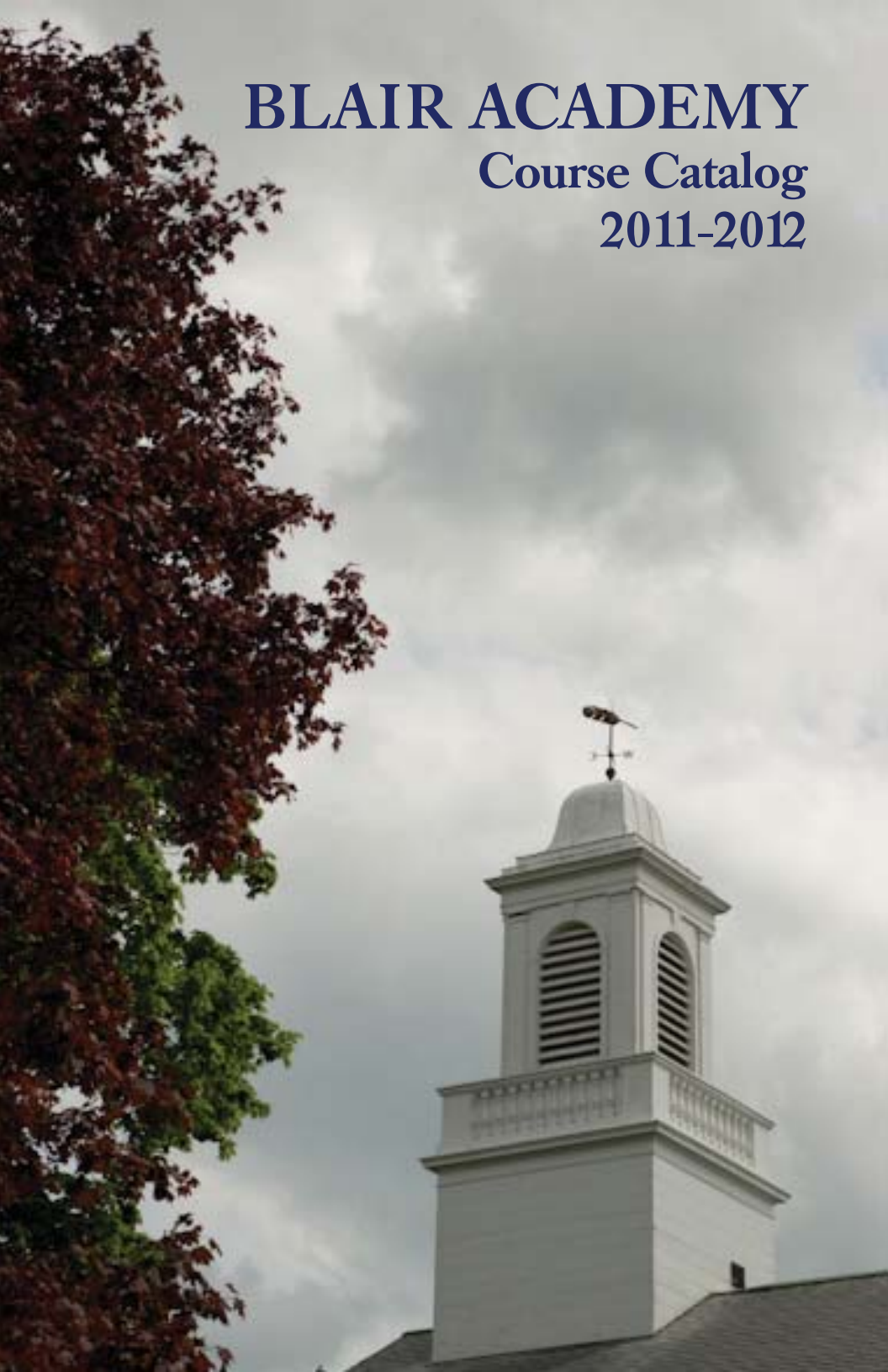


# BLAIR ACADEMY

## Course Catalog

### 2011-2012



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**T. Chandler Hardwick, *Headmaster***  
**The 164<sup>th</sup> Year**

# experience

## 2011-2012 Course Catalog

### DIPLOMA REQUIREMENTS

MR. SELDEN BACON, DEAN OF ACADEMICS

#### GENERAL REQUIREMENTS

The Blair Diploma is granted to students whom the faculty and Headmaster judge to be members in good standing of the school community and who have met the following requirements for graduation.

Students will be eligible for a Blair diploma only if they have been enrolled for at least one full academic year including the senior year, and if they have successfully completed 54 units of academic work for four-year students, 51 units for three-year students, and 48 units for two- and one-year students. For each year that the student has attended Blair, he or she must complete three units of Physical Activity. (For the freshman, sophomore, and junior years, two of the three units must be in the form of interscholastic team sports or the approved equivalent thereof. Only under very unusual circumstances will the faculty, through the Athletic Committee, make exceptions to these requirements.

The academic year is divided into two semesters and a student receives 1.5 units of credit for the successful completion of a single-semester and three units of credit for a successfully completed year-long course. No partial credit is awarded.

The units of academic work must include the following:

**English:** 3 units of English each year – *total 12 units for a four-year student*

**Mathematics:** 9 units in mathematics – *Algebra I, Geometry and Algebra II or their equivalents*

**Languages:** 6 units in a modern or classical language – *two years of one language*

**Sciences:** All students must present 6 units in a laboratory science – *Three units in biology and three units in chemistry or physics. In addition, four-year students at Blair must present 9 units of science, at least 6 units of which must be laboratory sciences, as described previously.*

**History:** 6 units in U.S. History/Western Civilization – *see department requirement regarding two-year courses taken at another school. In addition, four-year students will have taken World History, for a total of 9 units.*

**Fine and Performing Arts:** Units of fine and/or performing arts as described in the additional requirements below (see also the section on Fine and Performing Arts).

**Religion:** Units of Religion or Philosophy as described in the additional requirements below (see also the section on Religion and Philosophy).

#### REQUIRED FOR FRESHMEN ONLY, IN ADDITION TO THE GENERAL REQUIREMENTS

3 units of World History

1.5 units of religion or philosophy, to be completed by graduation.

1.5 units of Health (CHAT/Health 1)

**Arts:** Prior to graduation, four-year students must take three semesters of art. At least one of these semesters must occur in grades 9-10 and at least one in grades 11-12. In addition, at least one of the three courses must be a performing art and at least one a fine art. Freshmen who enroll for Freshman Cycle (see description) will complete the distribution requirement (Fine and Performing Art courses) and receive credit for a single semester of art (1.5 units). Students in Freshman Cycle will have to complete two further semesters of art prior to graduation. At least one of these remaining semesters must be in grades 11-12.

**Sciences:** Four-year students at Blair must present 9 units of science, at least 6 units of which must be laboratory sciences (*three units in biology and three units in chemistry or physics*).

#### REQUIRED FOR NEW SOPHOMORES ONLY, IN ADDITION TO THE GENERAL REQUIREMENTS

1.5 units of religion or philosophy, to be completed by graduation.

3 units of Fine or Performing Arts, to be completed by graduation.

1.5 units of Health (CHAT/Health2)

#### REQUIRED OF NEW JUNIORS, IN ADDITION TO THE GENERAL REQUIREMENTS

1.5 units of religion or philosophy, to be completed by graduation.

1.5 units of Fine or Performing Arts to be completed by graduation.

#### REQUIRED OF NEW SENIORS AND POSTGRADUATES

Irrespective of other requirements, these one-year students must carry a minimum of five courses each semester, with a minimum of four of those courses coming in the form of full-year courses. Senior English will be counted as a full-year course.

#### SPECIAL SENIOR REQUIREMENTS

No matter how many acceptable credits a re-enrolling student may already have, a returning senior must carry no fewer than six units per semester, none of which may take the form of an independent study (see below). Returning seniors must pass the minimum academic load of 12 units for the year, satisfactorily completing three units of Senior English and nine units of electives. Six of these nine units must be in full-year courses and the total schedule must represent the equivalent of a year's work in three different disciplines. A post-graduate is considered to be a member of the senior class and must fulfill all requirements, academic and non-academic, that seniors must meet as well as those listed in the section above, "Required of new seniors and postgraduates." In addition, seniors or post-graduates who elect to take a Senior Project must complete it satisfactorily to graduate. Participation in commencement exercises by individual seniors who do not successfully complete the appropriate pattern of disciplines and a minimum of 12 units of credit will be determined by the faculty.

## INDEPENDENT STUDY

Students in the junior and senior year wishing to take a course that the school does not offer or to take a course that does not fit their schedules may propose an independent study as a fifth or, in exceptional cases, a sixth course. Students select a faculty advisor with whom they work to create a written proposal. The proposal must make clear the purpose, process and outcomes of the independent study and receive the written approval of the faculty member, the student's advisor and class monitor, the relevant department head(s) and – finally – the Dean of Academics. All proposals are to be typewritten. *A student may undertake only one independent study per term.*

## ADVANCED PLACEMENT COURSES AND EXAMS

The AP examination is required of all students enrolled in an AP course. Advanced Placement (AP) courses end in an examination or, in the case of the arts, a portfolio of work. The examination or portfolio is an integral part of an AP course and its final focus. With this in mind, the AP exam grade is factored into the year-end grade for the course. Thus, the examination is required if a student is to receive credit and designation for an AP-designated course. In any case where a student withdraws from an AP class during the college application process, a corrected transcript will be issued to each of the student's colleges.

Fees for AP examinations are billed to student accounts in the late fall of the year. Students who are later counseled to withdraw from an AP class will have the amount credited on their account. The fee for AP examinations in 2011 was \$90.00 per examination.

