

# Packer Collegiate Institute

## Upper School Curriculum Guide

2010-2011



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## Packer Upper School – Four-Year Plan

Packer's **Upper School** curriculum is designed to encourage each student to realize his or her highest level of achievement. An engaging academic program; a vibrant community; and an array of artistic programs, athletics and clubs enable students to extend their personal interests and cultivate their talents. Freshmen and sophomore students pursue a prescribed program to ensure that they are confident and capable in critical analysis, reading, writing, mathematics, research, language, computer literacy, and study skills. Junior and senior years provide multiple opportunities to apply these skills through elective courses in areas of particular academic and creative interests.

The freshman year is organized around a study of major literary works, ancient civilizations, and the *FreshArts* course, which is an introduction to the fine and performing arts. Additionally, freshmen take an introductory physics course, a world language class, mathematics, as well as one quarter of computer literacy through the computer science department, one quarter of information literacy, and a one quarter health seminar prior to beginning Packer's peer support program.

The sophomore year looks at the *American Experience* from both a historical and a literary perspective. Chemistry, world language, mathematics, and health complete the required course of study for the grade. Students may choose to pursue an elective course in the tenth grade as well. Some students elect to enroll in a second world language, journalism, a computer science course, or a visual, dance or theater arts course to round out their second year of Upper School.

Students in their junior and senior years have increased flexibility in their academic schedules. Advanced Placement (AP) courses and upper level electives from each of the academic departments enable students to pursue particular strengths and talents. English course: The Individual in Society, biology and modern world history are required of all eleventh graders. Independent study, senior thesis, School Year Abroad, Maine Coast Semester, Rocky Mountain Institute, and cultural exchange programs are just a few of the special opportunities available for eleventh and twelfth grade students.

### **Graduation Requirements**

Four credits of English

Three credits of a world language

Three credits of mathematics

Three credits of history

Three credits of sciences

Two credits of elective academics

Two credits of arts

Four credits of physical education

One-half (.5) credit computer science (beginning with the Class of 2013)

One credit of health (completed in the 10<sup>th</sup> grade; 9<sup>th</sup> grade (1st quarter) and 12<sup>th</sup> grade (3rd quarter) each have a required health seminar; see Health Department, page 50 for further information.

\*Information literacy (one quarter)

\*Computer literacy (one quarter)

Forty-five hours of school and community service

\*Although required for graduation this course is not offered for credit and is graded on a pass/fail basis.

## Special Programs

### Advanced Placement and Accelerated Courses

Advanced Placement (AP) and accelerated courses enable students to pursue particular strengths and talents to the highest level of achievement. They are valuable to students because these courses represent to college admissions offices a clear indication that a student is taking the most challenging offerings at Packer. However, to do well in such a course, a student must possess not only the requisite content skills, but also the traits that characterize a commitment to serious study.

**Students who do well in AP and accelerated courses are self motivated, responsible, intellectually curious, independent thinkers who actively seek and respond maturely to constructive evaluation of their work.**

They also routinely demonstrate the following attributes, appropriate for their age:

- Solid understanding of concepts and facility with the skills from pre-requisite courses and material
- Ability to grasp complex and abstract ideas easily
- Strong analytic skills as demonstrated through class discussion, written work, and problem solving
- Clear, effective oral and written communication skills
- Well-developed student skills including: organization, effective note-taking, thorough and timely homework completion, and time management

**In addition to a student's grade record this criteria is use by teachers and department heads to make enrollment decisions for all AP and accelerated courses.**

Packer offers classes that prepare students for the following Advanced Placement examinations: American History; Art: Studio General; Art History; Biology; Calculus AB; Calculus BC; Chemistry; Computer Science; English Literature; French Language; European History; American Government/Politics; Latin: Vergil; Physics B; Spanish Language; Statistics.

## **Independent Study Program**

Students in grades ten through twelve can participate in the Independent Study Program, in which students can design a program to make possible a specialized project or course of study over the period of one semester or an entire academic year. An independent study is may not take the place of a course in Packer's curriculum.

The emphasis in this program is on *independent*; it is the student's responsibility to meet the deadlines and obligations of his/her program of study and the Independent Study program's general guidelines. Every independent study has a faculty mentor who is available to assist the student with completing a project proposal; mentor and student are expected to meet on a regular basis throughout the duration of the project. The mentor's role is to serve as a guide and resource.

Students who participate in the Independent Study program are responsible for writing a narrative comment at comment time (first and third quarter) and keeping the Independent Study coordinator apprised of their progress. At the end of the project, each student will determine in conjunction with his/her mentor if he/she has fulfilled the project's goals and then assess a grade of pass or high pass.

## **Senior Thesis Program**

Second semester seniors interested in pursuing a self-designed, in-depth study resulting in an important piece of original work may choose to participate in Packer's Senior Thesis Program. The purpose of the program is to promote skills of independent, self-directed learning, and to reinforce essential behaviors linked to creative, original work. Students who participate in this program are afforded the opportunity to frame a research project based on their personal academic interests and area(s) of specialization.

### Program Requirements

Senior Thesis Program participants will construct a research design that:

- accesses both faculty and community resources;
- works with printed material, multimedia resources, and Internet/on-line databases;
- additionally, program members deliver a 30-45 minute presentation of findings to their classmates and members of the school community.

Senior thesis presentations will take place during the first week of Senior Term. Throughout the spring semester, program members are required to attend weekly meetings with their mentor and thesis workshops as announced. In addition senior thesis members are required to write a third quarter comment detailing the progress of their study and future plans.

All projects will be exhibited during the last two weeks of the semester. Senior thesis applications are due on the **first Wednesday in December** of a student's senior year and require the approval of the class dean and program coordinator. Senior thesis projects receive academic credit and are evaluated on a high pass, pass, or fail basis.

**Note:** Students who chose to apply "early decision" to college (November 1 deadline) should be sure that their transcripts accurately represent their course of study. If senior

thesis is included on a transcript being mailed to colleges, the colleges expect students to enroll in this second semester course.

### Second Semester Course Load

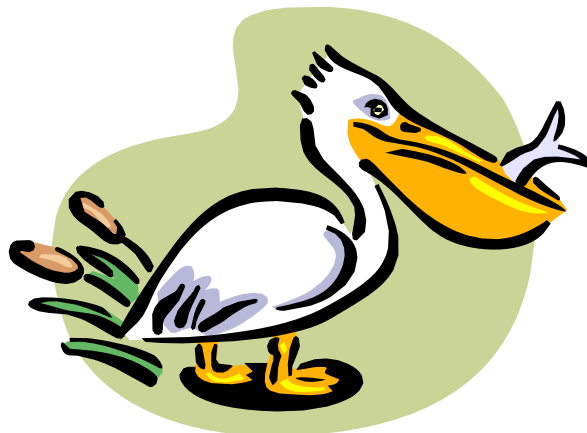
Students are expected to carry four academic courses including an English course in addition to the Senior Thesis. The project will be the equivalent of one-half course credit.

### **Chewonki Semester School**

Each semester, two juniors may enroll in this rich academic program that explores the relationship between humankind and the natural world. At the 400-acre peninsula campus of the Chewonki Foundation, a not-for-profit educational institution in Wiscasset, Maine, approximately thirty eleventh grade students complete one semester of junior year coursework while pursuing environmental studies and working on the Foundation's organic farm. For more information, visit [www.chewonki.org/mcs](http://www.chewonki.org/mcs).

### **Rocky Mountain Semester**

Students in their junior year may enroll in this unique semester program that is offered by the High Mountain Institute. Students engage in a rich academic program that takes place in both classrooms and the southern Rocky wilderness. In addition to traditional courses like United States history, calculus and world language, students also pursue environmental studies and engage in wilderness experiences such as fly-fishing, wilderness camping and mountain climbing. Students submit applications to the program during their sophomore year. For more information, visit [www.hminet.org](http://www.hminet.org).



## Course Descriptions

The course descriptions that follow represent a complete listing of courses offered in the upcoming school year (2010-2011). Some elective courses are given every other year to ensure the widest array of choices is available to Packer students. All classes meet four days per week unless otherwise indicated in the course description.

**Please note** that whenever a grade average is specified for course enrollment, student grades through the first semester for the academic year and/or cumulative grades in a sequential course of study are used as the standard for admittance.

## Computer Science

### Department Head: Jim Anderson

Packer's computer science curriculum is designed to offer students a variety of opportunities to become educated, competent, and confident computer users and informed digital citizens. Selecting from a range of courses, students can improve their ability to use the computer as a creative and problem solving tool, study certain applications in depth, or pursue their interest in programming languages and the formal discipline of computer science. All courses aim to help students improve their capacity to think abstractly, analytically, and systematically. Furthermore, an emphasis on innovation and design provides a creative element to each course.

**Beginning with the Class of 2013, all upper school students are required to take a semester of computer science in addition to the 9th grade computer literacy course.**

*Please note that courses without sufficient enrollment will not run.*

### **Ninth Grade Computer Literacy                      820 Computer Science                      Fall (One Quarter)                      Class meetings: 1**

This required course for all ninth grade students meets once a week to prepare them to make safe, productive, and skillful use of their Dell laptops in the Packer computing environment. Students receive an introduction to their new laptops as well as instruction and support in using Packer servers to manage work for academic classes, in safeguarding their important school files from accidental loss, and in keeping their computers free of hazards such as viruses and spyware. Students will also explore features of Windows that enhance productivity and enable them to use the computer for sophisticated tasks. Furthermore, this course addresses timely issues such as information literacy and technology-related ethics.

### **Computer Science and You                      812 Computer Science                      Spring                      Class meetings: 4                      Credit: .5** How do computers think? Do they think? How do they communicate? How does Facebook

know who my friends are? Do you actually own software you purchase? Who owns digital content like MP3s and videos? How do the basic components and concepts of computer science affect my everyday life?

The goals of Computer Science and You are to explore the impact and influence computer science has on modern society. Students will develop an understanding of algorithmic thinking and problem solving as well as how those skills and concepts are expressed and applied through software and systems. Students will also be introduced to topics such as interface design, limits of computers, as well as societal and ethical issues related to technology. No prior programming knowledge is required.

This course is open to students in grades nine through twelve.

### **Artificial Intelligence: From Robotics to Ethics**

**Computer Science                      837                      Fall                      Class meetings: 4                      Credit: .5**

This course is intended as an overview of the many practical, theoretical, and ethical issues involved in artificial intelligence, a field that blurs the line between reality and virtual reality. Students will leave this course with an understanding of concepts in robotics, language theory, and computer science. Through our investigation we will also explore the relationship between natural language and programming language. Coursework will begin with the hands-on experience of collaboratively assembling and programming a simple robot. We will extend our learning into the realm of artificial languages, creating a knowledgebase that simulates human speech and thought. Finally, the course will delve deeply into the ethical, philosophical, and moral implications related to robotics and the rapidly progressing technologies of tomorrow.

This course is open to students in grades ten through twelve.

### **3D Animation**

**Computer Science                      840                      Spring                      Class meetings: 4                      Credit: .5**

Ever wonder how Pixar creates such realistic looking fur on their characters? 3D modeling is the process of using computers and software to develop a mathematical representation of the surface of an object, in three dimensions. This representation, called a 3D model, can then be displayed as a 2D image or used in a computer simulation of physical phenomena.

The goal of this course is to introduce students to the techniques and possibilities of 3D computer modeling and its application in animation. Using Autodesk Maya, a professional animation package, and other tools, students will learn to build their characters and objects as 3D models and then animate them in short videos. Topics include character design, programming of character traits and actions, rendering and cell frame video editing. Students will also have the opportunity to interact with, and learn from, professionals working in 3D animation production. The work in this semester-long course will culminate in final animation projects that will be screened in the annual Packer Film Festival at the end of the school year.

This course is open to students in grades ten through twelve.

### **Fundamentals of Computer Science**

**Computer Science                      810                      Spring                      Class meetings: 4                      Credit: .5**

This course is an introduction to the discipline of computer science focusing on problem solving, software design, logic, Boolean algebra, and the principles of formal language theory. Students will design and construct software to solve increasingly interesting and challenging problems. They will also explore the historical framework of computer science, the nature of digital information, the evolution of the Internet and networking, and the cutting-edge technological issues affecting the world. Skills will be developed in preparation for AP Computer Science (optional). No prior programming knowledge is required.

This course is open to students in grades ten through twelve.

### **AP Computer Science**

**Computer Science                      850                      Year                      Class meetings: 4      Credit: 1**

This one-year course prepares students to take the Advanced Placement Computer Science exam. Students will further their knowledge of both computer science and the Java language through the study of advanced topics such as algorithm efficiency, recursion, object-oriented software design, and dynamic data structures. Working with the AP Computer Science case study and their own complex programming projects, students will improve their ability to design, code, test, debug, and modify sophisticated programs.

