skills associated with the games in each category. They will become thinking players, learning to react to and deal with the challenge presented in a game situation. This approach to learning game play provides quality opportunities for the student to give and receive feedback.

Bowling is a quarter long course that will follow a tactical games approach and sport education model in order for students to understand and demonstrate bowling tactics, skills, positive sporting behavior, etiquette, safety and fair play. As tactical complexity increases, students will develop understanding and performance of skills that enable them to make successful preshot decisions, attain proper pin action and adjust delivery for picking up spares. Biomechanical principles of movement will be integrated in the learning experiences to enhance the connection between science and sport. Most of the instruction will take place at a local bowling facility which provides an authentic experience for students to explore the recreational and social values of the activity. The fee for the quarter will be approximately $55.

WEL515 (Fall or Spring) **Individualized Physical Fitness**

Grade Level: Sophomore/Junior/Senior
Length: One semester
Credit: 0.5 Pass/Fail option
Prerequisite: Moving and Learning

This elective is a semester long course that will enable students to extend their knowledge and practice in all health-related fitness components as well as any of the skill-related components of their choice. As a member of the common exercise group, students will have the opportunity to establish factors that enable exercise adherence for themselves and others. There will be frequent guidance, support, and structures for periodic evaluation and motivation of individual fitness plans. This course is designed for a mature, self-motivated exerciser who is willing to extend their potential for physical development.

WEL525 (Fall or Spring) **Movement and Relaxation**

Grade Level: Sophomore/Junior/Senior
Length: One semester
Credit: 0.5 Pass/Fail option
Prerequisite: Moving and Learning

Movement and Relaxation is a semester long course that will enable students to explore and practice various methods of movement which produce and promote relaxation. Yoga, Pilates and Tai Chi are popular methods that may be examined and performed within this course. Movement origins and historical foundations will initiate each movement method explored. Student will individually perform activities, occasionally assisting each other for correct posture and form.

STUDENT INQUIRY AND RESEARCH

SIR100 (Junior Full Year)
SIR103 (Rising Junior Summer)
SIR200 (Senior Full Year)
SIR203 (Rising Senior Summer)

Grade Level:	Junior/Senior
Length:	Two Semesters. Students must discuss plans with and get permission from the SIR Coordinator before enrolling in SIR.
Credit:	1.0 Note: SIR credit does not fulfill any graduation requirement.
Prerequisite:	Permission of SIR coordinator

Student Inquiry and Research (SIR) is an interactive partnership that pairs students with on-campus and off-campus professionals so that they can actively pursue an in-depth investigation into a topic that they are passionate about. The SIR standards center on planning, investigating, analyzing, and communicating. Requirements include a proposal, investigation journal, active engagement, progress report, final paper, and presentation at IMSAloquium. Due to the independent nature of this course, active investigations must be started before the end of September or students will be dropped from course enrollment. SIR does not count toward the minimum course requirements for graduation, and maximum course credits apply as stated in the student handbook. SIR receives a "pass with distinction," "pass," or "fail" grade, assessed by the coordinator of Student Inquiry and Research in consultation with the SIR advisor. Students may enroll in SIR for both their junior and senior years; all SIR enrollment requires permission from the SIR Coordinator.

Dr. Judy Scheppler is the Student Inquiry and Research Coordinator. She can be reached via email at quella@imsa.edu, by telephone at (630) 907-5899, or in her office in the Grainger Center for Imagination and Inquiry.

TALENT

TALENT stands for **T**otal **A**pplied **L**earning For **Ent**repreneurs. Student learning in this program will focus on entrepreneurship and technologies that would benefit mathematics and science businesses.

For further information about the TALENT program, please contact Dr. David Abler at dabler@imsa.edu.

At this time participation in the TALENT program does not earn Academy credit.

Independent Study

Independent Study is a student-selected learning experience that goes beyond the IMSA course catalog. Unlike Student Inquiry and Research, Independent Study lacks a focusing question and is driven by a curriculum that is largely teacher-directed. Except with the Principal's permission, an Independent Study may only be conducted by a senior under the direction of an IMSA faculty member for one or two semesters. A proposal for an Independent Study, consisting of a learning contract must be submitted to the Curriculum and Assessment Leadership Team by the faculty advisor and student no later than the last class day of the third quarter in the student's junior year. An Independent Study counts as 0.5 credits each semester in a student's course load and receives a "pass with distinction," "pass," or "fail" grade, assessed by the advisor. It does not count towards the course requirements for graduation, and maximum course credits apply, as stated in the student handbook. If a student enrolls in an Independent Study because he or she has exhausted the IMSA course catalog in a certain field, he or she may, with the advisor's consent, appeal to the Principal that the credits earned in Independent Study be applied towards graduation.

Illinois Virtual High School (IVHS)

IVHS offers a number of on-line courses. Currently, IMSA students may enroll in an IVHS course for credit on a Pass/Fail basis, if the course was developed and is taught by an IMSA faculty member, and if the student is not able to enroll in the equivalent face-to-face course. Students who wish to enroll in an IVHS course need to get approval from their counselor. Information about IVHS can be found at the following website http://www.ivhs.org/index.learn?action=welcome&bhcp=1.