# COMPUTER SCIENCE AND APPLICATIONS

MR. SAMUEL ADAMS, CHAIR

## PROGRAMMING – FULL YEAR

This introductory course focuses on the basic concepts of sequential programming, using the C++ programming language. Work in the class is largely hands-on, using the computers in class to study and explore different programs; please note that this class now has a standard homework component. Although there are no prerequisites for this course, a strong mathematics background is recommended. This class is ideal for students who wish to get some exposure to programming before college without taking the AP course, and is recommended to all students who wish to take the AP Computer Science Course. *Open to Sophomores, Juniors and Seniors. Three units.*

## ADVANCED PLACEMENT COMPUTER SCIENCE – FULL YEAR

This year-long course follows a nationally standardized curriculum for computer science and seeks to prepare students for the AP Computer Science exam in May. The exam is a requirement for the course. This class continues from the Programming course, and is taught in the JAVA programming language, now used in the AP curriculum. NOTE: students must have a background in programming, own a computer which runs Microsoft Windows (English Language), and be able to work well independently. *Permission of the department required. Three units.*

# ENGLISH AND CLASSICS

## MR. ROBERT BRANDWOOD, CHAIR

### DEPARTMENT REQUIREMENTS

To graduate, students must take English each year and in each term of the senior year. Courses in Latin meet the school's foreign language requirement and may not be substituted for English classes. *Placement in honors or Advanced Placement sections English or Latin is by permission only.*

### ENGLISH 1 – FULL YEAR

English 1 is designed to develop the reading and writing skills of freshman students at the same time that it fosters a knowledge and appreciation of literature. Taught full time in a classroom equipped with computers, the course also requires that students continue to develop and refine their computer skills (keyboarding, word processing, Internet searching). The course is organized around several units in which students read and write extensively. In a typical year, they will read works such as *The Odyssey*, *Macbeth*, *Ordinary People*, a selection of short stories, and an assortment of poetry. In addition, there is a short but formal introduction to Public Speaking, which examines key skills and rhetorical devices and provides students with the opportunity to deliver oral presentations to their classmates. Vocabulary enrichment, public speaking opportunities, and punctuation study are also integral to the year's work. *Three units.*

### ENGLISH 2 – FULL YEAR

English 2 complements the various components of English 1 as it continues to strengthen reading, writing and study skills while using the lab's word processing and internet access resources. After an initial review of the elements of the essay and of good writing practices, students study units on poetry, the short story, Shakespeare and the novel. In a typical year, authors have included Shakespeare, Dickens, Walker, Steinbeck, Cummings, Frost, Cather and Huxley. Emphasis is on reading critically and writing persuasively. Written work demands personal response, close literary analysis and a familiarity with literary criticism; vocabulary enrichment and grammar study will be integral parts of the course. (An honors section is open to qualified students who obtain department approval.) *Three units.*

### ENGLISH 3 – FULL YEAR

English 3 is divided into two distinct thematic units represented by the motifs of "journey" and "illusion." The final quarter will be given over to the in-depth study of a particular theme or genre determined by each teacher. In addition, we will review vocabulary, grammar, and composition on an on-going basis and spend time preparing for the SAT administered in May. Journeys often present us with opportunities for change and growth and can have a profound effect upon our identity and the way we regard ourselves. Because the idea, as well as the actual experience, of a journey (in the broadest sense) is common to us all, the motif is a helpful one for understanding ourselves, each other, and the worlds we inhabit. Readings will feature *The Accidental Tourist*, *My Antonia*, and Cormac McCarthy's *The Road*. These texts will be supplemented by essays, short stories and poems throughout, and this approach forms the basis for our approach to literature across the year. The second semester offers an exploration of the theme of "illusions," and we'll examine this motif in texts as disparate as Shakespeare's *The Tempest* and Fitzgerald's *The Great Gatsby*. How we construct meaning in our lives is dependent upon our interpretation of ourselves, those around us, and our surroundings. How we identify and dispel the "illusions" we encounter will oftentimes determine the direction we move in and the decisions we make. Again, the core texts will be supplemented with essays, short stories and poems. *Three units.*

### ENGLISH 3 HONORS – FULL YEAR

Designed for students with a demonstrated talent for language and a heightened interest in literature, the English 3H course undertakes a close reading of works by writers as diverse as Donne, Wordsworth, Hurston, Shelley, Dostoevsky, Miller, and Shakespeare. The course puts a year-long emphasis on form and content, so that the mechanics of composition – whether in a student’s writing or in the author being studied – receive as much attention as the ideas being discussed. Extensive grammar, sentence structure and vocabulary study occur throughout the year. *Department approval required. Three units.*

### ENGLISH 4 – FULL YEAR

The senior English program offers a variety of electives each semester. Organized around a central theme, fall semester courses explore our search for meaning, our quests and our heroic ideals. Second-semester electives allow for an intensive exploration of a genre or literary period. Readings are wide-ranging. In the spring of the second semester, classes are devoted to public speaking. All senior electives contain a core component—a variety of composition assignments, a thorough punctuation and sentence structure review and intensive vocabulary study. *Both semesters must be passed for a student to receive credit for English 4. 1.5 units per semester.*

*Past English 4 offerings have included:*

*Shakespeare – Tragedy*

*Doubt, the Cornerstone of Faith*

*The Beat Generation*

*Ethnicity and Identity*

*Modern American Drama*

*Modern and Contemporary Poetry*

*Creative Writing*

*Satire*

*Shakespeare – Comedy*

*New York Stories*

### ENGLISH 4 AP–LITERATURE – FULL YEAR

Open to qualified students, English 4 AP-Literature is conducted as a seminar and emphasizes close literary reading. Students write compositions of sustained literary analysis, as well as in-class essays similar to those required on the Advanced Placement Exam. Readings in a typical year include works by Shakespeare, Hardy, Morrison, Camus, Conrad, as well as an assortment of traditional, modern and contemporary short story writers and poets, including Wordsworth, Frost, Keats, and Owen. Group and individual oral presentations make up a core component of the course. Enrollment presumes a love of reading, a high level of proficiency in writing and a willingness to participate actively in class discussion. *Department approval required. Three units.*

### ENGLISH 4 AP–LANGUAGE – FULL YEAR

English AP Language is open to seniors who would like intensive work in English Language and will prepare students for the AP Language exam. Students will have the opportunity to study a range of rhetorical modes from diverse historical periods. Those with previously demonstrated proficiency in close textual analysis will be well served by this course. Source readings will include novels, biography, letters, and speeches. Throughout, students will gain knowledge of advanced literary and rhetorical terms and techniques while developing their ability to recognize a range of rhetorical strategies. *Departmental approval required. Three units.*

## CLASSICS

### LATIN 11 (LATIN 1) – FULL YEAR

Latin 11 introduces students to the Latin language and its history with *Latin for the New Millennium*, a text that combines the traditional study of Latin grammar with the modern “reading method.” Students will learn the basic elements of Latin grammar, including the active and passive voices of all six tenses, while studying the history and mythology of the Roman world. Translations will include Latin-to-English adaptations of real Latin texts and English-to-Latin exercises. Grammar, vocabulary and derivatives activities will not only prepare students for Latin 21, but also enable them to be better writers and speakers of modern languages (including English!). Films, research projects and online activities will also be incorporated. *Three units.*

### LATIN 21 (LATIN 2) – FULL YEAR

This second-year course emphasizes the completion of the study of Latin grammar and the broadening of students’ Latin vocabulary and knowledge of English derivatives. Continued study of mythology and history will be supplemented by films and research projects. In the second semester, students will begin to translate authentic Latin by such authors as Catullus. *Three units.*

### LATIN 31 (LATIN 3) – FULL YEAR

This course is devoted to completing the students’ understanding of the more complex elements of Latin grammar and syntax and to developing the ability to read unadulterated Latin. Students will translate the first book of Caesar’s Commentaries On The Gallic Wars, a work useful for both its clarity of prose and its considerable political and historical interest. We will then begin a detailed reading of Cicero’s First Catalinarian Oration, with attention paid to the development of oratory in the Roman world. The year will conclude with an introduction to Latin poetry through the works of the Late Republican Poet, C. Valerius Catullus. *Prerequisite: Latin 11, 21, and teacher approval. Three units.*

### LATIN 41 (LATIN 4 & ADVANCED PLACEMENT LATIN) – FULL YEAR

This course will be offered for those students who wish to pursue either a serious course of study in Latin or who wish to prepare for a specific Advanced Placement exam. Consequently, the content will vary depending on student interest. Authors to be read will include Vergil, Cicero, Horace, Ovid, Sallust, Tacitus, Catullus, Petronius, and various legal authors. In addition, there will be an emphasis on acquiring a working understanding of the Republican and Imperial periods of Roman history. *Teacher approval required. Three units.*

### ROMAN HISTORY – AN INTRODUCTION – FULL YEAR

This course is offered through the History Department and is described there.

## **FINE AND PERFORMING ARTS**

**MRS. JENNIFER PAGOTTO, CHAIR, PERFORMING ARTS**

**MRS. KATHERINE SYKES, CHAIR, FINE ARTS**

### **DEPARTMENT REQUIREMENTS**

*Four-year Students* – Prior to graduation, four-year students must take three semesters of art. At least one of these semesters must occur in the lower grades (9-10) and at least one in the upper grades (11-12). In addition, at least one of the courses must be a performing art and at least one must be a fine art. Freshmen who enroll for Freshman Cycle (see description) will have completed the distribution requirement (Fine and Performing art courses) and receive credit for a single semester of art. They will have to complete two further semesters of art prior to graduation. At least one of these semesters must be in the upper grades (11-12).

*Three-year Students* – Prior to graduation, three-year students must complete two semesters of art.

*Two-year Students* – Prior to graduation, two-year students must complete one semester of art.

*One-year students* – Prior to graduation, one-year students who are carrying only four full-year courses must complete either a semester of art or a semester of philosophy/religion.

*Alternatives:* Four-year students may, in the 11th or 12th grade only, substitute the successful completion of a full school year of instrumental lessons (see Applied Music Instruction below) for one semester of their three-semester requirement. No credit awarded. Alternatively, four-year students may in the 11th or 12th grade only, substitute the successful completion of a major participation in a school theatre production for one semester of their three-semester requirement. *No credit awarded. Approval of the Performing Arts Chairman required.*

Only one substitution allowed in a student's career.

## **FINE ARTS**

### **FRESHMAN CYCLE – FULL YEAR**

Offered in conjunction with the Religion and Philosophy Department, this full-year cycle allows freshmen to meet the Fine and Performing Arts distribution requirement in Arts, the graduation requirement in Religion and Philosophy, and fulfill one semester of their three-semester art requirement. Ten-week sessions present the *Elements of Art*, *World Religions* and a course in performing art. *Must be taken for the full year. Freshmen only. Three units.*

### **ELEMENTS OF ART – SEMESTER\***

Elements of Art/Introduction to Art is offered as a stand-alone class for freshmen (only), as well as a discrete course within the Freshman Cycle. The object of the course is to build visual awareness through creative problem-solving. Every visual idiom is founded on the elements of point, line, shape, value, color, and texture are emphasized. These visual elements are organized and explored through the use of creative “triggers” and varied media, to tap the students’ potential and allow them to experience a range of possibilities in art. *1.5 units. Not offered 2011-12.*

*\* single semester course, available both fall and spring*

## TWO DIMENSIONAL

### DRAWING 1 – SEMESTER\*

The purpose of this course is to teach basic drawing skills and visual understanding. This course is designed for the beginner as well as the more serious art student. Students learn to see in the language of art: line, shape, value, texture and color and through exposure to art of the past. They will draw from direct observation to develop drawings that are both representational and personally expressive. *1.5 units.*

### ADVANCED DRAWING – SEMESTER\*

Advanced Drawing is a continuation of Drawing 1. Students combine the elements of art to create form, light, rhythm, and space. Although representational skills continue to be emphasized, students learn abstraction as well. A sketchbook is kept as a visual journal and to practice skills. May be taken more than once for credit. *Prerequisite: Drawing 1. 1.5 units.*