**Prerequisite:** Grade of B or above in Fundamentals of Computer Science or approval of the instructor.

|                |
|----------------|
| <b>English</b> |
|----------------|

### **Department Head: Teresa Genaro**

Through an intensive study of literature, the Upper School English curriculum seeks to instill in students an active curiosity about and appreciation for literature, human nature, and the world around them. In reading works from a variety of genres and a range of time periods, students hone their critical reading, thinking, and writing skills in preparation for the demands beyond high school. At each level, the processes of academic endeavor are emphasized; students write and revise often, and close readings of texts reinforce interpretive skills useful in all disciplines.

Packer requires that students take English during each of their four years in high school. Ninth, tenth, and eleventh graders take year-long courses focusing on age-appropriate literature and skills. Twelfth graders enroll in two semester-long English electives. Semester-long journalism classes are open to tenth and eleventh grade students in addition to their required year-long English course. **Eleventh graders interested in taking one of the Advanced Placement English exams may take a supplemental course to become familiar with the demands of the test and to study intensively literature not included in the required eleventh grade course.** Eleventh graders may also enroll in a senior English elective if space is available and their schedule permits. At all grade levels, students study vocabulary and the conventions of correct writing in the context of their own reading and writing. The department expects that students will leave Packer with the writing and thinking skills necessary for their continued success and with a love for literature and for reading.

The English department is committed to introducing students to a range of literature, and includes work by authors both within and beyond the traditional literary canon, emphasizing national, ethnic, racial, cultural, and religious diversity.

### **Grade Nine**

**Self-Expressions                      English 110                      Year                      Credit: 1**

In this course, students explore issues of identity through literature and their own writing. In doing so, they develop the critical reading and composition skills necessary for their success in high school. Students examine diverse literary works about the nature of self and moral choice. Through class discussion as well as participation in mock trials and dramatic scene work, students grow as critical readers. Students also develop techniques of self-expression in their writing, composing analytical and personal essays and imaginative pieces, including short fiction. Through peer-conferencing and other revision techniques, students learn that good writing involves rewriting.

Texts may include: *Antigone*, Sophocles; *Things Fall Apart*, Chinua Achebe; *Macbeth*, Shakespeare; and *One Flew Over the Cuckoo's Nest*, Ken Kesey.

### **Grade Ten**

**The American Experience                      English 120                      Year                      Credit: 1**

Using the essential question, "What does it mean to be an American?", the American Experience course explores the literature of the United States from the voices of the early Americans to the present day. The literature chosen reflects diverse voices and the many ways of interpreting the experience of being an American. Students are given the opportunity to write in a variety of forms, but the course emphasizes the analytical essay. Students study grammar and vocabulary throughout the year.

Texts may include works by Ralph Waldo Emerson, Henry David Thoreau, Walt Whitman, Emily Dickinson, Kate Chopin, Toni Morrison, F. Scott Fitzgerald and Arthur Miller.

### **Grade Eleven**

**The Individual in Society                      English 130                      Year                      Credit: 1**

In this course, students examine the individual's relationship to and function in society. Throughout the year, students will explore different elements of the individual and society through reading and discussion, personal and analytic writing, and individual or group projects. Students will read short stories, poetry, plays, and nonfiction. Art and film may also be used as supplementary texts. Significant attention is given to analytic writing, with emphasis on thesis development, revision of first drafts and integration of feedback from peer and teacher review.

Texts may include works by William Faulkner, Annie Proulx, Edith Wharton, Richard Wright, William Shakespeare, Lynn Nottage, Bertolt Brecht, Countee Cullen, Gwendolyn Brooks, Robert Hayden, and Walt Whitman.

**AP English                      English 160                      Class meetings: 1                      Year                      Credit: 1**

This course meets once a week to prepare students for the AP English exams. Students will practice the close reading and test-taking skills necessary for success on the exam, write essays on a variety of topics, and review the literary terms and techniques on which the exams focus. Upon successful completion of the course and sitting for the AP exam, students will receive an AP designation on their transcripts for English 130.

This course is open only to juniors.

**Prerequisites: Students who wish to be considered for the AP English course must have maintained an A- average in tenth grade English and must have submitted a sample analytic essay to the AP English instructor by Friday, February 12, 2010.**

Placement decisions will be made and announced by the English department head in consultation with 10th grade English teachers and the AP English instructor.

## **Grade Twelve**

### **Literary Endeavors**

Students are required to take one elective in English during both the fall and spring semesters of their senior year. Each year, members of the English department offer a variety of elective courses in writing, both fiction and nonfiction; in film; and in literature not covered elsewhere in the English curriculum. The rigor of these courses encourages students to be more engaged in critical reading, to take greater intellectual risks, and to exhibit greater autonomy in designing assignments, crafting thesis statements, writing and seeking constructive criticism on paper drafts, and, where appropriate, augmenting their written analysis with research from secondary sources.

### **Fall Semester**

#### **Classical Journeys in Literature    English 163                      Fall                      Credit: .5**

Seductive women who lure men to their watery deaths; lascivious clergy who have their bottoms scorched when they woo the wrong woman; and flatterers buried for all eternity up to their eyeballs in excrement. Sound like a commercial for a modern reality TV show? Look again – these are the ingredients of which the classics are made. In this course, we will explore three of the great classical journey novels, beginning in Ancient Greece with Homer’s *Odyssey*, traversing through Medieval England with Chaucer’s *The Canterbury Tales* and ending in the depths of hell with Dante’s *Inferno*. This course will look at these classical journeys and examine how each work gives insight into its own time and yet holds sustaining relevance to modern society as well.

#### **Dostoevsky                                      English 148                      Fall                      Credit: .5**

We will read Dostoevsky’s psychological masterpiece *Crime and Punishment*—a novel about a university drop-out who commits an “experimental” murder. In Dostoevsky’s in-depth treatment, this ultimate act of defiance tests the existence of God, the meaning of good and evil, the nature of justice, and the make-up of the human psyche. In the second half of the course, students will read short works of fiction thematically related to *Crime and Punishment*, including *Dr. Jekyll and Mr. Hyde* (also about a fundamental split in the psyche) and Camus’ *The Stranger* (also about alienation from humanity).

#### **New York City in Literature              English 154                      Fall                      Credit: .5**

New York City in Literature explores the evolution of the New York character through literary, social, and historical texts. Through reading, writing (formal & personal essays - of which there are several papers and a number of written responses – poetry, short fiction, literary analysis, and dramatic exercise), and lively discussion, together we investigate the recurring themes of identity & personal journey, both metaphorical and literal, in the New York experience. Essentially, through the lens of New Historicism, we attempt to wrangle with New York as its own literary and cultural organism.



evaluate their own work as well as the works of other writers, including their peers. Creative Writing: Short Fiction strives above all to create a comfortable and productive atmosphere rooted in creativity, constructive criticism, and intellectual daring.

### **Latin American Literature (in translation)**

**English 145**

**Spring**

**Credit: .5**

The biggest literary explosion of the 20th century, the Latin American "Boom," produced such writers as Juan Rulfo, Gabriel Garcia Marquez, and Julio Cortazar. During the course of the semester, we will read each of these Boom writers, looking at Garcia Marquez's masterpiece *100 Years of Solitude* (where beautiful women fly to heaven while hanging sheets, and people live for 145 years), Juan Rulfo's *Pedro Paramo* (where a series of narrators speak from the grave) and short stories of Cortazar (where people transform into salamanders) and Borges (where folks wander inside literal and metaphoric labyrinths). Finally, we will end with the extraordinary poetry of Pablo Neruda: his impassioned love poems, his odes to socks (best literature ever on that piece of clothing), and his poems of political protest.

### **The Bible as Literature**

**English 155**

**Spring**

**Credit: .5**

There is only one book whose name means *the* book, and that's the Bible. It is unquestionably the book with the greatest influence on your life—and that's true even if you've never read a page of it; its cultural influence is pervasive. Yet in this course we will attempt, at times, to read it as if three thousand years of Western history and culture had never happened; that is, to the extent humanly possible, to read the Bible without preconceived beliefs, simply as freshly written stories whose main character is God. We will read selections, in standard and more modern translations, from Genesis, Exodus, the story of David, the Prophets, the Book of Job and the Gospels. We will also look at ways that artists and writers have creatively re-imagined the Bible including Michelangelo's Sistine Chapel paintings and John Milton's *Paradise Lost*.

### **Writing about Film**

**English 159**

**Spring**

**Credit: .5**

What does it mean to "read" a film? What is the language of film? How do literary elements such as metaphor, symbolism, and characterization operate in the medium of film? In this course, students will learn about film elements and techniques as they hone their visual skills and learn to "read" a film; they will demonstrate their interpretive and analytical ability as they write a variety of papers throughout the semester. Emphasis will be on class discussion and on writing cogently about both content and technique; students will also keep a daily film journal. In this course, we will view films rated R.

### **Screenwriting**

**English 157**

**Spring**

**Credit: .5**

Think about your favorite movie. Now take a moment and think about how many people were needed to bring the story to the screen. Some films employ hundreds, even thousands of people in the process of taking a script idea to a finished film. No matter the size and scale of the cinematic endeavor, all movies originate with a writer and a piece of paper. We will look at how to create this paper: the screenplay. Unlike a short story or a novel, a screenplay is a piece of literature meant to be enacted and transformed. It is a blueprint for a larger and interactive creative process. This class will explore the ways in which a screenplay provides the blueprint for what we see on the screen, preparing students to create the blueprint itself through practicing the craft of screenwriting.

Students will learn about screenwriting through exploring elements of dramatic structure; studying existing scripts and their corresponding films; and, finally, writing and workshopping their own creative endeavors, culminating in a short film script.

The class will combine creative and analytical writing, shifting more towards the creative as the semester progresses. In this course, we will view films rated R.

**Shakespeare's Problem Characters      English 149      Spring      Credit: .5**

More than 400 years after the plays were written, we continue to read Shakespeare because of the beauty of his language, the stories he tells, and the insight he offers into human nature. Though written in a world entirely different from ours, we nevertheless find universal truths and characteristics in what he writes. Sometimes, though, contemporary perspectives knock hard against the social values of Elizabethan England, and in this course, we will read three plays that feature characters that can be problematic for a contemporary audience. The depictions of a Jew in *The Merchant of Venice*, of a black man in *Othello*, and of a woman in *The Taming of the Shrew* (even the title gives one pause!) raise questions about whether these plays can continue to hold value even while offering limited and at times offensive views of those outside the mainstream in Shakespeare's time. Readings will include the plays themselves and both contemporary and modern reactions to them.

**Journalism**

**Introduction to Journalism      English 161      Fall/Spring      Credit .5**

In this semester course, students learn the skills involved in the craft of newspaper journalism, including how to interview sources; how to report and write various news stories; how to take news photographs; and how to write headlines. Topics include current events, newsworthiness, fairness and accuracy, ethics, student press rights and freedoms, and beat reporting. Students will also put their skills and knowledge into practice by writing for *The Prism*, the Upper School's monthly newspaper, and *The Prism's* website (packerprism.com). Upon completing Introduction to Journalism in the fall, students will be eligible to enroll in Advanced Journalism in the spring. Preference will be given to tenth and eleventh grade students.

**Advanced Journalism      English 167      Class meetings: 5      Fall/Spring      Credit: .5**

The students in this course are the editors and senior staff members of the Upper School's newspaper, *The Prism*, and *The Prism's* website (packerprism.com). They will work on all aspects of the newspaper, from story planning to reporting, and from editing to design; they will be responsible for creating *The Prism's* content, format and style, and for meeting journalistic standards and ethical principles. Students will also study topics including current events, ethics, online journalism, student press rights and freedoms, and the evolving state of the news media.

**World Languages**

**Department Head: Yongling Lu (serving as the World Languages coordinator)**

The faculty of the world language department is committed to providing a curriculum through which students develop the skills necessary for comprehension and effective communication in Latin, French, Chinese and Spanish. In addition, our faculty believes that

the study of people and culture is critical to the appreciation of a language; therefore, appropriate historical and cultural material is integrated at each level of the program.

Packer requires three years of foreign language study in the Upper School. Students must also successfully complete level III in French, Spanish, Chinese or Latin to fulfill the graduation requirements. Each successive level of instruction is aimed at building upon the skills of the previous year. For this reason, there are established prerequisites for each course beyond the introductory level. Due to the full range of courses we offer at the advanced level, schedule permitting, Packer students may enroll in multiple language courses with approval from the world language department head and dean.

Upon entering the Upper School, students who are new to Packer are required to complete a placement examination which is used to determine their language proficiency, while returning Packer students are placed according to their middle school teachers' recommendations and grades. Although students entering the ninth grade may opt to choose a new language, they are strongly encouraged to continue the study of language they began in middle school.

*Courses without sufficient enrollment will not run.*

Upper School students with documented language-based learning differences may qualify for one or more of the following accommodations:

**World language waiver:** A world language waiver sets aside the school's world language graduation requirement. This waiver may be requested at the beginning of any school year in which said student is enrolled in the Upper School or by special permission from the Upper School administration.

**Pass/fail option:** The pass/fail grading option allows a student to enroll in a language class for credit that will be granted on a pass/fail basis. Students pursuing the pass/fail option must fulfill the following expectations in order to pass the course:

- Students must make an effort to participate regularly in class.
- Students must earn a minimum average of 60% on all homework, tests and quizzes.