### PAINTING 1 – SEMESTER\*

Painting 1 explores essential elements of art with an emphasis on strong composition and design of the rectangle. Color is studied through color-mixing and theory. Students then paint with a variety of painting media and techniques both in the studio and en plein aire. They are challenged to interpret their world through intuitive thinking as well as through direct observation. *1.5 units.*

### ADVANCED PAINTING – SEMESTER\*

Advanced Painting further explores the possibilities and potential media and techniques. Students are challenged to push their capacities for creative problem solving through personal expression and observation. May be taken more than once for credit. *Prerequisite: Painting 1. 1.5 units.*

### PHOTOGRAPHY 1 – SEMESTER\*

In Photography 1, students use a 35-mm manual camera and black and white film to gain familiarity with the parts of the camera, darkroom equipment, film developing and printing, presentation and the elements of good film exposure: aperture, shutter speed and film speed. The course consists of basic reading assignments and hands-on activities that guide students to an understanding of what makes a good photograph and how it can be a form of self-expression. *A 35-mm manual camera is required for this course. 1.5 units.*

*\* single semester course, available both fall and spring*

## ADVANCED PHOTOGRAPHY – SEMESTER\*

In Advanced Photography, students continue to work at achieving proper film exposure (aperture, shutter speed and film speed) using a 35-mm manual camera and black and white film. The course focuses more on creating a picture with strong composition, working with alternative light sources and exploration of different photographic techniques, such as solarized printing and sandwiching negatives to create a double image. Students are evaluated specifically on three essential factors: composition, subject matter and technical facility/cleanliness. Ideally, each student in Advanced Photography will develop a consistent body of work, presenting a continuous theme or developing theme, which will exhibit increasing technical mastery. Personal responsibility for time management, research and exploration of the history of photography and technique is an expectation of the course. Students are to record these ideas in a visual journal. *A 35-mm manual camera and a tripod are required for this course. Prerequisites: Photography 1 and teacher approval. May be taken more than once for credit. 1.5 units.*

## ART PORTFOLIO – FULL YEAR OR SEMESTER\*

This is a non-AP course. A description of the AP Portfolio class is below. The second semester version of the course may be taken in the second semester (ONLY) of the junior year to prepare for the full-year AP Portfolio in the following year. The full-year version mirrors the sections of the AP: Breadth, Concentration, and Quality. Students present only fifteen pieces, one-half the number required for the AP submission. The work done for Breadth can serve as a college portfolio and focuses on the use of a range of materials and advanced concepts. In Concentration, students develop a personal visual idea, emphasizing originality and process. The completion of the Quality section requires the presentation and critique of the student's three best pieces. *By permission of the instructor, only. Three units/year; 1.5/ units semester.*

## GRAPHIC ARTS 1, 2 – SEMESTER\*

The Graphic Arts class will combine two graphic disciplines: Graphic Design and Printmaking. Students will use a combination of Adobe Photoshop CS4 and digital media as well as intaglio and relief printmaking processes and techniques to create reproducible images. Assignments may include personal logos, product labels, posters, CD jackets, and more. Students are required to keep a sketchbook to aid in the art-making process and to develop and present a collection of superior graphic work from various media. *1.5 units per semester.*

## ARCHITECTURE 1 – FULL YEAR

This course emphasizes the development of accurate drawing and visual presentation skills, the ability to visualize three-dimensional forms, multi-view drawing, basic geometric constructions, isometrics, and perspective work. As well as the application of these skills to the design of shelter, students will explore the principles of architectural design such as the relationships of space and human activity. Students will work with drafting instruments. *Preference given to seniors. 1.5 units for the full year.*

## ADVANCED ARCHITECTURE – FULL YEAR

This course is a continuation of Architecture 1, and explores broader design concepts while building on the basic visualization and presentation skills introduced in the previous course. Course work includes rendering, model building, and site considerations as supplements to the design process. A discussion of the nature of contemporary architecture is included. *Prerequisite: Architecture 1 and teacher approval. Preference given to seniors. 1.5 units for the full year.*

*\*single semester course, available both fall and spring*

## VIDEO PRODUCTION – SEMESTER\*

This course provides students with an opportunity to learn the fundamentals of filmmaking from planning and preproduction to postproduction and public exhibition. Students will discuss readings and screenings, and critique student work. Students work on Apple computers, using iMovie HD, and Final Cut Pro software. Owning a digital camcorder is not a prerequisite.

*1.5 units per semester.*

## NEW MEDIA – SEMESTER\*

\*\*\*NEW COURSE\*\*\*

This course provides students with the opportunity to make interactive artworks that respond to the reactions of a live audience. Students will combine the use of traditional and non-traditional media, including performance, installation, sound art, web-based media, 3D imaging, and video game technologies. They will learn to use Final Cut Pro, iDVD, iMovie, Scratch, SketchUp, Photoshop, Dreamweaver, and Flash. *No prerequisites. Open to all students. 1.5 units.*

## MEANING AND MEDIA – SEMESTER\*

Students develop a language for constructive critique and a sophisticated level of media literacy. They will look at religious, cultural, political, and historical representations of good vs. evil, normal vs. abnormal, and us vs. them. This course is theoretical and creative. Students will present ideas in weekly written blog responses, then translate those ideas into visual works. Students will work on Apple computers, using Garage Band, DreamWeaver, Photoshop, Scratch, iMovie HD, Final Cut Pro, and iDVD. Owning a digital camcorder is not a prerequisite. This one-semester elective is offered in conjunction with the Religion Department. *This one-semester elective is offered in conjunction with the Religion Department and satisfies requirements in both departments. 1.5 units.*

## THREE-DIMENSIONAL

### CERAMICS 1 – SEMESTER\*

The goal of Ceramics is to expose students to the process of ceramic art making. Students will have experiences making both hand-built and wheel-thrown pieces as well as learning to glaze their projects using high-temperature and Raku glazes. Students are required to keep a sketchbook to aid in the art making process. *1.5 credits per semester.*

### ADVANCED CERAMICS – SEMESTER\*

Advanced Ceramics is a continuation of the basic course and provides work on creating more complicated forms, appendages to pots (spouts, lids, knobs, and handles), and refined claymaking techniques. Students will work on refining the form, shape, height, and weight of their pots and continue experimenting with glazes. Students are encouraged to explore decorative techniques such as faceting, scraffi to, stamping, texturizing, carving, and incising. Successful completion of the course requires a sketchbook. *Prerequisite: Ceramics I. 1.5 credits per semester.*

*\* single semester course, available both fall and spring*

## SCULPTURE – SECOND SEMESTER

The goal of the Sculpture course is for students to experience various sculpting techniques and learn to express themselves in three-dimensional formats. Projects will utilize numerous techniques (carving, molding, modeling, assembling, constructing) and several materials (plaster, clay, paper, metal, wire, Paris-craft or found objects). Students are required to keep a sketchbook.

*1.5 units per semester. This course can be taken more than once for credit.*

## ADVANCED PLACEMENT AND INDEPENDENT STUDY OPPORTUNITIES IN FINE ART

### AP ART HISTORY 1: SURVEY OF ART HISTORY – FULL YEAR

Art History is the study of a visual culture that reflects complex social, economic, religious and political factors. Students electing AP Art History will engage the material in depth. They will be expected to learn specific characteristics and stylistic traits of each major movement, and use this knowledge to identify periods and dates of works unknown to them. Evaluation will be based on examinations, essays and oral presentations. Previous background in history such as Western Civilization, United States History 1 and/or European History is helpful. *Three units.*

### ADVANCED PLACEMENT STUDIO ART PORTFOLIO – FULL YEAR

Students enroll in the regular, full-year Portfolio Course (see above) for the months of September and October. Based on strength of performance (as measured by the number of assignments completed on time, quality of work, and interest displayed over these first two months of the class), qualified students are then invited to prepare for the submission of the Advanced Placement Portfolio (29 pieces). In addition to the regular class, then, Advanced Placement Portfolio students will do significant extra work to prepare for the AP submission. *By permission of the instructor, only. Three units.*

### INDEPENDENT STUDY IN ART – SEMESTER\*

Independent study offers an opportunity for advanced and highly motivated students to work on special projects not normally within the scope of the art curriculum. Individual programs of study and course obligations will be developed in conjunction with the art department faculty. *Prerequisite: Previous study in the area in which independent study is to be undertaken; permission of the teacher and department chairman; approval as an independent study. 1.5 units.*

## PERFORMING ARTS

### THEATER 1 – SEMESTER\*

The course is designed to teach the rudiments of acting. A primary focus is the development and interpretation of a character through use of body, voice and imagination. Course work also entails the presentation of wide-ranging performance projects with emphasis on scene work.

*1.5 units.*

*\* single semester course, available both fall and spring*

## THEATER 2 – SECOND SEMESTER\*

This course allows students to explore and improve their performance techniques. A primary focus is the development and interpretation of character through script analysis into dramatic presentation. Course work entails the presentation of a wide range of performance pieces from the classical tradition to the modern. The goal of this course is for the student to develop an understanding of thousands of years of theatrical traditions, and to break away from simply playing in the style of realism. This course will focus a great deal on what the class as a whole can bring to a common understanding of different eras, from the Greeks to the present. *1.5 units.*

## THEATER 3 – THE THEATRICAL SELF – SEMESTER\*

This course explores the question of the self in any given text. Through script, historical and performance analysis, the actor is required to present his or her findings about the inner and outer roles of a given character. The creation of a dynamic being will be the culmination of each study, including a working understanding of historical style. A substantial performance piece will be the exhibition of each actor's mastery of his or her subject. *Offered as an independent study, only. 1.5 units.*

## MUSIC – GENERAL CLASSROOM

Music offerings at Blair are scheduled into the academic day, allowing more structured time for rehearsal. There are offerings for academic credit in both choral and instrumental music. These courses are graded. Other offerings, not for credit, are scheduled into the school day and may, in certain circumstances, meet part of the school's performing arts requirements.

## AP MUSIC THEORY – FULL YEAR

Admission to this course is by exam. This course is designed for the serious music student who has clearly mastered knowledge of scales, key signatures and pitch/rhythm reading, and has the ability to recognize and perform pitch and rhythm patterns orally and aurally. Students must pass an exam (no later than the opening class) to demonstrate this knowledge. Information regarding the exam is available from the director of instrumental music. Prerequisites: In addition to the aforementioned exam, at least one year's study of an instrument or voice. *By permission of the instructor, only. Three units.*

## EURHYTHMICS – SEMESTER

\*\*\*NEW COURSE\*\*\*

The study of Eurhythmics helps students to gain an understanding of the fundamental concepts of rhythm, pitch, and musical expression through physical movement. Students with any and all levels of musical experience benefit from this approach, which incorporates rhythmic movement, aural training and improvisation to enhance musicianship. This approach, which is based on the artistic and pedagogical principles of the Swiss composer and educator Emile Jaques-Dalcroze, gives students the chance to internalize and experience music in all parts of their being- not just through singing or playing an instrument. It's fun, physically active, and it is both an individual and a communal experience. *Prerequisite: Interest in the subject. 1.5 Units.*

## INDEPENDENT STUDY IN MUSIC – SECOND SEMESTER

Students with prior background in music are offered an opportunity to work on individual projects. Scope and content of projects will be structured in cooperation with members of the music faculty. Academic credit will be given for the successful completion of an independent study.

*Prerequisite: prior study in the project area, permission of the teacher and department chair. 1.5 units.*

## APPLIED MUSIC INSTRUCTION – SEMESTER\*

Music lessons are offered to instrumental or vocal students by working professional musicians. Intermediate or advanced students are expected to participate in recitals and other musical performances and activities. Minimum participation is one term. *This is an extra-fee course and is not given for credit. Four-year students who, in their junior or senior year, successfully complete a full school year of consecutive lessons (fall, winter, spring) may substitute this for one semester of the department requirement. See Extra-Fee Courses in the section at the end of the catalogue.*

## CHORAL MUSIC

### BLAIR ACADEMY SINGERS – FULL YEAR

This is the school's main vocal performing ensemble. The majority of its performances take place on campus (Christmas Vespers, Spring Arts Weekend, among many others). While the course meets during the school day, extended rehearsals prior to performance, often in the evening, will be an occasional requirement. Permission of the instructor; placement by audition. *Three Units.*

## INSTRUMENTAL MUSIC

Instrumental Music at Blair Academy is open to all students who have at least three years of experience with an instrument and who wish to continue their study of music through ensemble playing. Be aware that Ensembles may require extended rehearsals prior to performances, often in the evenings.

## FULL-YEAR ENSEMBLES

### STRING ORCHESTRA – FULL YEAR

\*\*\*NEW TITLE\*\*\*

This ensemble is available to all students who have at least three years experience playing the violin, viola, cello, bass or piano. Students focus on various aspects of ensemble playing including tone quality and production, rhythm, articulation, musicality, aural skills and the ability to follow a conductor. These concepts are studied primarily through our performance literature, which is selected from genres including Baroque, Classical, Romantic, and 20th Century. Students in String Orchestra will also perform in Blair's full Symphony Orchestra. Performances include (but are not limited to) the Fall Concert, Christmas Vespers and the Spring Concert, as well as off-campus performances and field trips. *Will include additional required evening rehearsals prior to concerts. This is a full year course. Three units.*

\* single semester course, available both fall and spring

## JAZZ ENSEMBLE – FULL YEAR/REDUCED MEETINGS

\*\*\*NEW TITLE\*\*\*

This ensemble is by audition only and is available to guitarists, bassists and pianists. This group creates the rhythm section for Blair's Jazz Band, and the primary focus of the group is to study various styles within the jazz genre and learn techniques for improvising and ensemble playing. Performances include (but are not limited to) the Fall Concert and the Spring Concert, as well as off-campus performances and field trips. *Will include additional required rehearsals prior to concerts. Meets two times each week for the full year. 1.5 units.*

## SEMESTER ENSEMBLES

### CHAMBER ENSEMBLE – SEMESTER

This ensemble is available to advanced music students who are interested in working in chamber group settings. Similar to an independent study, students will meet with the instructor once or twice a week, and work independently twice or three times a week. *Permission of the instructor required. 1.5 units.*

# HISTORY DEPARTMENT

MR. MICHAEL ECKERT, CHAIR

## DEPARTMENT REQUIREMENTS

World History is required of all freshmen; Western Civilization is required of all three and four-year students and is taken in the sophomore and junior years, always preceding the required US history course. Students entering Blair who have taken the first year of a two-year, high school U.S. History course/requirement must complete the Western Civilization course if they have not already taken a similar course and may—depending on the nature of the US History course at the former school, have to complete the single-year US History class at Blair.

## WORLD HISTORY – FULL YEAR

This course focuses on currently developing societies in Africa, Asia, the Middle East and/or Latin America facing the impact of former colonization and the problems of social change, political integration and economic development. In addition to a variety of texts, students use the newspaper (The New York Times) to follow current affairs in the region of study, attend lectures presented on Tuesday nights by the Society of Skeptics, and read historical novels. A range of electronic media is used in instruction. Basic academic skills such as note-taking, reading a newspaper, study techniques, and writing are incorporated into the course, as are a number of geography and computer skills. *The course is required of all freshmen. Three units.*

## WESTERN CIVILIZATION – FULL YEAR

Most students will take Western Civilization in the sophomore year, as much of its material serves as a foundation for the US History requirement. The course is a survey of the western tradition, European-focused. After beginning with an introduction to current issues in Europe (including globalization and the European Union), the course moves from the Renaissance to the present. Western Civilization will focus on major historical themes and the development of student skills (such as note taking and essay writing) through various student projects and activities, including a research paper. Documentary and commercial films, the novel *All Quiet on the Western Front*, and use of articles in *The New York Times* and primary documents further complement study. *Three units.*

## U.S. HISTORY – FULL YEAR

This course surveys and analyzes the significant events and issues in United States history from the first colonial settlements through the Cold War to the present. The main goals are for students to develop a sense of historical continuity; to appreciate the interrelationships of past, present and future; to understand their heritage; to be aware of current issues facing the United States, and to engage in the practice of critical reading and thinking. Central topics include the early colonial period, the creation of the Constitution and the national government, foreign relations, abolitionism vs. slavery, the Civil War, American industrial growth, immigration, WWI, the Depression, WWII and superpower status for the United States. Special attention is given to the development of research skills, resulting in a research paper project. *Prerequisite: Western Civilization or its equivalent. Three units.*

### ADVANCED PLACEMENT U.S. HISTORY – FULL YEAR

Designed to approximate an introductory college course in US history, this highly rigorous course prepares students to take the Advanced Placement Examination. Successful completion of this exam can result in college credit. In addition to acquiring a firm knowledge of historical themes and basic chronology, students will develop their analytical abilities. *Prerequisite: Western Civilization or its equivalent (see description). Instructor's permission is needed for admission to this course. Three units.*

### ADVANCED PLACEMENT EUROPEAN HISTORY – FULL YEAR

*This course follows the courses in Western Civilization and Advanced Placement US History. Students receiving a 3 or better on the US AP exam automatically qualify for this course. All others will need the instructor's permission.* European AP History is rigorous in terms of its assigned reading, essay writing and analysis of basic historical source documents. Wide-ranging class discussion and debate, independent reading of current events and specific preparation for the Advanced Placement Examination (May) will be pursued throughout the year. *Prerequisites: See above. Three units.*

### ECONOMICS HONORS: HISTORY AND THEORY – FULL YEAR

The course is taught at an advanced level and aims to familiarize the student with the complex processes providing for the material well-being of society. Main concerns are with the production and distribution of goods and services necessary for the survival and enjoyment of mankind. Students survey the history of economic thought and study the “giants” from the past (e.g., Adam Smith, Karl Marx, John Maynard Keynes), before moving on to analyze the complexities of our modern capitalist system. Urban problems, health care issues, social security constraints, further integration of the European Union and more will be examined over the course of the year. The extensive use of film, guest lecturers and a major research paper are highlights of the course. *Three units.*

### ADVANCED PLACEMENT COMPARATIVE GOVERNMENT/POLITICS – FULL YEAR

AP Comparative Politics will provide students with an understanding of the diversity in world political systems as well as an introduction to the frameworks political scientists use to compare those systems. The countries for the coming year will be China, Great Britain, Mexico, Nigeria, Russia, and Iran. Topics of focus will be each nation's political structure and recent changes in the political arena as well as the nation's society and citizenry: their political behavior as well as the sources and outcomes of authority and power. Students will consider the impact of culture, especially religion, on a country's political system, as well as its economic and public policies. The class will also spend a couple of weeks studying an overview of United States government – as a framework for understanding government and also because it is unavoidably a bias point for American citizens. At the conclusion of the course, students will be required to take the AP Comparative Politics. *Prerequisites: courses in US history and either European or World History. Three units.*

## US CONSTITUTIONAL LAW – FIRST SEMESTER

\*\*\*NEW COURSE\*\*\*

An introduction to the U.S. Constitution through the analysis of landmark Supreme Court opinions on controversial topics including freedom of speech, freedom of religion, abortion, the death penalty, homosexual rights, affirmative action, search and seizure law, gun control, gay marriage, and many more. There will also be a heavy emphasis on current events, derived from The New York Times. *Prerequisites: completion of U.S. History. Preference given to seniors and to those seniors who have also completed a course in either European History or Western Civilization. 1.5 units.*

## US LEGAL HISTORY – SECOND SEMESTER

\*\*\*NEW COURSE\*\*\*

The course presents an examination of the historical background and legal issues surrounding some of the great trials that changed American society. We will begin with the fundamentals of the American judicial system, including a review of the relevant constitutional and legal principles, rules of evidence, and the structure of the court system. We then move into the study of several pivotal and challenging trials in American history. The end of the semester will focus on public speaking in a courtroom setting, including a Mock Trial presentation by the students. *Prerequisites: completion of U.S. History. Preference given to seniors and to those seniors who have also completed a course in either European History or Western Civilization. 1.5 units.*

## AMERICAN GOVERNMENT: CONSTITUTIONAL LAW – FULL YEAR

\*\*\*NEW DESCRIPTION\*\*\*

This full-year course comprises the two electives described above, US Constitutional Law (1st Semester) and US Legal History (2nd Semester). *Prerequisites: completion of U.S. History. Preference given to seniors and to those seniors who have also completed a course in either European History or Western Civilization. Three units.*

## INTRODUCTION TO JAPANESE HISTORY – FIRST SEMESTER

This course will briefly examine early Japanese history and proceed through the era of isolation and golden age of art and culture (1650-1850) to the development of the modern nation-state. The major focus of the course will be Japan's 19th and 20th century political and economic modernization. The growth of nationalism during the last 150 years will be underscored, with particular emphasis on Japan's WWII experience and the subsequent rebuilding process leading to the changing Japanese economic role in the world today. Highlights include a focus on geography, art, social values and a wide variety of cultural attributes. There will be a day trip to the teacher's Japanese house to sample authentic Japanese cuisine (Sushi dinner). *Prerequisites: completion of U.S. History. Preference given to seniors and to those seniors who have also completed a course in either European History or Western Civilization. 1.5 units.*