Included within this option are accommodations appropriate to the development of both oral and written work. Due to the idiosyncratic nature of world language syntax and orthography, spelling accommodations will be granted only to those who exercise the pass/fail option.

**Course for grade:** Some Packer students with language-based learning differences will elect to enroll in a world language class for a grade. It is important that students and families understand that when students elect to take a course for a grade, they will be assessed according to the same standards as other students in the class. They will earn a grade based on their mastery of the course content alone.

The routine accommodations of extended time, tests on computers and preferential seating will continue to be offered to students who qualify. Please take time to discuss each of

these options with a member of the world language department, your child's dean, and a learning skills specialist in order to select the option that best fits your child's individual needs. All decisions are binding for the duration of the school year, unless appealed to the Upper School head or her representative.

### **Spanish Program**

**Spanish I**                      **Spanish 228**                      **Year**                      **Credit: 1**

This Upper School course is an introduction to the Spanish language. While acquiring a solid, basic vocabulary, the beginner will exercise the four skills necessary for the mastery of language: listening, speaking, reading, and writing. The course will combine a communicative approach with a solid grammar base, enabling beginning students to express themselves. Appropriate readings from authentic sources, communicative activities, and cultural presentations will serve to enhance student learning.

Texts include: *Aventuras*, textbook, Vista Higher Learning

**Spanish II**                      **Spanish 227**                      **Year**                      **Credit: 1**

Spanish II students will continue to consolidate the skills learned in Spanish I. They will be exposed to new and more advanced grammar topics while continuing to develop their communicative abilities. Students will be introduced to authentic literary texts that will serve as a basis for vocabulary acquisition, brief writing assignments, and in-class discussion.

Texts include: *Aventuras*, textbook, Vista Higher Learning

**Prerequisite:** Spanish 228 (Spanish I) with a grade of C+ or above

**\*NOTE:** Students who do not satisfy the prerequisite must repeat Spanish I or complete a summer remediation program. Students who elect to pursue summer work must retake and pass the Spanish I final exam with a grade of B- or above before the start of the fall semester in order to move to the next level.

**Spanish III**                      **Spanish 238**                      **Year**                      **Credit: 1**

Spanish III students will progress from an intermediate to an advanced level in Spanish. Advanced grammar topics will include the subjunctive and conditional moods. Our textbook, which includes authentic materials, will expose students to an array of important Hispanic authors and cultural figures. Written and oral summaries of these works, together with discussion in the classroom, will provide a meaningful context for the student's progress in the areas of grammar and vocabulary.

Texts include: *Enfoques*, text and workbook, *Vista Higher Learning*

**Prerequisite:** Spanish 227 or a grade of C+ or above

### **Spanish IV-A: Advanced Spanish Grammar, Composition and Style**

**Spanish 247**                      **Year**                      **Credit: 1**

This advanced course will work toward mastery of the grammar learned in Spanish I, II, and III. Students will be introduced to the skills and standards of the SAT II/Spanish and the Advanced Placement Spanish Language examinations. This course will focus on advanced vocabulary acquisition, speaking, reading comprehension, and listening. Students will be introduced to basic literary themes and movements in Hispanic literature.

Students enrolled in this course will be prepared to sit for the SAT II/Spanish test in June.

Texts include: *Abriendo Paso Lectura* and *Gramática*, Prentice Hall

**Prerequisites:** Grade of A- or above in Spanish 238 and/or permission of the department head.

**The following courses are offered in alternating years and satisfy the requirements for Spanish 248 and 258.**

**Spanish IV/V: Spanish Language, Literature and Culture: The Iberian Peninsula**  
**Spanish 248/258                      Year-Offered 2010-11                      Credit: 1**

This intermediate-advanced culture and conversation class provides students with a variety of opportunities to learn about the Spanish-speaking world. Students will study history, political trends, artistic movements and literature from Spain. The course will begin with a survey of the medieval and the Golden Age periods. The focus of the spring semester will be on modern and contemporary Spain. Authors may include but are not limited to Cervantes, Lorca, Hernández, and Machado. Students will continue to work on the four language skills: reading, writing, listening, and speaking.

**Spanish IV/V: Spanish Language, Literature and Culture: The South America**  
**Spanish 248/258                      Year-Offered 2011-12                      Credit: 1**

This intermediate-advanced culture and conversation class provides students with a variety of opportunities to learn about the Spanish-speaking world. Students will study history, cultural trends, and literature. In the fall semester, our study will focus on Central America and the Caribbean. During the spring semester, students will study South America. In all aspects of this course, students will continue to work on the four language skills: listening, speaking, reading, and writing.

Text: TBD

**Prerequisite:** Grade of C+ in Spanish 238 or permission of the department head

**Advanced Placement Spanish Language**

**Spanish 257    Year    Credit: 1**

This advanced Upper School course combines an exploration of twentieth century literature with an intensive grammar review. Contemporary writings, newspapers, magazine articles and audio files are used to engage discussion and improve oral proficiency, an essential part of the Advanced Placement exam. Essays and oral presentations are directed toward increased accuracy and fluency. Each student in this course is expected to take the AP exam in May.

Texts include: *Preparing for the AP Spanish Exam* and *Abriendo Paso Lectura*, Prentice Hall, and *Spanish for Oral and Written Review*, Holt, Rinehart and Winston

Text: TBD

**Prerequisites:** Grade of B+ or above in Spanish 247 and/or permission of the department head.

**Spanish-Language Cinema**

**Spanish 278    Fall    Credit: .5**

In this post-Advanced Placement course, students will explore Spanish and Latin American film and attempt to understand and appreciate the socio-political contexts of these cinematic masterpieces. Films from the Spanish-speaking world will be used as springboards for conversation, reading, writing, and advanced language study. Supplementary, authentic readings will aid students in grasping a variety of themes, genres, and cultural experiences encapsulated in the films while presenting natural language in context. Class discussion, essays, and oral presentations will be geared to improving proficiency in speaking and writing.

### **French Program**

|                 |                   |             |                  |
|-----------------|-------------------|-------------|------------------|
| <b>French I</b> | <b>French 214</b> | <b>Year</b> | <b>Credit: 1</b> |
|-----------------|-------------------|-------------|------------------|

This Upper School course is an introduction to the French language. While acquiring a solid, basic vocabulary, the beginner will exercise the four skills necessary for the mastery of language: listening, speaking, reading, and writing. The course will combine a communicative approach with a solid grammar base, enabling beginning students to express themselves. Appropriate readings from authentic sources, communicative activities, and cultural presentations will serve to enhance student learning.

Texts include: *Discovering French, Bleu, Level I, Valette Valette*

|                  |                   |             |                  |
|------------------|-------------------|-------------|------------------|
| <b>French II</b> | <b>French 220</b> | <b>Year</b> | <b>Credit: 1</b> |
|------------------|-------------------|-------------|------------------|

French II students will continue to consolidate the skills learned in French I. They will be exposed to new and more advanced grammar topics, such as how to use the various past tenses, while continuing to develop their communicative abilities. Students will be introduced to authentic literary texts that will serve as a basis for vocabulary acquisition, brief writing assignments, and in-class discussion.

Text include: *Discovering French, Blanc Valette Valette*

**Prerequisite:** French 214 (French I) with a grade of C+ or above

**\*NOTE:** Students who do not satisfy the prerequisite must repeat French I or complete a summer remediation program. Students who elect to pursue summer work must retake and pass the French I final exam with a grade of B- or above before the start of the fall semester in order to move to the next level.

|                   |                   |             |                  |
|-------------------|-------------------|-------------|------------------|
| <b>French III</b> | <b>French 230</b> | <b>Year</b> | <b>Credit: 1</b> |
|-------------------|-------------------|-------------|------------------|

French III students will progress from an intermediate to an advanced level in French. Advanced grammar topics will include the subjunctive and conditional moods. Our textbook, which includes authentic materials, will expose students to an array of important French and francophone authors and cultural figures. Written and oral summaries of these works, together with discussion in the classroom, will provide a meaningful context for the student's progress in the areas of grammar and vocabulary.

Texts include: *Bien Dit, Level 3, Holt McDougal*

**Prerequisite:** French 220 or a grade of C+ or above or French 228 with a B or above

|  |             |                  |
|--|-------------|------------------|
| <b>French IV-A: Advanced French Grammar, Composition and Style (Intro to AP)</b> | <b>Year</b> | <b>Credit: 1</b> |
| <b>French 240</b>  |             |                  |

This advanced course will work toward the mastery of the grammar learned in French I, II,

and III in preparation for the AP French Language course. Students will be introduced to the skills and standards of the SAT II/French and the Advanced Placement French Language examinations. This course will focus on advanced vocabulary acquisition, speaking, reading comprehension, and listening. Students will be introduced to basic literary themes and movements in French literature. Students will read, discuss and write about the following texts: “En Attendant Godot” by Samuel Beckett, “Huis Clos” by Jean-Paul Sartre, “L’étranger” by Albert Camus as well as a range of French poetry. Students enrolled in this course will be prepared to sit for the SAT II/French test in June.

Texts include: *French Four Years, Advanced French with AP Component*, Amsco

**Prerequisites:** Grade of A- or above in French 230 and/or permission of the department head.

### **French IV/V: French Language, Literature and Culture: Révolutions**

**French 248/258**

**Year Offered - 2010-11**

**Credit: 1**

We will look at these moments of civil unrest and founding events of France’s history: revolutions. Revolution is a key concept to understand France since the 18<sup>th</sup> century but it is also a work in progress whose definition is both powerful and malleable. Thus, through these revolutions, we will ask these questions: what is at stake and for whom? Who is leading the revolution, for what and against whom? How do revolutions help build a national identity and a culture in and against France? This course will focus on oral communication and will review some grammatical aspects of the French language.

Texts include: Aimé Césaire's rewrite of Shakespeare’s *Tempest, Une Tempête*, excerpts from political speeches, the “Declaration des droits de l’homme et du citoyen”, the Manifestes du Surrealisme, films from the French New Wave.

**Prerequisites:** French 230 or French 248 with a grade of C+ or above

### **Advanced Placement French Language**

**French 250**

**Year**

**Credit: 1**

This advanced Upper School course combines an exploration of twentieth century literature with an intensive grammar review. Contemporary writings, newspapers, magazine articles and audio files are used to engage discussion and improve oral proficiency, an essential part of the Advanced Placement exam. Essays and oral presentations are directed toward increased accuracy and fluency. Each student in this course is expected to take the AP exam in May.

Texts include: *Une Fois Pour Toutes, Halte Sturge II, Linda Cregg Nielsen, Henry Lynn Herbst*

**Prerequisites:** Grade of B+ or above in French 247 (Intro to AP) and/or permission of the department head.

### **Latin Program**

**Latin I**

**Latin 218**

**Year**

**Credit: 1**

This Upper School course is an introduction to the Latin language. For the purpose of enriching the student’s vocabulary, the course will emphasize the study and memorization of Latin vocabulary and its roots and derivations. The class will increasingly focus upon identifying parts of speech and using basic grammatical forms and functions in Latin as

well as in analogous English sentences. Within the context of narrative reading passages, students will encounter the various types of nouns, their inflected endings, and the different tenses of verbs that occur in Latin. This introduction to the nuances of the Latin language will be accompanied by an emphasis on the rich historical and cultural aspects of antiquity so that students may gain an understanding and appreciation for the impact of the ancient world upon our own heritage.

Texts include: *Ecce Romani - Book 1*, by Lawall, et al.

**Latin II**                      **Latin 225**                      **Year**                      **Credit: 1**

This Upper School course is a continuation of all basic skills introduced and mastered in Latin I. During the course of the year, students further their exploration of the grammatical forms and functions of the Latin language, developing and sharpening their ability to read Latin with comprehension, to translate with accuracy (both from and into Latin), and to analyze grammatically the structural components of a Latin sentence. Analogies to English grammar will be plentiful. New vocabulary, grammar, and syntax are studied within the meaningful context of continuous passages of Latin prose. Word study and a focus on the culture and history of Rome reinforce the connection between Latin and English and the link between Roman civilization and ours.

Texts include: *Ecce Romani -Book 2*, by Lawall, et al.

**Prerequisite:** Latin 218 with a grade of C- or above

**\*NOTE:** Students who do not satisfy the prerequisite must repeat Latin I or complete a summer remediation program. Students who elect to pursue summer work must retake and pass the Latin I final exam with a grade of B- or above before the start of the fall semester in order to move to the next level.

**Latin III**                      **Latin 235**                      **Year**                      **Credit: 1**

This intermediate Upper School course is a continuation of all the skills mastered in previous Latin courses. Students will continue to develop and sharpen their ability to read Latin with comprehension, to translate with accuracy (both from and into Latin), and to analyze grammatically the structural components of a Latin sentence as presented within the context of patterned sentences and continuous passages. The more advanced structures of Latin grammar are introduced through and reinforced by the reading of authentic Latin authors, including Caesar, Cicero, Pliny, Catullus, Martial, Vergil, and Ovid. Students engage in more in-depth historical and cultural studies of Rome and the development of Latin literature as these topics emerge from the readings. For the purpose of enriching the student's English vocabulary, the course will emphasize the etymology and derivations of the Latin vocabulary encountered.