## CHINESE HISTORY – SECOND SEMESTER

This is a survey course focusing on the history, culture and recent political and economic development of this Asian giant. The extensive use of film (e.g., *The Heart of the Dragon* series), immersion in current events (human rights issues in China, etc.), guest speakers and a required term paper are among the highlights of this course. Time will be taken to survey the history of the United States' post-World War II involvement in Indochina (Cambodia, Laos, Vietnam), with a particular emphasis on the Vietnam War years (1963-75). *Prerequisites: completion of U.S. History. Preference given to seniors and to those seniors who have also completed a course in either European History or Western Civilization. 1.5 units.*

## ASIAN STUDIES – FULL YEAR

This full-year course comprises the two electives described above, Introduction to Japanese History (1st Semester) and Chinese History (2nd Semester). Students taking both electives as a full-year sequence will be expected to have a broader understanding of pertinent issues and complete assignments accordingly. *Prerequisites: completion of U.S. History. Preference given to seniors and to those seniors who have also completed a course in either European History or Western Civilization. Preference in enrollment is given to students electing the full-year course. Three units.*

## SENIOR HISTORY SEMINAR – FULL YEAR

The Senior History Seminar is a full-year offering that will combine two consecutive single-semester courses: either of the semesters of Asian Studies (above), plus either of the semesters of American Government: Constitutional Law (above). *Prerequisites: completion of U.S. History. Preference given to seniors and to those seniors who have also completed a course in either European History or Western Civilization.*

## MICROECONOMICS ADVANCED PLACEMENT – FULL YEAR

The full-year AP course in Microeconomics will provide a thorough understanding of the principles of economics that apply to the functions of individual decision makers, both consumers and producers, within the larger economic system. The course, which prepares students for the Microeconomics AP Exam, places primary emphasis on the nature and functions of product markets, and includes the study of factor markets and of the role of government in promoting greater efficiency and equity in the economy. *Prerequisites: Completion of US History or its equivalent; enrollment in a mathematics course and completion of Precalculus with a 4.5 or better GPA. Open to juniors and seniors, only. Three units.*

## ROMAN HISTORY – AN INTRODUCTION – FULL YEAR

This full year survey course will serve as an introduction to the major periods of Roman history. The fall semester will cover the Monarchy, the expulsion of the kings and establishment of the Republic, the unification of Italy, the conflict with Carthage, and the beginnings of the fall of the Republic. The spring semester will cover the civil wars of the first century B.C., the victory of Augustus and establishment of the Empire, and the first major dynasties of the Imperial Period from the Julio-Claudians to the Severans. In addition, we will consider various topics in Roman history: the development of the Roman political and legal systems, the institution of slavery, social conflict within Roman society, and the notion of citizenship in a world empire. Readings will include some secondary sources, but the majority of readings will be from primary sources such as Livy, Plutarch, Cicero, Caesar, as well as a variety of legal and epigraphic sources. No previous study of the ancient world is necessary. *Prerequisites: Western Civilization and US History or their equivalents. Three units.*

## ADVANCED PLACEMENT WORLD HISTORY– FULL YEAR

\*\*\*NEW COURSE\*\*\*

Advance Placement World History is a course aimed at developing a greater understanding of the evolution of global processes and contacts in different types of human societies. The historical timeline of the course stretches from 8000 BCE to the present, but with a focus on the nature of changes in global frameworks and their causes and consequences, as well as comparisons among major societies. At its heart this is a course about ideas, and the analysis and interpretation of historical evidence. *Prerequisites: Western Civilization (or its equivalent), US History AP or a year grade of 4.5 in US History. Three units.*

# LANGUAGES

## MR. TIMOTHY DEVANEY, CHAIR

### DEPARTMENT REQUIREMENTS

To graduate, students must complete six units of study in one foreign language. This requirement may be waived for students for whom English is not a native language. Honors designations: In French and Spanish, honors designations are available at the 2 and 3 levels. At the 2 level, faculty set criteria, and a single teacher coordinates extra material; students are invited to participate at the beginning of the winter term.

### SPANISH 11 (SPANISH 1) AND SPANISH 21 (SPANISH 2) – TWO FULL-YEAR COURSES

The program supports the five C's of language study: communication, culture, connections, comparisons, and communities. Components of the program, including interactive lessons and other resources, offer a variety of materials, many of which are technology-based. These address and support a range of student strengths, while encouraging and reinforcing readiness skills, critical thinking, creative problem solving, and the ability to work cooperatively in the target language. The two-year sequence introduces and emphasizes all the basic grammar of the language. Vocabulary is thematically organized, emphasizing traditional as well as everyday topics. Speaking and listening skills, and later those of reading and writing, are the principal focus. *Three units each. The Academic Dean and the Spanish Department will determine recommendations.*

### SPANISH 31 (SPANISH 3) AND SPANISH 32 (SPANISH 3 HONORS) – FULL YEAR

These courses focus on reinforcing the grammar skills and basics of the language developed in the first two years of study while seeking to develop communication almost entirely in the target language. Reading provides exposure to the interesting background of Hispanic cultures through legends and historical material from throughout the Spanish-speaking world. Technology continues to be a major component of the program. Vocabulary activities provide the fundamental vocabulary useful for interaction on a daily basis. Opportunity for creative writing is provided through projects in each semester, which allow the students to focus on writing skills as they demonstrate their grasp of multiple tenses, moods and grammatical structures. The difference between the honors and regular sections involves the length and nature of various assignments, choice of readings and expectations for proficiency. *Prerequisite: Spanish 11 and 21; placement by current teacher. Three units, either course.*

### SPANISH 41, 42, 43 (SPANISH 4, SPANISH 4/5 HONORS AND SPANISH 4/5 AP) – FULL YEAR

These courses seek to improve further the proficiencies developed in Intermediate Spanish. Spanish will be used almost exclusively in class, for it is expected that students at this level will be committed to developing fluency. Readings will involve excerpts from great writers of Hispanic literature, as well as from essays and articles intended for the Spanish-speaking population. Throughout the year there will be research, projects and presentations pertaining to a range of topics both social and political. Native-language films provide exposure to the varying accents and dialects of the Spanish-speaking world. Intense preparation for the AP language exam will be a principle focus for all students. All students at this level, regardless of designation, are expected to have mastered the essentials of the language prior to beginning the course. Students must be committed to functioning at an advanced level in each of the four skill areas: reading, writing, speaking and listening. *Recommendation for these courses is made by the current Intermediate (Honors) teacher. Three units.*

## ADVANCED SPANISH CONVERSATION AND CULTURE

### FALL SEMESTER ONLY

\*\*\*NEW COURSE\*\*\*

This is a conversational, cultural course with limited formal grammar instruction. It is intended for students who have taken Spanish 4, 4H, or 4AP. Students should be strong speakers and decent writers of the target language who maintain an eagerness to delve into the more cultural aspects of Spanish. Throughout, students will read from articles, websites, and supplemental readers. Oral presentations and essay writing will be central to the course. Mastery of situational vocabulary will also be a major component of the course. There will also be an opportunity for students to focus in on particular regions of the Spanish-speaking world with regard to culturally significant people, places, and things. *Prerequisites: as noted in the course description. 1.5 units.*

## ADVANCED HISPANIC LITERATURE – SECOND SEMESTER ONLY \*\*\*NEW COURSE\*\*\*

This course is intended for students who have taken Spanish 4, 4H, or 4AP. Students should be strong speakers and decent writers of the target language who maintain an eagerness to explore a range of literature from Spain and Latin America, both prose and poetry. Selected authors include Lorca, Marquez, Fuentes, among others. Discussion and writing are in the target language, and students will be expected to analyze and comment upon the works at hand. *Prerequisites: as noted in the course description. 1.5 units.*

## ADVANCED SPANISH LANGUAGE AND LITERATURE – FULL YEAR \*\*\*NEW COURSE\*\*\*

This course combines the two semester-length courses listed above. *Prerequisites are the same. Three units.*

## FRENCH 11 (FRENCH 1) AND FRENCH 21 (FRENCH 2) – TWO FULL-YEAR COURSES

The series, *Espaces*, uses a communicative approach to French as it is spoken in the Francophone world. Students develop proficiency in listening to, speaking, reading, and writing French as they work together in paired and group activities; in addition, the students acquire cultural sensitivity and awareness of everyday activities of the French-speaking peoples. Proficiency activities serve as a catalyst for the authentic use of French, as students begin to internalize and master the language. *Students with exceptional ability and interest may be invited to receive an Honors designation, which would require further commitment to additional activities in French. Three units for each year.*

## FRENCH 12 – FULL YEAR

This course is intended for motivated and enthusiastic students who most likely have no prior background in French. However, these students have excelled in the study of another foreign language, either at Blair or in their former school. As a result, French 12 moves at a faster pace than the French 11 course and will enable students to enroll in the third year of French upon successful mastery of the material. While the concepts covered are the same as those of French 11 and 21, the textbook, vocabulary topics, and classroom approach are different. *Three units.*

### FRENCH 31 (FRENCH 3) – FULL YEAR

Third level French will use the *Ensemble* program. Students will develop cultural understanding about how people in French-speaking regions live, act and think, as well as what they value. Students will continue to build upon the communicative tasks and skills of former years. They will also acquire skills that will allow them to act independently and successfully in new cultural situations. Finally, they will use French to enrich their lives and to connect to the French-speaking world around them, from Saint Martin to Senegal, from Montreal to Mali, developing skills that will serve them both now and in the future. Students recommended for French 32 (3H) may not select this course. *Prerequisite: French 11 and 21. Three units.*

### FRENCH 32 (FRENCH 3H) – FULL YEAR

This course aims to develop those oral and written skills needed for making contact with French speaking people of the world. Emphasis is on using the language in everyday situations. Cultural study involves readings concerning daily life overseas and topics such as immigration, social classes and the French education system. Designed for the student with a solid background; French is used exclusively in class. *Prerequisite: French 11 and French 21 and department recommendation.*

### FRENCH 41, 42, 43 (FRENCH 4, FRENCH 4/5 HONORS & FRENCH 4/5 AP) – FULL YEAR

In order to develop a strong proficiency in speaking as well as in the other three skill areas (listening, reading and writing), the course prepares students to function within a French-speaking community. Readings from 20th century literature and current articles provide the basis for role-plays, debates and discussions. Video clips, films and taped materials expose students to a wide range of accents and views of the French world today. *The AP designation (French 43) is an option for approved students who will undertake the necessary extra preparation for the language exam. Prerequisite: recommendation of current teacher. Three units.*

### CHINESE 11 AND CHINESE 12– FULL YEAR

Placement in beginning courses in Chinese is determined by the instructors.

Chinese 11 is a basic, introductory course in standard Chinese (Mandarin) and is intended for students who have had no exposure whatsoever to the languages of the area. Students should enroll in Chinese 12 if they have any exposure (regular classroom or occasionally through the family) to the speaking of the language. Final placement may be adjusted through the year and will be at the discretion of the instructors.

Chinese 11 guides the student through the development of four basic skills, including aural comprehension, speaking, reading and writing. Emphasis will be on the functional use of language. Instruction begins with learning *pinyin*, the Romanization system of Chinese pronunciation. Students then progress to learning vocabulary, grammar and how to write 200 Chinese characters. *Three units.*

Chinese 12 moves at a faster pace than Chinese 11. Students will most likely cover the work necessary to be placed in Chinese 31 in the following year, though such placement is at the discretion of the instructors. In some cases, further study may be required. *Three units.*

### CHINESE 21 – FULL YEAR

This course is a continuation of the work begun in Chinese 11. Learning will go beyond the survival level to include more extensive classroom interaction and systematic grammar development. The students will be asked to use learned vocabulary to express their own thoughts, to respond to simple statements and to maintain face-to-face conversations dealing with daily life. Students will learn to write down their thoughts in sentence and paragraph form, as well as master another 200 characters. *Three units.*

### CHINESE 31 AND CHINESE 32 (CHINESE 3 HONORS) – FULL YEAR

While continuing to strengthen the essentials of grammar, syntactical structure, and vocabulary, this course will also emphasize the ability to communicate effectively with native speakers. The textbook for Chinese 31 and 32 is *Integrated Chinese: Level 1, Part 2*. In addition to textbook work, students write and perform dialogues in class and continue to develop their writing skills. Students work on group projects related to Chinese history and literature. The Honors (Chinese 32) course covers the material in more depth and with higher expectations in terms of spoken and written performance. The Honors class also learns more characters and vocabulary. *Three units.*

### CHINESE 41 AND CHINESE 42 (CHINESE 4 HONORS) – FULL YEAR

This course for the advanced student will concentrate on continuing to expand vocabulary and grammar. Students read and translate articles from Chinese sources (newspapers, poems and websites). They participate in a month-long research project on Chinese dynasties and present a PowerPoint presentation in Chinese. The Honors (Chinese 42) course covers the material in more depth and with higher expectations in terms of spoken and written performance. The Honors class also learns more characters and vocabulary. *Three units.*

### CHINESE 52 (AP CHINESE LANGUAGE AND CULTURE) – FULL YEAR

This course is designed to prepare advanced students for the AP Exam in Chinese Language and Culture. Students will develop their skills in reading, writing, listening and speaking by reading and discussing Chinese news and culture articles, engaging in group projects and presentations and analyzing literature and poetry. This course is conducted completely in Chinese. Students will sit for the AP Chinese Language and Culture exam in May. *Three units.*

### LATIN

Courses in Latin—which meet the school’s foreign language requirement—are listed under English and Classics.

# MATHEMATICS

## MR. R. LATTA BROWSE, CHAIR

### DEPARTMENT REQUIREMENTS

#### MATH 11, MATH 21, MATH 31 OR THEIR EQUIVALENTS.

**Technology:** As of the 2010-2011 School Year, a TI-89 graphing calculator (symbolic manipulator) will be required in all courses numbered 30 or higher. No other calculator should be purchased. Placement: Returning Blair students are placed by the department in the spring of the year. New students are placed over the summer by the Dean of Academics in conjunction with the department head.

#### MATH 11 (ALGEBRA 1) – FULL YEAR

Algebra 1 is a full-year introduction to algebra. Students work with radicals, rational expressions and factoring, in order to develop the tools needed to solve linear and quadratic equations.

Linear and polynomial functions and their graphs are studied extensively, as are linear combinations and linear equalities. *Placement by department. Three units.*

#### MATH 21 (GEOMETRY) – FULL YEAR

Geometry is a full-year course stressing both the discovery of postulates and theorems, as well as applications. In the first term, the postulates and theorems of Euclid, revised and restated to agree with contemporary mathematical thinking, form the basis for the study of geometry as a mathematical system. Students make extensive use of The Geometer's Sketchpad software to make and test conjectures. Later in the year, the emphasis is on applications, including ratios and similarity, triangle trigonometry, circles, areas and volumes. *Prerequisite: Math 11. Three units.*

#### MATH 22 (GEOMETRY HONORS) – FULL YEAR

Geometry Honors is an accelerated course in Euclidean geometry. The section uses the same text as the regular section, but problems requiring more creativity are investigated in the course. In addition to the topics taught in Math 21, the honors section presents formal, two-column proofs and transformational geometry. A student whose average falls below 4.0 must have permission of the instructor to remain in the course. *Prerequisite: Math. Three units.*

#### MATH 30 (ALGEBRA 2S) – FULL YEAR

Algebra 2S is designed for the junior or senior who has struggled with algebraic concepts. The topics studied will cover most of those in the Algebra 2 syllabus, with an emphasis on factoring, solving linear and quadratic equations, working with radicals and exponents and functions. The instructor will work very closely with the students to improve their confidence in mathematics. Extensive group work is intended to lead students to come to enjoy more fully their study of mathematics. *Open to juniors and seniors, only. Prerequisite: Math 11, Math 21 and department approval. Three units.*

### **MATH 31 (ALGEBRA 2) – FULL YEAR**

The course reviews and extends the study of algebra begun in Math 11, with the expectation that the student has mastered the fundamentals of geometry. Students learn to solve polynomial equations over the set of complex numbers, study rational and exponential functions, learn to manipulate logarithms, and investigate circular trigonometry. The TI-89 is used as a tool to investigate families of functions, as well as a means to use mathematics to model real-world data. *Prerequisite: Math 11, and Math 21 or 22. Three units.*

### **MATH 32 (ALGEBRA 2 HONORS) – FULL YEAR**

Algebra 2 Honors follows a syllabus similar to that of Algebra 2, but because greater rigor is demanded, a different text is used. The standard Algebra 2 curriculum is completed early in the spring term so that the remainder of the year can be devoted primarily to intermediate topics in conic sections and sequences and series. A student should maintain a 4.0 average to remain in the course. Summer work is required of all students enrolling in Math 32. *Prerequisite: Math 11, Math 22, and placement by the department. Three units.*

### **MATH 40 (ADVANCED ALGEBRA & DATA ANALYSIS) – FULL YEAR**

Advanced Algebra and Data Analysis is designed to be a terminal math course for seniors who wish to continue their study of mathematics beyond the minimum requirement but for whom the study of mathematics has been problematic. Using the graphing calculator, students analyze data as an approach to studying functions. In addition, topics such as sequences, probability and statistics, and discrete mathematics are introduced to students for the first time in the course. *Seniors only. Prerequisite: Math 30 or 31 and departmental approval. Three units.*

### **MATH 41 (COLLEGE ALGEBRA) – FULL YEAR**

College Algebra is designed for those students who wish to go beyond the minimum mathematics requirement and who are not planning immediate entry into a college sequence in engineering, the sciences or in the area of pure mathematics. Topics covered will include a review of important algebraic concepts, mathematical modeling, analytic geometry and circular trigonometry. *Prerequisite: Math 31 and department approval. Three units.*

### **MATH 51 (PRE-CALCULUS) – FULL YEAR**

Pre-Calculus is for juniors and seniors who have achieved above-average success in mathematics and who wish to extend their study of mathematics beyond the required sequence. It is expected that all students who successfully complete Pre-Calculus will be competent to enter either the non-AP calculus at Blair or an entry-level college calculus course the following year. Topics studied include mathematical modeling; triangle trigonometry and trigonometry of the circle; elementary functions and domain and range; exponential and logarithmic functions, including the natural logarithm; and inverse functions. *Prerequisite: Math 31 with department approval or Math 32 or Math 41. Three units.*

### **MATH 52 (PRECALCULUS HONORS) – FULL YEAR**

The honors level of Pre-Calculus follows the same syllabus and uses the same text as that of Math 51. Additional topics include sequences, series, and limits. Students successfully completing this course will be competent to take Advanced Placement Calculus (AB) the following year. To this end, problems requiring significant creative thought and extensive algebraic rigor will be practiced frequently. *Prerequisite: Math 32 and department approval. Three units.*

### MATH 53 (AP CALCULUS-A) – FULL YEAR

AP Calculus (A) is the first year of a two-year sequence for sophomores or juniors leading to the Advanced Placement Calculus (BC) exam in May of the following year. It covers elementary functions in depth, including exponential, logarithmic, polynomial, rational and trigonometric functions. Emphasis is placed on graphing. In addition, topics from triangle trigonometry, sequences and series, polar coordinates and limits are studied. In the spring, students follow the AP syllabus and study differential calculus, including continuity of functions; the definition of the derivative; differentiation algorithms; relative and absolute extrema problems; and related rates of change. Students should maintain a 4.0 average to remain in the course. Summer work is required of all students enrolling in Math 53. *Prerequisite: Math 32 and department approval. Three units.*

### MATH 60 (STATISTICS) – FULL YEAR

Statistics is designed for students who have struggled with mathematics at the Precalculus level and are looking for an alternative to Calculus (Math 61) in their senior year. With departmental permission, College Algebra may in certain cases be accepted as a prerequisite for the course. Students will learn various methods of data collection and approaches to understanding the mathematics of both simple daily events and important historical trends. Group work and independent research will allow students to explore their own interests through the lens of mathematics. Statistics may not be taken concurrently with any other course in mathematics. *Prerequisite: Precalculus. Three units.*

### MATH 61 (CALCULUS) – FULL YEAR

Calculus is a non-AP course in differential and integral calculus of a single variable. The pace of the course and the extent of the material covered are dictated by the ability of the students. The focus of the course is on applications of differentiation (related rates, applied minimum and maximum problems) and integration (area under a curve, volumes of solids of revolution, rectilinear motion) rather than mathematical theory. It is not expected that this course will substitute for the first semester of calculus at the university level. *Prerequisite: Math 51 or Math 52 and department approval. Three units.*

### MATH 62 (CALCULUS AB) – FULL YEAR

Calculus AB closely follows the syllabus prescribed by the College Board for Advanced Placement Calculus. The material covered is fundamental to the first semester of a traditional college calculus program. Included in the course is a study of both the theory and the practical applications of differential and integral calculus. Trigonometric, exponential and logarithmic functions will be studied extensively. Considerable emphasis will be placed on graphing and the TI-89 will be used extensively. Students are expected to take the AP exam in May. *Prerequisite: Math 52, Math 53 or Math 61 and department approval. Three units.*

### MATH 63 (CALCULUS BC) – FULL YEAR

BC Calculus is a continuation of Math 53 (AP Calculus A). Students who complete BC Calculus will have learned the equivalent of an entire year of college calculus. The course includes all the material normally studied in AB Calculus (differential and integral calculus of a single variable), as well as sequences and infinite series, parametrically defined curves and polar functions. In addition, several theoretical topics not required by the College Board's syllabus are presented to provide an overview to the foundations of rigorous mathematics. Students in the course are expected to take the AP Exam in May. Summer work is required of all students enrolling in Math 63. *Prerequisite: Math 53 or Math 62. Three units.*

### MATH 71 (MULTI-VARIABLE CALCULUS) – FULL YEAR

For the highly motivated student of mathematics who has already successfully completed BC Calculus. *Prerequisite: Demonstrated success in Math 63 and department approval. Summer work is required of all students enrolling in Math 71. Three units.*

### MATH 72 (LINEAR ALGEBRA) – FULL YEAR

In Linear Algebra students study vectors, vector spaces (linear spaces), vector maps (linear transformations) and systems of linear equations. Applications in both natural and social sciences will be considered, along with uses in abstract algebra and functional analysis. *Prerequisites: demonstrated success in Math 63 and permission of the department. Meets in alternate years; not offered in 2011-12. Three units.*

### MATH 73 (CALCULUS-BASED STATISTICS) – FULL YEAR

\*\*\*NEW COURSE\*\*\*

For the highly motivated student of mathematics who has already successfully completed Multi-Variable Calculus (Math 71). *Prerequisites: demonstrated success in Math 71 and permission of the department. Three units.*

# RELIGION AND PHILOSOPHY

## THE REV. CYNTHIA CROWNER

### DEPARTMENT REQUIREMENTS

All students entering Blair in the freshman, sophomore or junior years must complete 1.5 units in religion or philosophy before graduation.