Texts include: *Wheelock's Latin*, Fifth Edition; *Latin Stories* by A.Groton and J. May

**Prerequisite:** Latin 225 with a grade of C- or above

**Latin IV**                      **Latin 265**                      **Year**                      **Credit: 1**

This advanced Upper School course combines a thorough review of grammar and vocabulary with a survey of Latin prose, poetry, and culture. Students develop comprehension skills as they acquire increased facility and accuracy in translating a wide range of authors. Historical and cultural topics will serve to augment the readings and to illuminate aspects of the ancient world. Students enrolled in this course would be ready,

should they so choose, to sit for the SAT II/Latin Test at the end of the school year. The students will also be introduced to Roman poetry and meter both in order to read them for the possibility of taking the SAT II/Latin Test as well as to prepare them for the poetry of Vergil, whose epic, the *Aeneid*, is treated at the AP level.

Texts (and handouts) include: Petronius, *Cena Trimalchionis*; Pliny, *Epistulae*; Phaedrus, *Fabulae*; Ovid, *Metamorphoses*; Vergil, *Georgics*

**Prerequisite:** A grade of B- in Latin 235 or permission of the department head

### **Advanced Placement Latin: Vergil**

#### **Latin 245**

**Year**

**Credit: 1**

This advanced Upper School course prepares students for the Advanced Placement exam in Latin: Vergil through an in-depth study of his epic poem *The Aeneid*. The skills and topics developed during the course include accurate translation and critical interpretation; scansion; figures of speech; imagery; the structure and themes of the epic; and aspects of Roman history and culture. Each student in this course is expected to take the AP exam in May.

Texts include: *Vergil's Aeneid*, C. Pharr, editor; *The Aeneid of Vergil*, translated by Allen Mandelbaum

**Prerequisites:** A grade of B+ or above in Latin IV and permission of the department head

#### **Honors Latin**

#### **Latin 266**

**Year**

**Credit: 1**

This advanced level reading/special topic course is open Latin students who have either already taken AP Vergil or have completed Latin IV and wish for more reading practice prior to going on to the AP level. Students in this course will have the opportunity to sample an array of ancient authors and various genres of literature in both prose and poetry. The course will focus upon a special topic, this year upon the theme of mythology. Besides exploring how myths come about in ancient and primitive cultures and the purposes they serve, students will focus upon such topics as the creation myths of the Greeks and Romans and the anthropomorphic nature of their respective pantheon of gods and goddesses, ancient religious practices, mystery cults and initiatory rites, and the oracles of Delphi and Cumae. Students will also compare the Greek and Roman mythological systems to those of other ancient and modern cultures. A number of mythological stories, legends and fables will be read in Latin, with a concentration upon the famous mythical cycles and characters that have continued to reverberate through the centuries in the literature, art and even the psychology of later cultures.

**Texts** (and handouts) will include:

In English: Hesiod, *Theogony*; Homer, *Iliad*; *The Homeric Hymns*; G.S. Kirk, *Myth: Its Meaning and Functions in Ancient and Other Cultures*; Mark Morford and Robert Lenardon, *Classical Mythology*; Aeschylus, *The Oresteia*

In Latin: Ovid, *Metamorphoses*; Livy, *The Early History of Rome*; Phaedrus, *Fabulae*; Seneca, *Thyestes*

**Prerequisite:** A grade of B- in Latin 265 or permission of the department head

### **Chinese Program**

Unlike European based languages, Chinese has little linguistic or direct cultural connection with English. This lack of connection presents an extra layer of challenge for native English

speakers, and requires a longer period of study before students reach an equivalent level of proficiency. In order to ensure the greatest degree of success, students of Chinese are enrolled in a program that progresses from Level 1 through Level 5 before taking on the rigors of the Advanced Placement Course: Chinese Language and Culture. Each successive level of Chinese builds upon the language and cultural skills mastered during the previous year.

|                  |                    |             |                  |
|------------------|--------------------|-------------|------------------|
| <b>Chinese I</b> | <b>Chinese 200</b> | <b>Year</b> | <b>Credit: 1</b> |
|------------------|--------------------|-------------|------------------|

This introductory Upper School course aims to develop the student's basic language skills in listening, speaking, reading, and writing at an introductory level of Mandarin Chinese language. Students learn to use the phonetic system of Pinyin and to recognize and reproduce one hundred Chinese characters. They will also learn to write in simplified characters. Dialogues and simple descriptive/narrative texts cover everyday topics, issues of interest, and idiomatic expressions. Through a series of culture-based activities, students not only learn about Chinese culture, but also develop a basic awareness of cultural commonality and diversity.

Texts include: *Integrated Chinese: Level 1, Part 1*, Cheng & Tsui Company, 3<sup>rd</sup> Edition

|                   |                    |             |                  |
|-------------------|--------------------|-------------|------------------|
| <b>Chinese II</b> | <b>Chinese 202</b> | <b>Year</b> | <b>Credit: 1</b> |
|-------------------|--------------------|-------------|------------------|

This basic, intermediate course builds upon the fundamental skills mastered in Chinese I. Students will continue to use the phonetic system of Pinyin and will be able to recognize and reproduce an additional one hundred and fifty characters. Exercises and drills to recognize and reproduce tones will be given daily to help the students sharpen their listening and speaking skills. Students will also use the computer to write dialogues and short passages that they will share with the class. Through a series of culture-based activities, students will explore current social and economic trends in China.

Texts include: *Integrated Chinese: Level 1, Part 1-Part 2*, Cheng & Tsui Company, 3<sup>rd</sup> Edition  
**Prerequisite:** Chinese I with a grade of C or above or permission of the department head

|                    |                    |             |                  |
|--------------------|--------------------|-------------|------------------|
| <b>Chinese III</b> | <b>Chinese 203</b> | <b>Year</b> | <b>Credit: 1</b> |
|--------------------|--------------------|-------------|------------------|

This advanced, intermediate course offers a continuation of all of the skills mastered in the previous Chinese courses. Students will continue to hone their understanding of the four main skill groups: reading, writing (using simplified characters), speaking, and listening. Students will also increase their ability to carry on a conversation in Chinese, exploring a wider range of topics, while building vocabulary and solidifying their knowledge of basic syntax. Students will learn an additional three hundred Chinese characters to increase their reading comprehension and writing skills. At the completion of this course, students will be able to carry out daily conversations that demonstrate an understanding of culture and customs, to read short articles adapted from newspapers, magazines, and literary works, and to write simple and short essays.

Texts include *Integrated Chinese: Level 1 Part 2*, Cheng & Tsui Co.  
**Prerequisite:** Chinese II with a grade of C or above or permission of the department head

|                   |                    |             |                  |
|-------------------|--------------------|-------------|------------------|
| <b>Chinese IV</b> | <b>Chinese 205</b> | <b>Year</b> | <b>Credit: 1</b> |
|-------------------|--------------------|-------------|------------------|

This intermediate-advanced Upper School course is a continuation of all four skills mastered in the previous Mandarin Chinese courses. Students will continue to develop the four main language skills: reading, writing, speaking, and listening. Students will expand

their ability to carry out conversations on a wider range of topics as well as use more idiomatic expressions while building their vocabulary and solidifying their knowledge of sophisticated syntax. Students will also enhance their ability to recognize and write characters. At the completion of this course, students will be expected to carry out regular conversations in real life with cultural sensitivity, to read simplified article from media source and literary works, and to write simple essays.

Texts include *Integrated Chinese: Level 2 Part 1*, Cheng & Tsui Co., 3<sup>rd</sup> Edition

**Prerequisite:** Chinese III with a grade of C+ or above and/or permission of the department head

**Chinese V**                      **Chinese 207**                      **Year**                      **Credit: 1**  
 This advanced language class provides students with a variety of opportunities to improve language proficiency and to learn about the Chinese-speaking world while thoroughly synthesizing grammar and vocabulary that have been mastered in Chinese I, II, III and IV. Students will develop skills in advanced vocabulary acquisition, oral production, reading and listening comprehension, and writing, in addition to introducing basic themes and movements in Chinese culture and contemporary society. At the completion of this course, students will be able to participate in an oral discussions with linguistic ease and cultural sensitivity; to read a selection of newspaper articles and literary works; and to write essays on social and cultural topics.

Texts include *Integrated Chinese: Level 2 Part 2*, Cheng & Tsui Co., 3<sup>rd</sup> Edition

**Prerequisites:** Chinese IV with a grade of B- or above and/or permission of the department head

**Advanced Placement: Chinese Language and Culture**

**Chinese 209**                      **tentatively offered in the 2011-12 academic year**

This advanced language course combines an exploration of Chinese literature with an intensive grammar study. Contemporary literary writings, newspapers, and magazine articles will be used to perfect reading comprehension skills as well as to engage discussions and improve oral proficiency. Advanced vocabulary and the acquisition of idiomatic expressions will be a major focus of this course. Essays and oral presentations on a variety of topics will lead the students toward increased oral and written accuracy. In addition to improving their reading and writing, the students will spend time perfecting their listening comprehension and advanced speaking skills. All students are expected to sit for the AP Chinese Language exam in May.

**Text: TBD**

**Prerequisites:** Chinese V with a B+ average grade and/or permission of the department head

**Rassias Method®: Student Language Coach**

**French 204**                      **Year**                      **Class meetings: 2**                      **Credit: .5**  
**Spanish 206**

In this elective, students will learn to perfect a highly structured and rapid-fire method of oral language drilling in French or Spanish, designed to increase speaking confidence and success for beginning foreign language learners. Students will learn the Rassias Method® philosophy and method and the skills necessary to lead and manage successfully small

groups of students. In addition to training in the method, class time will be used for delivering language drills to Middle School language students, debriefing coaching sessions, and refining one's technique. By assuming the role of an assistant teacher, students will work to improve their own command of French or Spanish while gaining valuable leadership experience.

**Prerequisite:** The completion of French 230 or Spanish 238 with at least a B+ and demonstrated exceptional oral proficiency and speaking confidence in French or Spanish; high energy and dramatic style; willingness to be a social and academic role model for younger students; and interest in teaching a language.

This course has a limited enrollment of eight students (four French and four Spanish) and permission to enroll is based upon an application process that includes an audition. Applications are available from the world language department.

## History

### **Department Head: Erland Zygmuntowicz**

The history department aims to prepare students to become citizens capable of taking an active and informed role in shaping the society they will inherit. Packer's rich selection of courses exposes students to the forces that have shaped our own institutions as well as those of our increasingly interdependent world. Experienced faculty members take students beyond dates and memorization to insightful analysis and thoughtful interpretations of past and present world events. Instruction supports the development of writing and research skills, which are an essential part of a college preparatory curriculum.

Packer requires three years of Upper School history for graduation. In the ninth grade, students investigate major themes of global history through the fifteenth century. In the tenth grade, students explore American history. Modern world history is the focus in the eleventh grade. In the twelfth grade, students may take Advanced Placement (AP) American Government or a history elective. AP options are also available for qualified students in 10th and 11th grades.

*Please note that courses without sufficient enrollment will not run.*

### **Humanities: Foundations of World History**

#### **History 311**

**Year**

**Credit: 1**

This course explores the world's major centers of culture from ancient times through the 16th century. We begin with the evolution of communities from Neolithic societies to the urban civilizations of Southwest Asia, India and China. As the year progresses, we focus on the development of major world religious and philosophical traditions in classical Greece, Rome, India and China. We examine the rise of Islam; the rise of new states in Africa; the development of feudalism; and the Renaissance and Reformation in Europe. Finally, we explore increasing global interaction resulting from Mongol conquests in Eurasia and European expansion in the Americas. Using primary and secondary sources, students will trace trade and migration routes, discuss sacred and secular texts, and analyze surviving remnants of architectural and artistic creativity. The course aims to develop skills of historical inquiry that will empower students to make thoughtful decisions about their own

roles in today's interdependent and culturally diverse world.

Text: *The Human Drama Volumes 1 & 2*, Johnson & Johnson

**American History History 320 Year Credit: 1**

American History is a year-long examination of the major figures, events, themes and cultural movements that have shaped our nation. The course focuses on the American political process; social and economic forces such as immigration; the growth of reform movements; and the evolution of foreign policy. Through the development of skills in primary source analysis, expository writing, historical research, and oral presentations, students learn to grapple with conflicting interpretations of history.

Text: *Out of Many: A History of the American People Sixth Edition* by Faragher, Buhle, Czitrom & Armitage

**Advanced Placement United States History**

**History 352 Year Credit: 1**

Taking the Advanced Placement examination in American history can be a challenging and interesting experience. The exam measures more than historical knowledge; its questions ask for originality, theory formation, and the integration of new information with old. This course will help students look at American history critically in preparation for the College Board assessment. The most important part of this preparation will be lively discussion in which different points of view can be shared. It will be crucial for students to learn to help each other understand concepts and causation. Students can expect to practice with multiple-choice questions, document based essays, and standard essays. Each student in this course is expected to take the AP exam in May.