*The Freshman Cycle.* This course is offered in conjunction with the Fine and Performing Arts Department, and the full-year cycle allows freshmen to meet the freshman/sophomore Arts requirement as well as the graduation requirement in religion and philosophy. See description for World Religions. *Freshmen only; must be taken for the full year. Three units.*

### PERSONAL EXPERIENCE, RELIGION, AND SPIRITUAL EXPLORATION – SEMESTER\*

\*\*\*NEW DESCRIPTION\*\*\*

Personal Experience, Religion, and Spiritual Exploration is a one-semester elective that allows students to systematically explore the meaning of their own life experience. Through reading two memoirs and a series of essays, viewing two narrative films about young adults coming of age, exploring some of the major religious traditions of our world, engaging in a series of interactive exercises, and nightly journaling on relevant themes, students will identify and clarify their core values, convictions, and life goals in the context of their identities as individuals and as members of an increasingly globalized society. The course culminates in a final integrative paper. *Open to sophomores, juniors and seniors. 1.5 units.*

### LITERATURE AND THE SPIRITUAL IMAGINATION

#### FIRST SEMESTER

\*\*\*NEW DESCRIPTION\*\*\*

This course is available to seniors only. Through the exploration of biblical and contemporary literature of similar genres and themes, students will be provided with opportunities to comprehend, evaluate, articulate and write about their own values and beliefs. Themes include nature mysticism, sin and forgiveness, prophetic speech, faith in a pluralistic society, and the agonizing issue of theodicy—why does God allow bad things happen to good people? Genres include novels, poetry, essays, and a narrative film. The course meets the requirements for both the English and Religion and Philosophy Departments. *Reminder: this one-semester elective is offered in conjunction with the English Department and must be registered for as a part of the Senior English elective program. This registration takes place in the student's junior English class in May. It is open to seniors only. 1.5 units. Satisfies department requirement.*

\* single semester course, available both fall and spring

## DOUBT, THE CORNERSTONE OF FAITH – FIRST SEMESTER

This course is available to seniors only. How can we expect anything but the most tentative expression of faith when we live in a world where faith is often tempered or put to flight by scientific inquiry and rationality? How do we justify the concept of a loving, divine presence in a world that too often coexists with evil? This elective explores a few authors who address the most important questions of existence. Far from a systematic study of the Christian faith, the course is most interested in reading dynamic works of literature while at the same time considering the necessary interplay of doubt and faith in our lives. Works will include Shakespeare's *Hamlet* as well as works from various genres—short stories, a novel, and some poetry. The course will meet requirements for both the English and Religion and Philosophy Departments. *This one-semester elective is offered in conjunction with the English Department and must be registered for as a part of the Senior English elective program. This registration takes place in the student's junior English class in May. It is open to seniors only. 1.5 units. Satisfies department requirement.*

## SELF AND SOCIETY – SECOND SEMESTER

\*\*\*NEW DESCRIPTION\*\*\*

*Self and Society* is a semester elective that focuses on the study of the adolescent self. Through the exploration of key theories in developmental psychology, students are encouraged to reflect on personal experiences – the goal is to move closer to answering the question *Who Am I?* As the semester progresses, we shift attention outward (using social psychology and sociology) to focus on the adolescent in society. Coursework draws from a variety of sources including formal texts, film, personal reflections, peer presentations, and class discussion. Students will be expected to keep a journal and must be willing to take personal risks in the classroom to truly achieve academic success. *Open to juniors and seniors, only. Preference is given to seniors. As of 2011-12 this course is no longer graded P/F. 1.5 units.*

## ETHICAL PHILOSOPHY: WHERE DO YOU STAND AND WHY – SECOND SEMESTER

Ethical Philosophy is a one-semester elective about how one can determine what is right from what is wrong. The course leads students to consider their most basic values and personal philosophies by studying six classic schools of ethical philosophy and modes of ethical reasoning. With this background, students will develop the tools to critically evaluate contemporary moral dilemmas including issues in human sexuality, biomedical studies, capital punishment, corporate responsibility, economic justice and environmental stewardship. Students read from primary sources, discuss case studies, and write ethical position papers culminating in a final presentation on a pressing ethical issue of their own choosing. *Open to juniors and seniors. Highly qualified sophomores may be admitted with instructor's permission. 1.5 units.*

## WORLD RELIGIONS – SECOND SEMESTER

This course is offered both as a stand-alone semester course (second semester) and as a part of the year-long Freshman Cycle. World Religions introduces students to the background and concepts of five of the world's major religions: Hinduism, Buddhism, Judaism, Christianity, and Islam. In addition, the course provides an introduction to indigenous religions. The objective of the course is for students to use the beliefs and teachings of these religions in exploring their own sense of meaning and understanding about life and God. There are nightly reading and writing assignments, and the course ends with a cumulative project. The one-semester, stand-alone version is not open to freshmen. *Preference is given to seniors. 1.5 units if not part of Freshman Cycle.*

*\* single semester course, available both fall and spring*

## GREAT STORIES OF THE HEBREW BIBLE: BUT WHAT DO THEY HAVE TO DO WITH ME? – SEMESTER\*

This elective familiarizes students with many of the classic stories of the Hebrew Scriptures as an avenue for examining the writings' relevance for their lives and our society today. The use of film will complement a variety of approaches to analysis of the stories. The very human issues of temptation and honor, deceit and forgiveness, oppression and redemption, law and grace, humanity's relationship to the earth and to God will be explored. *Open to any grade level. 1.5 units. Not offered 2011-2012*

## EXPLORATION OF THE NEW TESTAMENT – SEMESTER\*

This one-semester elective challenges students with the Christian scriptures and the question about how this ancient literature speaks to their lives and our society today. Students will be exposed to historical critical and literary interpretation which reveal nuanced but different portraits of Jesus in the four Gospels, and to select letters of the apostles. Students will be urged to evaluate which portraits, emphases, and stories speak most directly to their own life experience and values.. *Open to sophomores, juniors and seniors. 1.5 units. Not offered 2011-2012*

## MEANING AND MEDIA – SEMESTER\*

Students develop a language for constructive critique and a sophisticated level of media literacy. They will look at religious, cultural, political, and historical representations of good vs. evil, normal vs. abnormal, and us vs. them. This course is theoretical and creative. Students will present ideas in weekly written blog responses, then translate those ideas into visual works. Students will work on Apple computers, using Garage Band, DreamWeaver, Photoshop, Scratch, iMovie HD, Final Cut Pro, and iDVD. Owning a digital camcorder is not a prerequisite. This one-semester elective is offered in conjunction with the Fine Arts Department. *This one-semester elective is offered in conjunction with the Religion Department and satisfies requirements in both departments. 1.5 units.*

## HISTORY OF RELIGION – FALL SEMESTER

This course introduces students to a range of topics central to the study of religion and its place in human society, past and present. Alternating its focus from significant figureheads in religion, to the significance of the individual in the development of a religion, to the place of that religion in culture itself, the course encourages students to engage in active debate (written and oral) on the impact of faith throughout the ages. In 2010-11, the course will focused on Eastern Religions. *Open to sophomores, juniors and seniors. 1.5 units.*

\* single semester course, available both fall and spring

# SCIENCES

## DR. MICHAEL SAYERS, CHAIR

### DEPARTMENT REQUIREMENTS

All students must present 6 units in a laboratory science – *Three units in biology and three units in chemistry or physics.* In addition, four-year students at Blair must present 9 units of science, at least 6 units of which must be in the laboratory sciences, *three units in biology and three units in chemistry or physics.*

### BIOLOGY – FULL YEAR

The emphasis of this full-year laboratory course will be both investigative and conceptual, seeking to address the major topics in biology as they relate to current events and the world around us. Beginning with the scientific method, topics will include cell structure and a variety of functions, genetics and biotechnology, evolution, animals and their adaptations, plants and their functions, human anatomy and physiology and ecology. Students will develop critical reading and note-taking skills, as well as analytical skills to interpret laboratory data. *Three units.*

### HONORS BIOLOGY – FULL YEAR

\*\*\*NEW DESCRIPTION\*\*\*

Designed for the motivated 9th or 10th grade student, this course serves as an introductory exposure to major concepts in the field of biology. With an emphasis on research skills, the course covers 4 major content areas: molecules and cells, heredity and evolution, human anatomy and physiology, and ecology. Science is presented as both a process and a body of knowledge, and the emphasis is placed on learning the skills involved in acquiring, interpreting, analyzing, and communicating data. An independent research project as well as a variety of inquiry lab experiences provides an opportunity for students to learn these skills. In addition, the study skills involved in reading effectively, organizing and presenting information, and reviewing for quizzes and tests are emphasized. *Three units.*

### CHEMISTRY IN THE COMMUNITY – FULL YEAR

This full-year laboratory course was developed by the American Chemical Society to address the needs of the junior or senior who is not planning a career in science. It is intended to provide students with an understanding of the fundamental concepts of chemistry; both the extensive lab work and the main topics of the course stress the application of these concepts to our everyday lives. *Open only to juniors and seniors. Three units.*

### CHEMISTRY – FULL YEAR

This is a full-year laboratory course that introduces chemical principles and shows their applications in our technology-based society. The primary emphasis is on discovery: through hands-on, laboratory studies students are exposed to how chemical processes may be analyzed, understood, and described. Material on the structure of matter, chemical dynamics, chemical arithmetic, and energetics is woven into this context. By year's end, students will be able to describe the basic principles of chemistry, relate these principles to our economy, culture, and environment, and learn how to evolve solutions to problems. *Three units.*