Text: *American History: A Survey 13<sup>th</sup> Edition* by Alan Brinkley

**Prerequisites:** See requirements for AP history course.

**Modern World History**

**History 340 Year Credit: 1**

Modern World History presents a survey of world history from 1700 to the present. After a general overview of the variety of cultures and societies of the 18th century world, the class will concentrate on the development of a global exchange system and its impact on Asia, Europe, Africa, and the Americas. Throughout the year, students will examine political and social revolutions in Europe and the Americas; the impact of European technological change on Asia and Africa; the legacy of imperialism; and world wars, 20th century revolutions, and the problems and possibilities in the post-Cold War world.

Texts: *A History of the Modern World*, by R.R. Palmer and Joel Colton; *Western Civilization: Sources Images and Interpretations* 3rd Edition, by Sherman

**Advanced Placement European History**

**History 382 Year Class meetings: 5 Credit: 1**

The Advanced Placement course in European history is designed to foster a considerable depth of knowledge about events, people and movements since 1450 and to stress the ability to speak and write persuasively about historical developments. Each student in this course is expected to take the AP exam in May.

Text: *A History of the Modern World*, by R.R. Palmer and Joel Colton

**Prerequisites:** See requirements for AP history courses (below).

**History 347      Cultural Anthropology      Fall      Credit: .5**

Anthropology is a discipline that includes a wide range of subject matter – from tribal societies in Africa to “modern” communities in the United States. This course will focus on human beings as social beings; specifically, it will examine the forms of social organization and cultural practice that humans create. While students will be asked to analyze the cultural differences of various societies throughout the world, they also will be asked to consider thematic similarities among these societies. Since this course will be an introduction to anthropology for many students, it will begin with an investigation of anthropological methodology and a discussion of anthropology’s historical roots in colonialism. The remainder of the course will focus on anthropological themes such as ritual, kinship, belief systems, political structures, artistic expression, and gender and social organization. Open to students in grades 11 and 12.

Text: *Cultural Anthropology*, by Conrad Phillip Kottak; Supplemental Texts TBD

**Economics History 346      Fall      Credit: .5**

This course is intended to introduce students to key economic concepts and theories through the study of economic history and current economic events. Given the turmoil that has, at times, come to dominate our economic system over the past few years, it is perhaps more important than at any time in recent history for Americans to develop a strong understanding of the way our global economy functions. As such, we will approach this class as an opportunity to grapple with the reasons for the recent economic turbulence and the impact that these events have had on nations, groups, and individuals. Open to students in grades 11 and 12.

Text: TBD

**Philosophy History 342      Fall      Credit: .5**

The word ‘philosophy’ comes from the Greek for ‘love of wisdom.’ Throughout history, philosophers have pursued the wisdom that comes from contemplating some of life’s most fundamental questions: *Who am I? What is my purpose in life? What does it mean to be human? How should we behave towards each other?* Through the study of some of the most influential Western philosophers, students will achieve a better understanding of the ideas that have shaped their world. Additionally, they will strive to become philosophers themselves, speaking and writing about their own evolving answers to these questions. Open to students in grades 11 and 12.

**History of Modern China      History 349      Fall      Credit: .5**

This course traces China’s development from the relative peace and prosperity of the late eighteenth century, through the devastating wars and imperialist incursions of the nineteenth century, to the struggle in the twentieth century to create a modern nation-state and regain a position of wealth and power in an often hostile world. The survey ends with the crushing of the pro-democracy movement at Tiananmen in 1989 and its consequences. Chinese materials in translation, including novels, autobiographies, reports, and films, will

help students explore how individuals experienced the major political, cultural, social, and economic transformations of the past two centuries. Open to students in grades 11 and 12.

Text: TBD

**Modern East Asia History 348 Spring Credit: .5**

This course examines the cultural patterns and the key historical developments that have shaped modern East Asia. Special attention is given to China and Japan with secondary attention to Vietnam and Korea. The class aims to help students appreciate the unique character of each of these cultures within the general framework of East Asian civilization. Patterns of indigenous change and responses to Western imperialism are central to appreciating the crucial role the region plays in the world today. Materials used in the course will include translated documents, period fiction, art, memoirs, films, and selected scholarly writings. Open to students in grades 11 and 12.

Text: Rhoads Murphey, *East Asia: A New History*, 4<sup>th</sup> Edition

**History of the Modern Middle East History 344 Spring Credit: .5**

Birthplace of civilization and of the world's three main monotheistic religions, the Middle East has a rich cultural heritage and has long been at the crossroads of history. Today its geopolitical realities, strategic resources and its ideological movements make the area central to US interests and foreign policy. As a result, the aim of this course is to provide students with the historical and cultural background to help them understand current realities throughout the region. Key topics will include the Ottoman Empire and its collapse, European colonialism, the rise of nationalism and Zionism, and political Islam in relation to the development of modern nation-states. The course will also explore more current events including the Israeli-Palestinian conflict, the Islamic Revolution in Iran, the Gulf Wars, and the War on Terror. Open to students in grades 11 and 12.

Text: *The Modern Middle East: A History*, 2<sup>nd</sup> Edition by James L. Gelvin

**Documenting History: Viewing History through the Lens of Documentary Film History 345 Spring Credit: .5**

The emergence of low-cost, high quality digital video equipment has given more people than ever the opportunity to capture and to communicate world-altering images to enormous audiences via theaters and, most notably, the Internet. Given the flood of video that exists to explain world events, the average person is left alone to determine what is "real" about the history they have "witnessed." Documenting History is intended to address this dilemma by offering students the opportunity to refine their abilities to read the way that history is represented in non-fiction film and video. In this course, students will view a variety of films on a range of topics\* to enable them to analyze the role of the filmmaker in the representation of historical events in documentaries. Additionally, students will make a short film, either by using footage from other countries provided by Karin Muller's Take 2 program or footage from a project they propose to shoot and edit. Open to students in grades 11 and 12.

Text: TBD

**History 343 Spring Credit: .5**

## **Human Rights**

This inquiry-based course is designed to cultivate a spirit of active citizenship and curiosity about the world. We will begin with an initial overview of the historical, philosophical, and legal roots of the concept of human rights, and then use that foundation to delve into a contemporary case study selected by group consensus. Possible case studies might investigate the genocide in Sudan, human trafficking in Southeast Asia, or the treatment of prisoners of war in Iraq. In addition to the analytical reading of primary and secondary resources and the writing of policy briefs and persuasive essays, students will turn that same critical eye to relevant artwork, websites, and other media. The course will culminate in a multidimensional group project, such as an advertising campaign, series of podcasts, or service learning experience, focusing on the practical connections between the general idea of human rights and the specific concerns and abilities of Packer students. Open to students in grades 11 and 12.

## **International Relations: Model United Nations**

**History 341**

**Spring**

**Credit: .5**

In this course students will participate in Model United Nations (MUN) through the simulation of United Nations committees. Each student will represent a country in the United Nations and will focus on topics of global concern such as the environment, sustainable development, international security, and human rights. Students will consider conflicting viewpoints, and will work together to develop comprehensive and creative solutions to the same problems that our world leaders face today. In addition to learning problem-solving, decision making and negotiation skills, students will leave MUN with experience in writing and presenting formal speeches, writing policy statements and resolutions based on research, lobbying, and formal debate. Students should be prepared to attend a MUN conference if given the opportunity. The final assignment for the course requires student groups to select an issue of world importance and write a paper identifying the problems and suggested solutions for the issue. Open to students in grades 11 and 12.

Text: *THIMUN Instructional Guide* by Irwin Stein and David L. Williams

**Sociology**

**History 350**

**Spring**

**Credit: .5**

This social science elective explores fundamental principles and concepts from the field of sociology, including social groups and social structures, socialization and gender, deviance and social controls, social inequality, and social change. Students will work with an array of resources, conduct field observations, and meet with experts in the field. Open to students in grades 11 and 12.

Text: *The Real World: An Introduction to Sociology*, Ferris and Stein; *Down To Earth Sociology: Introductory Readings 14<sup>th</sup> Edition* by James M. Henslin

## **Advanced Placement American Government**

**History 372**

**Year**

**Credit: 1**

This course is designed to prepare students for the Advanced Placement test in American government and is intended to be the equivalent of a first year college level offering. Topics of study include the Constitution; civil liberties; the role of the federal and state governments in policy making; interest groups; and political parties. Students discuss and

debate issues. Each student in this course is expected to take the AP exam in May. Open to students in grades 11 and 12.

Texts: *Challenge of Democracy* 10<sup>th</sup> Edition by Janda, Berry and Goldman

*Lanahan Readings in the American Polity, 4<sup>th</sup> Edition by Serow and Ladd (Editors)*

**Prerequisites:** See requirements for AP history courses (below).

**Note: The criteria for admission to all AP history courses include:**

- A grade of A- or above in the preceding history course taken (B+ if it is an AP course)
- Submission of a statement of intent to take the course; this statement must include the student's reasons for wanting to take an advanced course and is due February 8, 2010 to the head of the history department.
- Submission of an essay written in a current history course
- Permission of the department head.
- Students are advised to review the additional information about AP classes found on page 4 of the curriculum guide.

|                    |
|--------------------|
| <b>Mathematics</b> |
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**Department Head: Lizabeth Joseph**

Although Packer has a sequential, three-year math requirement for graduation, the majority of Upper School students enroll in a math course all four years. The central goal of the mathematics department is to provide Packer students with a supportive and challenging learning environment in which they may fully develop their talents and abilities in the field of mathematics. The coursework for students in the Upper School is designed to build upon the analytical skills developed in Middle School math courses so that students can master the increasingly complex concepts and ideas covered in the Algebra, Geometry, Algebra II, and Precalculus courses. Students will have the opportunity to develop the analytical skills necessary to work confidently and independently as they apply mathematics to real world situations.

The mathematics department is committed to utilizing an array of resources, including work with teachers outside of class and peer tutoring, to support student success in mathematics. Students will graduate from Packer with a deep appreciation for mathematics as a science, a language, and a tool that can be used to solve real-life problems. In addition, they will be fully prepared to enroll in math courses offered in any four-year institution of higher learning.

Because of the cumulative nature of Packer's math curriculum, it is important for students to be prepared adequately in Algebra in order to be successful in subsequent courses. A student who receives a grade of C- or lower in Algebra I will be required to complete a summer school course. This summer work is expected to strengthen the student's mastery of the material. Prior to enrolling in a geometry course, the student will be required to complete an exam to assess his or her achievement.

A TI-83, TI-83+ or TI-84 graphing calculator is required for all Upper School mathematics



**Geometry Math 422 Year Credit: 1**

This is a standard geometry course which covers the fundamentals of plane and solid geometry and geometric proofs. Topics include points, lines, planes, and angles; deductive reasoning; parallel lines and planes; congruent triangles; quadrilaterals; inequalities in geometry; similar polygons; right triangles; circles; areas of planar figures; and areas and volumes of solids. Students will apply many of the skills that they learned in algebra. They will work with geometric proofs and use Geometer's Sketchpad to investigate the material.

**Prerequisites:** Grade of C or higher in Upper School Algebra I (Math 410) or a grade of B- or higher in 8<sup>th</sup> grade Algebra I.

**Geometry Accelerated Math 420 Year Credit: 1**

This is a fast-paced advanced geometry course which covers the fundamentals of plane and solid geometry and geometric proofs. Topics include points, lines, planes, and angles; deductive reasoning; parallel lines and planes; congruent triangles; quadrilaterals; inequalities in geometry; similar polygons; right triangles; circles; areas of planes and figures; areas and volumes of solids; coordinate geometry\*; and transformations\*. Students will apply many of the skills that they learned in algebra. They will work with geometric proofs and use Geometer's Sketchpad to investigate the material.

**Prerequisites:**

- consistent demonstration of attributes of students successful in AP and Accelerated Course Criteria (p. 4), AND
- permission of the department head, AND
- grade of B- or higher in 8<sup>th</sup> Algebra I A (eighth-grade Algebra )

**Algebra II Math 432 Year Credit: 1**

This is a standard Algebra II course which strengthens and reinforces students' algebraic skills through the study of intermediate algebraic concepts and provides a rigorous study of functions. Topics include linear and absolute value equations and inequalities; polynomial, radical and rational expressions and equations; linear and quadratic functions; common parent graphs and their transformations; operations, compositions and inverses of functions; exponential and logarithmic functions; and intermediate statistics including the standard deviation and the normal distribution. Students use the graphing calculator extensively throughout the course.

**Prerequisites:** Grade of C- or higher in Geometry (Math 422).

**Algebra II Accelerated Math 430 Year Credit: 1**

This is a fast-paced Algebra II and Trigonometry course which strengthens and reinforces algebraic skills through the study of intermediate algebraic concepts and provides a rigorous study of functions and trigonometry. Topics include linear and absolute value equations and inequalities; polynomial, radical and rational expressions and equations; linear and quadratic functions; common parent graphs and their transformations; operations, compositions and inverses of functions; exponential and logarithmic functions; unit circle trigonometry\*, trigonometric functions\*, and trigonometric identities and equations\*; and intermediate statistics including the standard deviation and the normal



**Prerequisites:**

- consistent demonstration of attributes of students successful in AP and Accelerated Course Criteria (p. 4), AND
- permission of the department head, AND
- grade of B+ or higher in Algebra II A (Math 430) OR grade of B- or higher in Precalculus Accelerated (Math 448) OR grade of B+ or higher in Precalculus with Trigonometry (Math 445)

**Discrete Math****Math 490****Fall****Credit: .5**

This math course covers several topics typically taught in a college freshmen level discrete, finite or introduction to college math class. Topics include Polya's problem solving techniques, set theory, logic, number theory, combinatorics and intermediate probability including the Binomial Theorem. Throughout the course students hone their problem solving skills, engage in hands-on lessons, and complete several applied mathematics projects.

**Applications of Advanced Mathematics - Math- 491 Spring****Credit: .5**

This math course covers several topics typically taught in a college freshmen level discrete, finite or introduction to college math class. Topics include the development of number systems, network theory, three-dimensional geometry including a study of Platonic solids, applications of triangle trigonometry and voting and apportionment methods. Throughout the course students hone their problem solving skills, engage in hands-on lessons, and complete several applied mathematics projects.

**Calculus Math 480****Year****Credit: 1**

This is a standard calculus course which covers approximately one semester of college-level calculus. Primary topics of study include functions, limits, continuity, derivatives, applications of the derivative, and an introduction to integration. Students spend some time reviewing pre-calculus material to reinforce their understanding of functions prior to studying calculus topics. At the completion of this course students will be prepared to successfully complete their first year of college calculus.

**Prerequisites:**

Calculus is considered an advanced course. As such, the following prerequisites apply:

- consistent demonstration of attributes of students successful in AP and Accelerated Course Criteria (p.4), AND
- permission of the department head, AND
- strong algebra skills, AND
- grade of B or higher in Precalculus with Trigonometry (Math 445) OR a grade of C or higher in Precalculus Accelerated (Math 448).

**AP Calculus AB****Math 481****Year****Credit: 1**

This course is approximately equivalent to a rigorous one semester college-level calculus course. Students spend less time reviewing precalculus material and study more topics at a greater depth than students in the standard calculus class. Topics include limits, derivatives, applications of the derivative, integrals, applications of the integral and an

introduction to differential equations and slope fields. Students prepare for the AP Calculus AB examination in May. Students who score a 4 or 5 on the AP exam are usually awarded one semester of college credit.

Prerequisites:

- consistent demonstration of attributes of students successful in AP and Accelerated Course Criteria (p. 4), AND
- permission of the department head, AND
- grade of B or higher in Precalculus Accelerated (Math 448)

**AP Calculus BC Math 483 Year Credit: 1**

This course is approximately equivalent to two semesters of college-level calculus. The class moves much more quickly than AP Calculus AB and covers additional topics. Topics include limits, derivatives, applications of the derivative, integrals, applications of the integral, integration by parts, an introduction to differential equations and slope fields, sequences and series, and Taylor and Maclaurin series and polynomials. Students prepare for the AP Calculus BC examination in May. Students who score a 4 or 5 on the AP exam are usually awarded two semesters of college credit.

**Prerequisites:** Grade of A or higher in Precalculus Accelerated (Math 448) and permission of the department head.

**Multivariable Calculus Math 485**

**Year**

**Credit: 1**

This course includes a variety of advanced mathematics topics, including functions of several variables, non-rectangular coordinate systems, vector-valued functions, and differential and integral calculus of several variables. The course is designed around challenging problem sets and requires strong communication skills.

**Prerequisites:** Grade of A- or higher in AP Calculus BC (Math 483) or permission of the department head.

|                |
|----------------|
| <b>Science</b> |
|----------------|

**Department Head: C. N. Williams**

The science department promotes a curriculum that is designed to provide the information necessary to understand the discoveries and principles of science in an increasingly scientific and technological society. There are three primary goals of the science program: to promote scientific literacy for all students, to develop critical thinking and inquiry skills that help students understand the basic nature of science, and to teach students how to apply their knowledge to solve scientific problems. What is critical is not the amount of material covered but the conceptual depth of understanding reached.

The use of the laboratory is essential to learning science at Packer. Students conduct hands-on investigations as integral components of each unit with an emphasis on prediction,

qualitative and quantitative analysis. Writing skills, mathematics, and technology are organically embedded within the laboratory program.

Packer requires three years of laboratory science for graduation. Students fulfill this requirement by taking physics in ninth grade, chemistry in tenth grade, and biology in eleventh grade.

Those considering a career in science or engineering are encouraged to complete four years of science including an Advanced Placement (AP) science course.

Students earning a B+ average or better in AP Chemistry, AP Physics or AP Biology should consider taking the respective SAT II test in June.

**Conceptual Physics                      Science 500                      Year                      Credit: 1**

Why is it a bad idea to wear a black skirt on a hot day? Should I be afraid of falling out of a roller coaster? What does it mean to “blow a fuse”? Physics applies to absolutely everything in the natural world, and it allows us to predict the outcome of a given scenario. This course will focus on a conceptual understanding of the material; hence, laboratory investigations and demonstrations will comprise a major component of the course. Students will make use of computers and probes for data collection and analysis and will learn how to find mathematical relationships between physical quantities using graphical methods.

Basic algebra skills are used as a tool to understand these relationships and to solve problems.

Text: TBD

**Co-requisite:** Students should be enrolled in Algebra I with an introduction to trigonometry.

**Computational Physics                      Science 505                      Year                      Credit: 1**

Have you ever wondered how to predict where a high fly ball to deep center field will land? Or have you tried to predict which way your body will fall when the subway stops short? Physics is a way of quantifying these scenarios and explaining mathematically how they will turn out. Computational Physics will cover the topics of mechanics, waves, electricity and magnetism. The emphasis will be on establishing a strong conceptual understanding of the physics topics mentioned above and examining how mathematical equations can describe the world around us. These topics will be explored through discussion, problem solving, and laboratory investigations. Students will make use of computers and probes for data collection and analysis.

Text: TBD

**Prerequisite:** Algebra I with an introduction to trigonometry; students should be enrolled in geometry.

**AP Physics B                      Science 586                      Year                      Class meetings: 7                      Credit: 1**

This course is designed to be the equivalent of a college-level introductory physics course and builds upon the foundations you received in your 9th grade physics class. Topics include: motion in one- and two- dimensions, forces, circular motion and rotation, simple harmonic motion, waves, geometric optics, thermodynamics, electrostatics, conductors and

capacitors, magnetic fields, electromagnetism, fluids, thermodynamics and atomic physics. Numerous quantitative experiments are conducted throughout the year to show application of concepts and expand understanding, some of these using probes and computers. Strong emphasis is placed on solving a variety of challenging problems, as well as continuing to develop a deep understanding of physics concepts.

After completing this course, students will be required to sit for the Advanced Placement Physics B examination in May.

Text: Giancoli *Physics*, 6th Edition, 2005

**Prerequisites:** Conceptual or Computational Physics. This course is open to juniors and seniors with a B+ average in quantitative chemistry or an A- average in chemistry and equivalent math grades; completion or concurrent enrollment in pre-calculus, and the recommendation of the relevant science teacher.

| <b>Chemistry</b>   | <b>Science 510</b> | <b>Year</b> | <b>Credit: 1</b> |
|--|--------------------|-------------|------------------|
| This introductory course emphasizes the development of problem-solving skills through a study of matter. All major topics in physical chemistry are introduced in this course, including models of atomic and molecular structure; states of matter; the chemical and physical behavior of elements and compounds; solutions; nuclear chemistry; and equilibrium. Laboratory investigations stress the importance of quantitative analysis and experimental error. Some emphasis is given to relating chemistry to current developments in science and its importance in environmental issues. This course is open to all 10 <sup>th</sup> grade students, regardless of their math level. |                    |             |                  |

Text: Zumdahl et. al. *World of Chemistry*, 2002

**Prerequisite:** Computational or Conceptual Physics

| <b>Quantitative Chemistry</b>  | <b>Science 512</b> | <b>Year</b> | <b>Credit: 1</b> |
|--|--------------------|-------------|------------------|
| This rigorous year-long course in chemistry explores the nature of matter through quantitative analysis. An emphasis is placed on developing improved analytical thinking and problem solving skills and on exploring the nature of the scientific process. Students will carry out hands-on investigations of chemical phenomena and learn to analyze and explain their observations with increased precision and detail. Topics covered will include atomic structure, bonding, qualitative and quantitative relationships in chemical reactions, thermodynamics, gas laws, condensed states of matter, solution behavior, equilibrium, and acid-base chemistry. This course is open to 10 <sup>th</sup> grade students enrolled in Algebra II or IIA with a strong interest and aptitude in math and science. |                    |             |                  |

Text: Zumdahl, *Introduction to Chemistry*, 2008, 6th edition

**Prerequisite:** B average in both Computational Physics and 9th grade math course or by approval from department head.

| <b>Go Organic: Topics in Organic Chemistry</b>  | <b>Science 542</b> | <b>Fall</b> | <b>Credit: .5</b> |
|---|--------------------|-------------|-------------------|
| This one semester course will provide an introduction to organic chemistry and will focus on a series of representative organic molecules that are of current and/or historical interest. Many organic compounds are discussed frequently in the public sphere, but how |                    |             |                   |

much does the average person know about their chemical structures, properties and reactivity? What do they look like? What do they do? How do we decide if they are “safe?” Students will learn to tackle these questions with informed chemical understanding and will explore the relationship between chemistry and politics/public opinion.

Text: Hart, *Organic Chemistry—a short course*, 2007, 12th edition

**Prerequisites:** B+ or higher in Chemistry or Quantitative Chemistry and completion or concurrent enrollment in biology

### **Forensic Chemistry**

**Science 544**

**Spring**

**Credit: .5**

This one semester course will focus on analytical techniques used by chemists to solve problems in forensic science. In addition to expanding their knowledge of chemical structure and reactivity, students will learn methods for separating and identifying chemical substances in blood, urine, hair and other samples that might be collected at a crime scene, in a drug test, or for some other investigative purpose. The course will also explore the validity of these methods, their level of precision, and the ways in which their results are used in the legal system.

Text: Funkhouser-Deslich, *Forensic Science for High School*, 2006, 1st edition

**Prerequisites:** B or higher in Chemistry or Quantitative Chemistry and completion or concurrent enrollment in biology

### **Advanced Placement Chemistry**

**Science 580**

**Year**

**Class meetings: 6**

**Credit: 1**

Chemistry is all around, in every interaction of matter and in all that is observable. Chemistry provides the answers to the questions: Why does ice float? How do batteries generate electricity? What does the catalytic converter in your car do? Why is the ozone layer important? How is life maintained and reproduced? What are the tiles on the space shuttle made of? How do we freeze-dry coffee? By accepting the challenge of AP Chemistry, students are building the academic foundation required to excel in any field of science. This course is the equivalent of the general chemistry course usually taken during the freshman year of college by science majors. Students can expect to achieve a deep understanding of the fundamentals of general chemistry, develop critical thinking and problem solving skills, and learn to interpret or explain chemical phenomenon.

Text: Zumdahl & Zumdahl, *Chemistry*, 7th Edition, 2007.

**Prerequisite:** Students enrolled in AP Chemistry must have successfully completed either Quantitative Chemistry with at least a B+ average or Chemistry with an A- average. Students must also either be currently enrolled or have completed Algebra II while maintaining a B average in accelerated math courses or a B+ average in non-accelerated math courses, and be recommended by the relevant science teacher.

### **Biology**

**Science 520**

**Year**

**Credit: 1**

This introductory course presents a study of the fundamental processes of living organisms, with an emphasis on the role of molecular biology and biotechnology in our world. Topics include: biochemistry, structure and function of cells, the cell cycle,

reproduction, genetics, protein synthesis, evolution, cellular respiration, and photosynthesis. Students will make use of computers for data collection and analysis as well as for simulations and research on the internet. Realizing that science can never be separated from the culture and society from which it comes from, we will explore selected bioethical issues throughout the year.

Text: Campbell et. al. *Biology: Concepts and Connections*, 5th edition, 2006.

**Prerequisite:** courses in physics and chemistry

### **Advanced Placement Biology**

**Science 582**

**Year**

**Class meetings: 7**

**Credit: 1**

This course is designed to be the equivalent of a college-level introductory biology course. It aims to provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing science of biology. Topics include: the principles of biological chemistry; cytology; cellular energy transformations; heredity; molecular genetics; evolution; ecology; taxonomy and systematics; and the anatomy, physiology, and development of plants and animals. The laboratory program consists of quantitative experiments that stress experimental design, as well as the use of computers for simulations, data collection, graphing, and an introduction to statistical analysis. After completing this course, students will be prepared for the Advanced Placement Biology examination in May.