## HONORS CHEMISTRY – FULL YEAR

This course provides a thorough, detailed introduction to chemical principles and their many applications. It is designed for students who have an interest in the sciences and a willingness to explore, analyze, describe, and play with the chemical nature of our world. Virtually all students will be concurrently enrolled in Algebra 2, 2H, or a higher-level mathematics course. Honors Chemistry shares topics with Chemistry, but the course adds more detail, greater depth of physical and mathematical exploration, and more numerous methods for problem-solving. Thus, honors students explore course content in greater depth: developing chemical nomenclature and arithmetic, characterizing the rates and extent of reactions, developing schemes of reaction types, and describing and exploring the role of energy in chemical operations. *By permission. Three units.*

## PHYSICS – FULL YEAR

This introductory course covers essentially the concepts found in the Honors Physics course; however, less emphasis is placed on the mathematical development of problem solving and more on the conceptual nature of the subject. Laboratory work is done throughout the course as a means of developing a more complete understanding of the principles being studied. *Prerequisites: Concurrent enrollment in Algebra 2 or higher. Three units.*

## HONORS PHYSICS – FULL YEAR

Honors Physics covers many of the basic laws of nature observed in everyday experience. Extensive laboratory work is done throughout; there are approximately 35 different labs that each student performs during the year. Analytical thinking, solid study skills, clear presentation of arguments and organization of materials are emphasized. *Prerequisite: Concurrent enrollment in Algebra 2 Honors or higher. Three units.*

## ENVIRONMENTAL SCIENCE – FULL YEAR

Students may approach Environmental Science either by taking the first semester course (Ecology) or by taking both semesters as a full-year course. Following the material covered in Ecology, the course will move to an introduction to the Law of the Commons. Specific topics addressed include groundwater, siltation, eutrophication, sewage, acid precipitation, ozone depletion, global warming, incineration, and recycling. The final portion of the course focuses on how everyday decisions regarding our lifestyles have profound impact on our environment. Laboratory exercises, field trips, and a project designing a town will complement class discussion. *Prerequisites: Biology and Chemistry or Chemistry in the Community. Preference is given to seniors. Three units.*

## MARINE SCIENCE – FULL YEAR

This course is divided into two significant sections: first, the physical and chemical factors that affect the ocean realm; second, the biological factors within this biome. The class will begin by focusing on the delimitation of the ocean's extent and depth, the physics and chemistry of its waters, its origin and geologic framework, and the exploitation of its resources. The second semester includes extensive work on major biological concepts in marine science, including the wide variety of organisms in the ocean realm, examining their physiology and adaptations and the behaviors used to interact with one another and with their environment. Throughout the year, students will examine the long history of interactions between man and the ocean and consider the future of this unique and under-explored resource. Classes will include lectures, readings, discussions, research papers, PowerPoint presentations, and in-school and out of school labs, including a possible Spring Break trip for research purposes. *Preference is given to seniors. Three units. If space is available, the first semester may be taken as a single-semester course-1.5 units.*

## BIOCHEMISTRY – FULL YEAR

The investigation of human disease serves as the basis for this introductory course in biochemistry. There are four major parts. The first, through the fall midterm, is a detailed review of basic biology and chemistry concepts. This section focuses primarily on enzymes, metabolism, polarity, bonding, protein structure, and ion chemistry. The period following, through the semester's end, will be a general presentation of certain diseases and disorders that can affect the natural functions of the body. The second semester continues the study of diseases and disorders; however, this period will begin to focus on very specific aspects of the diseases. The final period, following spring break, will be devoted to a major research project, requiring the ability to work independently. Each student will be assigned a disorder (not covered in class) and will have to perform research independently, based on methods and techniques presented in the class. This will culminate in a major research paper, as well as a presentation of findings to the class. This is expected to be a college-level paper; the entire project's value will be approximately 50% of the second semester's grade. *Preference is given to seniors. Prerequisites: successful completion of full-year courses in biology and chemistry. Three units.*

## BIOTECHNOLOGY – FULL YEAR

This laboratory-based course provides an introduction to concepts and techniques employed in the field of biotechnology. Modern biotechnology uses discoveries in genetics, biochemistry, and molecular biology to manipulate genes in organisms for human purposes. We will investigate the ancient techniques of fermentation and cheese-making, as well as the processes of gene cloning, DNA amplification by PCR, gel electrophoresis, protein identification, bioinformatics, and tissue culture. Laboratory skills and ethical implications are emphasized throughout the year. Biotechnology is open to juniors and seniors who have completed biology and chemistry. *Preference is given to juniors seeking a lab science. The course may be used as the third lab science precursor to AP Biology in the senior year. Three units.*

## EPIDEMIOLOGY – FULL YEAR

Epidemiology is the most basic science of public health and focuses on the distribution, pattern and cause of disease in populations. During the course of this full-year elective, we will explore the basic concepts of, and build a common vocabulary for, epidemiological analysis, using case studies and current events as the core of our study. We will look at risk factors, morbidity and mortality rates and begin to uncover why some people get sick and others do not. For example, in 2000, why were children in New York City almost *twice as likely* to be hospitalized for asthma as U.S. children as a whole? Why were pneumonia and influenza the leading causes of death in the U.S. in 1900 and heart disease the leading cause of death today? What does a water pump in London in 1854 have to do with epidemiology? What is an outbreak? What are at-risk populations? Students will be expected to approach the course with curiosity and an eagerness to develop critical reading/thinking skills, as we analyze issues in biology, medicine, health and social/environmental sciences. *Prerequisites: Biology, Chemistry. Open to juniors and seniors with preference to seniors. Three Units*

## ASTRONOMY – SECOND SEMESTER ONLY

The course is offered in either the first or second semester. Astronomy students will learn about our universe, following the work of astronomers including Copernicus and Galileo as they expanded our view of the Cosmos. We will work our way outward from the Earth to the Moon, to our solar system and to our Milky Way Galaxy, studying everything from our neighboring planets to the formation and inner workings of stars and black holes. Students taking Astronomy will gain a cosmic perspective beyond that of a standard physics or Earth science course and learn about modern advances and applications in the field of Astronomy. This course WILL necessarily involve some evening class work with telescopes and may require some last-minute adjustments on students' parts in accounting for weather and viewing conditions. *Prerequisite: At least one science course meeting the Blair graduation requirement (may be taken concurrently); completion of or concurrent enrollment in a geometry course. Open to all grade levels. No preference given. 1.5 units.*

## ADVANCED PLACEMENT PROGRAM IN SCIENCE

### CRITERIA FOR ADMISSION TO AN AP SCIENCE COURSE:

1. Students must complete the "breadth requirement" in science by the end of the year in which the AP Science Course is to be taken. The "breadth requirement" is the successful completion of a full-year introductory laboratory course in each of the following three areas: biology, chemistry, and physics. In the case of AP Biology, the course Biotechnology may be substituted for a class in physics but may NOT BE TAKEN CONCURRENTLY with the AP course.
2. Students must obtain the written permission of the science department chairperson. This permission is based on the academic comments and records of previous performance in related science and math courses. The student must have completed the first-year course in the area in which the AP course is being requested.
3. All AP students at Blair are required to take the AP Examination in May.

## AP BIOLOGY – FULL YEAR

Topics covered in depth include ecology, biochemistry, cell structure, respiration, molecular genetics and biotechnology, evolution, plant physiology and photosynthesis. Extensive lab work is integrated into the course throughout the year in order to emphasize the wide application of the principles being studied. *As a prerequisite, the course Biotechnology may be substituted for a course in physics. Three units.*

## AP ENVIRONMENTAL SCIENCE – FULL YEAR

Students first enroll in the regular Environmental Science course for the fall term. Based on performance, effort, and interest, qualified students are invited in late October to begin to prepare for the AP exam. In addition to following the syllabus of the regular class, AP students are required to read extra chapters from the text, write several reports on current environmental issues, attend review sessions, and take the AP exam in May. *Prerequisites: Enrollment in Environmental Science; Biology, Chemistry, and nomination by the instructor.*

### AP CHEMISTRY – FULL YEAR

Advanced Placement Chemistry focuses on the process of solving complex problems in chemistry, as well as reaching intuitive-level understanding of abstract concepts. The major topics covered include chemical thermodynamics, kinetics, equilibrium, states of matter, atomic and molecular structure, oxidation and reduction, electrochemistry, and chemical bonding. Weekly laboratory work enhances students' understanding of concepts being studied. *Prerequisite: Physics Honors or Physics. Three units.*

### AP PHYSICS B – FULL YEAR

\*\*\*NOTE NEW COURSE NAME\*\*\*

This is the course formerly entitled "AP Physics." Topics covered in this non-calculus, first-year college course are kinematics, dynamics, thermodynamics, electrodynamic phenomena, atomic structure and particle physics. Creative and well-presented problem solutions are emphasized throughout the course. Extensive laboratory work is done throughout the year, typically involving computer interfacing with the very latest in high school laboratory apparatus. Each student in the course conducts over 30 laboratory experiments. *Offering is subject to enrollment. Three units.*

### AP PHYSICS C – FULL YEAR

\*\*\*NEW COURSE\*\*\*

AP Physics C is a first-year college physics course focused extensively on the principles of Classical Mechanics, and Electricity and Magnetism. This curriculum differs from AP Physics B in that it requires students to use differential and integral calculus explicitly. Also, some topics not covered in the Physics B curriculum are introduced here (e.g. moments of inertia, conservation of angular momentum, Gauss' Law, and Maxwell's equations). Along with the breadth requirements of the science department, students are also required to have completed the Calculus AB or BC course upon entering this class. Extensive laboratory work is done to emphasize the fundamental aspects of the ideas being studied. *Prerequisites: AP Calculus AB or higher. Offering is subject to enrollment. Three units.*

## EXTRA-FEE COURSES

### MUSIC LESSONS

Music lessons are offered to instrumental or vocal students by working professional musicians. Intermediate or advanced students are expected to participate in recitals and other musical performances and activities. Minimum participation is one term. *This is an extra-fee course and is not given for credit. Four-year students who, in their junior or senior year, successfully complete a full school year of consecutive lessons (fall, winter, spring) may substitute this for one semester of the department requirement.* Fees are set in the summer, and returning students may enroll through the music department. Lessons are paid for, in advance, before the beginning of each term. Once lessons are begun, there can be no refunds. New students will receive enrollment forms with their registration packets during the summer. *No credit.*

### DRIVER'S EDUCATION – FALL/WINTER/SPRING

Classroom and on-the-road instruction are available at the school. Arrangements may be made through the assistant headmaster's office in Clinton Hall. *No credit.*

### SAT I PREPARATION – SPRING/FALL

Materials detailing the SAT 1 prep course offered at the school in the spring are mailed to juniors during the winter term. The course runs for the month of April and prepares students for the May SAT 1. A similar course is offered in the fall of the year, in preparation for the October and November SAT 1. Materials are mailed to seniors in August. *No credit.*