Text: Neil Campbell and Reese *Biology, 7th Edition, 2005.*

**Prerequisites:** Conceptual or Computational Physics; Chemistry or Quantitative Chemistry; and Biology. This course is open to seniors with a B+ cumulative average in science or the permission of the department head. Juniors with a solid A average in science may take this course to fulfill the biology requirement for graduation.

### **Anatomy and Physiology**

**Science 553**

**Fall**

**Credit: .5**

Do you yearn to learn how the body works? Ever wonder what that bone in your ankle was that you broke playing basketball? Or why people who have heart bypass surgery have a large incision in their leg? Do you know why your feet swell in a theater or on an airplane when you take your shoes off? Why your rings get loose during winter? Why people run a fever? Why pregnant women waddle for the last few weeks? Ever wonder what an EKG, EEG, MRI, or CAT scan meant? Or what the difference is between an aneurism and an embolism?

If these questions pique your curiosity, join us for an exploration of human biology. In this course we will study the structure and function of the systems of the human body. Students should be aware that lab exercises will include a dissection of a fetal pig when all of the systems have been studied; since this is an elective and not a required course, **this activity will not be optional.**

Note: This course will enhance your preparation for the SAT II in biology, if you intend to take it. Both the E and M forms of the test include human systems.

Text: Kapit & Elson *The Anatomy Coloring Book*, 2002, 3rd edition; Kapit et. al. *The Physiology Coloring Book*, 2000, 2nd edition

**Prerequisite** or concurrent enrollment in Biology or AP Biology

**Biotechnology and Human Genetics      Science      Spring      Credit: .5**

We live in a technological society that has made striking advances in our knowledge of an organisms' genetic code as well as our ability to manipulate it: from gene splicing, to genetic finger printing to genetically modified organisms and the possibility of 'designer children'. This one semester elective is a lab based course that will introduce techniques in modern genetics such as DNA analysis by gel electrophoresis, polymerase chain reaction (PCR), DNA restriction and ligation, and plasmid isolation. The class will use these techniques as well as computer resources to explore topics such as theories of human origin, bacterial transformation, and DNA fingerprinting. As we pursue these topics, students will develop the skills to interpret and analyze the newest developments in biology, genetics and medicine.

Text: TBD

**Prerequisite:** Biology

**Introduction to Independent Science Research**

**Science 506      Year      Class meetings: 2      Credit: 1**

Open to students entering the 10th grade, Introduction to Independent Science Research will provide a rich experience in the physical sciences, leading to an authentic research experience working in a laboratory with a scientist in the summer. The course is quite different to other courses in science as it is designed to be multi-year such that the student's research will get more and more detailed each year. In addition, the majority of the work is carried out independently with individual conferences every other week with the teacher to discuss progress. In order to prepare students for this summer experience, the 10th grade course will include exposure to the body of science research literature and the discussions taking place in the larger scientific community. Students will read and analyze journal articles, attend occasional evening and weekend science lectures and meet local scientists. Students will gain experience presenting their research at a presentation and poster session in the spring which will be attended by parents, invited scientists and school administrators.

**Pre-Requisite:** Grades of A- or above in Conceptual or Computational Physics, Algebra, and Geometry. This course is open to students entering 10th and 11th grade. There is a summer reading assignment to help prepare the students for the course.

**Intermediate Independent Science Research**

**Science      Year      Class Meetings: 2      Credit: 1**

This intermediate science research course is open to those students who have successfully completed the introductory course and will be a continuation of each student's work in his/her field of independent research. Students will continue working with both the course teacher and their individual mentors to advance their understanding of their chosen topic. Students will be encouraged to enter at least one science competition and continue their independent research with their outside mentor. Summer research is expected between the introductory and intermediate science research courses.

**Prerequisite:** Successful completion of Introduction to Independent Science Research.

## Arts

### **Department Head: Debbie Pressman**

The mission of the arts department is to offer a range of opportunities that will foster the development of each student's creative and artistic voice. The education process in these art courses fuses theory and concept with students' expressive lives, and offers them the practical tools to give form to their experience. Using both traditional and innovative techniques, the arts faculty encourages students to be risk-takers and creative problem solvers, and to appreciate the rigors of disciplined craft and the development of skills over time.

The program includes two inter-related methodologies, which occur simultaneously: the formal studio/class experience within the curriculum, and the co-curricular experience, represented by performances and visual art displays, both within and beyond Packer's walls. Co-curricular experiences include the annual Packer Dance Concert, Brass Choir tour, Upper School Chorus European tour, fall play, Renaissance Evening, and spring musical.

### **FreshArts Arts 610**

### **Year**

### **Credit: 1**

The freshman year is a discovery year and provides an introduction to basic arts specialties in the Upper School. FreshArts is taught by members of the visual and performing arts faculty. In the first phase of the course, students rotate through five arts disciplines: dance, music, theatre, new media, and visual arts. Included are discussions of common themes and ideas, historical contexts, and social and cultural perspectives. The second phase of this course requires students to choose a concentration in two of the arts disciplines for more intensive study at the beginning level. Choices are made from the following:

**Dance Fundamentals** involves structured work in technique, composition, and improvisation. Its primary focus is on expanding students' movement vocabulary and introducing them to basic compositional elements. Extensive use of William Forsythe's *Improvisational Technologies* (a video/CD-Rom textbook) is the basis of the work done in the second semester. This video textbook gives students a working vocabulary from which dance can be analyzed and used for movement invention. A final choreographic project is performed at the end of each quarter.

**Digital Video** gives students the opportunity to explore various aspects of video production and relevant film-making technologies. Students will use available digital media at Packer to create individual and group projects that explore a variety of video-making themes. An on-going critical dialogue will be at the center of the production process.

**Music** offers students a hands-on experience with learning and improvising a variety of rhythms and harmony using a variety of musical techniques. While playing authentic instruments such as congas, xylophones as well as exploring alternative instruments, such as PVC pipes and bucket drums, students are given the opportunity to expand their view of

playing, improvising and composing. They come to respect musical systems that are as sophisticated as their own, learn musical terms and formal structures that are founded on a different logic, and develop a flexibility that allows them to approach new music with curiosity and enthusiasm.

**Theater Introduction** gives students the opportunity to work as an ensemble. Through voice and movement work, improvisation, and group performance exercises that are designed to free emotional spontaneity and to encourage creativity, the ensemble explores various aspects of the craft. Students are assigned contemporary monologues and/or scenes and have the opportunity to explore text and develop confidence in their performance skills.

**Visual Arts** explores both observational and imaginative concepts in the visual arts. Students work with a variety of materials in a wide range of techniques, including drawing, painting, printmaking, sculpture, and rudimentary computer graphics. The course emphasizes creating artwork in the studio, accompanied by discussions of aesthetic ideas that emerge from the assignments.

### **Intermediate Dance**

**Arts 625/PE 725**                      **Year**                      **Class meetings: 3**                      **Credit: 1**

The focus of this class is to prepare students in the art of choreography, providing them with the tools needed to succeed at the advanced level. Principles of composition, choreography, performance, technique, dance history and theory are covered throughout the year. During the first semester, students learn and rehearse a new dance work to perform in the dance concert; in the spring, an intensive choreography workshop allows each student to create and direct a dance for his or her own ensemble of dancers. Students write three major papers dealing with dance criticism, theory and dance history.

**Prerequisite:** Arts 610 or permission of the instructor. This course is open to students in grades ten through twelve and fulfills physical education requirements.

### **Advanced Dance**

**Arts 635/PE735**                      **Year**                      **Class meetings: 3**                      **Credit: 1**

This course offers an opportunity to study advanced and diverse techniques, composition, choreography, improvisation, contact work, and dance criticism. A major focus of the first semester is the required participation as a choreographer in the dance concert, which requires time outside of class. While choreography is the most obvious element of this task, students learn about costume design, lighting, leadership, and concert production. Second semester will provide the opportunity for further choreographic development with site-specific creations. In addition, students are required to develop and teach a lesson plan to the rest of the class. Throughout the year there are two papers, 15 hours of service work in dance/arts, and individual conferences with the teacher.

**Prerequisite:** Arts 625 (Intermediate Dance). This course is open to students in grades eleven and twelve and fulfills physical education requirements.

**The Packer Chorus**                      **Arts 651**                      **Year**                      **Class meetings: 3**                      **Credit: 1**

The Packer Chorus has received high praise for its performances abroad as well as home.

The chorus presents two major school concerts each year and performs at numerous school functions. In addition, the chorus participates in outside events that include choral festivals, trips and exchanges with other schools. Within the rehearsal, singers focus on breathing and vocal technique through a rigorous approach to practicing repertoire. Students also will learn basic score and music reading skills to incorporate through the repertoire. They acquire their aural musical skills, and explore their imagination through movements and imagery exercises. Focus in class is on the development of a strong and beautiful voice that blends seamlessly into the ensemble. This course is open to students in grades nine through twelve.

**The Select Choir                      Arts 650              Year      Class meetings: 2              Credit .5**

The Select Choir sings all kinds of accapella music – from classical to jazz – and in the process focus on how to blend and how to listen to each other. We will work diligently each rehearsal to prepare for concerts, as well as other school events. Through singing in this choir, we will work on healthy tone production, performance etiquette and teamwork, note-reading and sight-singing skills, as well as develop a musical language to perform diverse choral music with beauty, integrity and rhythmic precision. Our class time is crucial as dedicated and disciplined rehearsals translate into consistently fabulous performances. We will be working very hard and reaping great rewards.

**Prerequisite:** Students need to be in Packer Chorus or the Packer instrumental program in order to be considered for this choir. Permission of the instructor is also required.

**The Packer Orchestra              Arts 653              Year      Class meetings: 3              Credit 1**

With a focus on instrumental technique and ensemble playing, we will learn a variety of repertoire selected from the rich tradition of over three centuries of art music. We will have three weekly rehearsals, one of which is used as a sectional practice, divided into upper and lower strings, to work out fingers, bowings, and other technical issues. We will continue to learn how to watch and interpret visual cues given by the conductor (as an extension of the skills developed in MS orchestra). The main emphasis will be team spirit and working as an ensemble. Select students will be given the opportunity to play chamber music, and both the orchestra and the chamber ensembles will perform several times throughout the year. This class is open to eligible instrumentalists in grades nine through twelve.

**Chamber String Ensemble      Arts 654              Year      Class meetings: 2              Credit .5**

While the US Orchestra trains students to be part of a standard orchestra with a conductor, the aim of the Chamber String Ensemble is to train the student to be part of a standard chamber ensemble, working as a collaborative group without a single leader. Students will be playing music from a wide range of time periods. Like the Orpheus Chamber Ensemble, we will work to come to musical and artistic consensus together. Participating in such a group requires additional skills such as cooperation, compromise, giving and receiving cues, and a much stronger knowledge of everyone else's ensemble part. In this new, smaller group, students will work to develop stronger intonation skills and achieve a higher level of listening while sight-reading. Additionally, as a tight-knit team, we will aim to perform more frequently and in a variety of venues. While facilitated by a teacher, a goal of the course is to support each student's musicianship so that he/she could successfully form a chamber group and rehearse without outside direction. This class is open to eligible instrumentalists in grades nine through twelve.



four) part vocal writing, basic counterpoint and music analysis. There is no prerequisite for this course; however, students must be invested in the mechanics of music, specifically the musical score. This class is for all musical enthusiasts and will include dictation, sight-reading and formal listening analysis. This semester class will focus on music theory using visual, aural, and kinesthetic tools.

### **Music Theory: Improvisation, Playing and Composing**

**Arts 656**

**Spring**

**Credit: .5**

This course includes music syntax, key signatures, and clefs and will progress to two (or four) part vocal writing, basic counterpoint and music analysis. There is no prerequisite for this course; however, students must be invested in the mechanics of music, specifically the musical score. This class is for all musical enthusiasts and will include dictation, sight-reading and formal listening analysis. This semester we experience music theory through improvisation, playing, and composing music.

### **Actor's Studio**

**Art 627-I/II**

**Year**

**Credit: 1**

This acting course is designed to immerse students in the acting experience. Using a variety of texts, but with a focus on classical material, students develop their skills using an array of acting techniques. There is an emphasis on interpreting text and analyzing character, and students will be expected to work toward performance of scenes or monologues. The course will include practical experience in movement, basic physical relationships, and ways in which the body can be used to heighten communication. Stage combat work is introduced, and may include units in unarmed combat, quarterstaff, or broadsword. This course is open to students in grades ten through twelve.

**Prerequisite:** Students who have already taken Level I may enroll in Level II.

### **Actor's Ensemble Arts 614**

**Year**

**Class meetings: 2**

**Credit: .5**

Actor's Ensemble is an exciting option for theatre students. The focus is completely on the technique of the actor. The Ensemble is designed to continue the FreshArts introduction to the study of acting: theater games, exercises, sensory response, imagination, improvisation, and characterization work with a focus on ensemble work. Study will also include work on prepared scenes and monologues from selected plays.

### **Theater Elements**

**Arts 638 Fall/Spring**

**after school/per semester**

**Credit: .5**

Theatre Elements is for those students interested in serving as or learning how to be the stage manager for the fall Upper School play or the spring musical. In addition to helping to organize and run rehearsals, stage managers keep track of blocking and serve as the right hand to the director. One of the primary responsibilities of the stage manager is to organize crews and call all cues for the various performances. This course meets during the rehearsal periods for the US theatrical productions and is open to students in grades ten through twelve.

**Prerequisite:** permission of the instructor

### **Photography: Method and Concept**

**Arts 622**

**Year**

**Credit: 1**

This course is designed to cultivate and enrich the act of seeing, as well as to develop

through photography a particular mode of visual thinking. The principal means are picture-taking with both film and digital cameras and working in the darkroom to learn the traditional methods of making photographic prints. Students learn to articulate their understandings about photography through speaking and writing about the work of other photographers as well as through discussions of their own work. The sequence of photographic assignments covers a wide range of subject matter including portraits, still life, and the city, as well as important aspects of picture-taking such as light, vantage point and composition. A 35mm camera is required (a few cameras are available to be checked out from the arts department). Students purchase their own film and paper.

**Prerequisite:** Arts 610 or permission of instructor. This course is open to students in grades ten through twelve.

### **Advanced Photography**

**Arts 633**

**Fall**

**Credit: .5**

The emphasis in this course is on deepening students' understanding of how photography can serve as a significant tool for communication and personal expression. In addition to teacher-generated assignments, students are expected to create their own individual photographic projects, including a book designed around a selected theme. Gallery visits and written papers are required. All students must have access to a 35mm camera. Students purchase their own film and paper. This course is open to students in grades eleven and twelve.

**Prerequisites:** Arts 622 and permission of instructor

### **Digital Video: Focus on Animation, Digital Sound, Narrative Short Film**

**Arts 612**

**Fall**

**Credit .5**

Video storytelling is at the heart of this course designed to expose students to current and historic approaches to art making through an array of new media. A variety of projects are planned to enhance student understanding of video production and the synthesis of media that is at the core of the storytelling that shapes our world. The class will work with visiting filmmakers and artists through class visits and field trips. Students will create multimedia presentations and write a paper.

You can explore this course of study over 4 semesters beginning anywhere in the sequence. Each semester will have elements of team brainstorming, screenwriting, and storyboarding.

For future reference the planned semester breakdown is as follows:

Fall 2010 Animation, Digital Sound, Narrative Short film

Spring 2011 PSA, Animation, and Documentary

Fall 2011 Long format Narrative film, Music Video, Experimental film

Spring 2011 Digital Sound, PSA, Animation, Short Film

This course is open to students in grades ten through twelve.

**Prerequisite:** Arts 610 or permission of the instructor

### **Digital Video: Focus on PSA, Animation, Documentary**

**Arts 612**

**Spring**

**Credit .5**

Video storytelling is at the heart of this course designed to expose students to current and



**Prerequisite:** Students who have already taken Level I may enroll in Level II

**Advanced Placement Studio Arts:**

**Level 1 (junior year) and Level 2 (senior year)**

**Arts 681**

**Year**

**Credit: 1**

The Advanced Placement Studio Arts program culminates with the submission of a portfolio consisting of 24 works of art at the end of the senior year. The portfolio may be submitted either as: THE DRAWING PORTFOLIO (including painting and printmaking) or THE 2-D DESIGN PORTFOLIO (including photography and computer graphics). Each portfolio is comprised of two major areas; **concentration** and **breadth**. The **concentration** area allows students to develop a single compelling visual arts direction, while **breadth** requires numerous specific explorations of technical and conceptual visual arts issues. While work created in the course serves as the body of the portfolio, each student is expected to complete substantial assignments not covered in class. Portfolio development is discussed in periodic seminars with the instructor. This course is open to students in grades eleven and twelve, but generally, Juniors will need two years of AP Studio Art to complete a successful portfolio by the end of their senior year.

**Prerequisite:** Completion of a year of intermediate art and/or photography courses, as well as approval by the instructor.

**Advanced Placement Art History**

**Arts 683**

**Year**

**Credit: 1**

The Advanced Placement program in art history describes this course as a chronological survey of art. This is a global approach to art history that, while primarily focusing on Western traditions, incorporates many non-European themes through specialized readings and assignments. Architecture, sculpture, and painting are discussed from historical, contextual, aesthetic, and interpretive viewpoints. Students make frequent independent trips to museums to research comparative essays.

**AP Art History is open to seniors only. Students who register for this course must have previously demonstrated an expressed interest or experience in the arts.**

Text: TBD

|   |
|---|
| <b>Physical Education and Athletics</b> |
|---|

**Physical Education Department Head: Pippa Mayell**

**Athletic Director: Rich Domanico**

The Physical Education program in the Upper School seeks to develop each student's appreciation of and commitment to lifelong personal health and fitness through participation in individual and team sports. The physical education program recognizes the wide range of abilities and interests of its students and seeks to offer choice and some flexibility in order to encourage maximum participation and enjoyment. To achieve these

aims, Packer offers instruction in the following activities: volleyball, soccer, basketball, softball, floor hockey, fitness and weight training, yoga, and Tae Kwon Do.

**Requirements:**

Physical Education is required each year and meets two times per week for the entire year. Students must pass eight semesters of physical education in the Upper School to graduate.

All students are required to register for a full year of physical education during the registration process the previous school year; students can fulfill this full-year requirement through the variety of options listed below. If a student is uncertain whether or not he/she wants to play on a team, the student must register for a physical education class.

Any student who is registered for and participating in a physical education class and who decides to try out for a team will be allowed to complete an add/drop form during a determined period of time at the beginning of each season.

**Physical Education**

**PE 711/712                      Semester                      Class meetings: 2 Credit: .5**

**Yoga**

**PE 713/714                      Semester                      Class meetings: 2 Credit: .5**

Yoga literally means union. It is a divine discipline that gives a seeker the power to turn his/her attention within. Yoga reunites all polarities and recreates a state of oneness, and it is both the process of reconciling these apparent opposites and the final state of union--it is both the means and the goal. Yoga is the scientific art of remembering our true nature. Yoga is a fifty-minute class opens to all Upper School students. No prior yoga experience is necessary. It is an elective that can be taken to fulfill the physical education requirement. Yoga postures are introduced, practiced, and combined with relaxation and breathing exercises, meditation, and philosophy.

**Tae Kwon Do**

**PE 736                      Semester                      Class meetings: 2 Credit: .5**

The aim of Tae Kwon Do is to develop mind, body, and spirit through martial arts training. As well as gaining experience and understanding of personal safety and self-defense through this course, students are given the opportunity to understand the cultural context of this discipline and other martial arts. The learning process involves the introduction of basic Korean vocabulary relevant to training techniques. As students improve as martial artists, they will progress through the standard rank system. Students are expected to practice techniques taught in class on their own time between training sessions. Assessment is based on attendance, focus, and adherence to the underlying tenets of Tae Kwon Do: respect, humility, modesty, self-control, integrity, and indomitable spirit. The class meets twice a week for the full year.

**In addition, students can choose from a variety of team sports for interscholastic competition:**

**Fall: Winter:**

Boy's varsity soccer Boy's varsity basketball  
 Boy's JV soccer Boy's JV basketball  
 Girl's varsity soccer Girl's varsity basketball  
 Girl's varsity volleyball Girl's JV basketball  
 Girl's JV volleyball Squash – co-ed  
 Boy's cross-country Indoor Track – co-ed  
 Girl's cross-country

**Spring:**

Boy's varsity baseball  
 Boy's JV baseball  
 Boy's Varsity volleyball  
 Girl's varsity softball  
 Girl's JV softball  
 Boy's track  
 Girl's track  
 Tennis

Participation on one sports team may be used to satisfy one semester of physical education credit each year. Participation on two or more teams may be used to satisfy an entire year of physical education credit. The following table shows which quarters and/or semesters toward which each sports team counts.

Both tennis and squash are dependent upon court availability. Please confirm that they are going to take place at end of the first quarter with the athletic director.

|                   | 1 <sup>st</sup> Q | 2 <sup>nd</sup> Q | S1 | 3 <sup>rd</sup> Q | 4 <sup>th</sup> Q | S2 |
|-------------------|-------------------|-------------------|----|-------------------|-------------------|----|
| <b>Soccer</b>     | X                 | X                 | X  |                   |                   |    |
| <b>G VB</b>       | X                 | X                 | X  |                   |                   |    |
| <b>X-Country</b>  | X                 | X                 | X  |                   |                   |    |
| <b>Basketball</b> |                   |                   |    | X                 | X                 | X  |
| <b>Squash</b>     |                   |                   |    | X                 | X                 | X  |
| <b>Baseball</b>   |                   |                   |    | X                 | X                 | X  |
| <b>Softball</b>   |                   |                   |    | X                 | X                 | X  |
| <b>B VB</b>       |                   |                   |    | X                 | X                 | X  |
| <b>Track</b>      |                   |                   |    | X                 | X                 | X  |
| <b>Tennis</b>     |                   |                   |    | X                 | X                 | X  |

Students may also fulfill their Physical Education credit by working as a manager for an athletic team.

**Expectations for Managers of Athletic Teams (as of 2010-2011)**

Managers will be expected to fulfill the following in order to receive Physical Education credit for one semester:

1. Complete one session in the Fitness Center per week - recorded, signed by a supervisor and handed in to the team coach. (This requirement may be fulfilled by participation in a team practice, if deemed appropriate by your coach.)

2. Attend all games during the season to fulfill duties appropriate to the team sport. Duties may include assisting with equipment, set up, score keeping, record keeping, running the clock, calling lines, writing up game and practice schedules etc.

3. Managers are exempt from PE class for the duration of the season. They must return to PE (Fall sports) or begin a PE class (Spring sports) when they are not in season. Basketball managers are exempt for the semester, due to the length of the season.

4. Managing an Athletic team may only be used for one semester of PE credit per year.

**NOTE:** Students who are registered for a physical education class that takes place in the fall and who decide to participate in a team sport that satisfies the third/fourth quarters and second semester credit must remain in their assigned class until the end of the first semester.

If the number of students trying out for a team is more than the team can carry, cuts may be made. If this is the case, all students in jeopardy of not making a team must be enrolled and participating in a physical education class until they have made the team.

**NOTE:** See the Arts Department section of this guide for a listing of dance classes that can be taken for physical education credit.

## Health

### **Department Head: Karen Brandt**

The purpose of Upper School health education is to review and build upon the foundational concepts of Lower and Middle School Health: self esteem, interdependence, awareness of and respect for diversity, decision-making skills, and community membership. A one-quarter course in ninth grade, a year-long course in tenth grade and a one-quarter course in the 12<sup>th</sup> grade concentrate on life skills topics, which empower students to consider themselves as responsible, contributing members of their various communities, while providing opportunities for explorations of personal decision-making and social identifiers. The Upper School health courses are designed to inspire students to take responsibility for their choices, understand their consequences, and be able to appreciate their value as learning experiences.

### **Health (9<sup>th</sup> grade)**

#### **Health 751**

#### **Fall (One Quarter)**

#### **Class Meetings: 1**

The design of this introductory health class is to help the freshman have a smoother transition from middle school into the upper school. The class will emphasize relevant issues such as decision making, drugs/alcohol and social/mental health. Additionally, this class will offer an introduction to sources of support for the freshmen. Guest speakers may include the learning specialist, school psychologist and peer supporters.



Packer's libraries promote academic excellence and individual success by equipping students with the skills to become independent, life-long learners and readers. In addition to developing a collection of quality print, non-print, and electronic materials that support the academic departments' curricula, we provide a dynamic environment in which students learn the necessary skills to interpret information, understand ideas, think critically and creatively, and develop a love of reading.

### **Information Literacy**

#### **Library 820**

**Fall (2nd Quarter)**

**Class meetings: 1**

This required course for all 9<sup>th</sup> graders will introduce students to the research process. It will be organized around important research topics and skills including academic honesty and plagiarism, accessing and evaluating information through databases and Web 2.0 resources, the mechanics of paraphrasing and direct quotation, and proper MLA-style citation. By the end of the course, students will demonstrate their understanding of the research process through the completion of a final research project.

Text: *Packer Upper School Academic Integrity Handbook.*

## **College Counseling**

### **SAT Subject Tests: Which ones? When?**

The timeline for taking SAT Subject Tests is predicated upon several variables, which makes choosing the best time for a student to take a specific test an individualized decision. Most students begin taking Subject Tests in the spring of their junior year. In some cases, however younger student may consider taking a Subject Test prior to 11<sup>th</sup> grade.

**For further guidance regarding a student's readiness to take specific SAT Subject Test, please refer to the information below:**

### **Subject Tests: English**

Students in grades 9 through 11 read works from a variety of time periods, from the Renaissance through the 20<sup>th</sup> century. They read English and American literature, along with literature in translation, in a variety of genres, including novels, poetry, non-fiction, short stories, and plays.

As part of their day-to-day work in English, students in grades 9 through 11 practice the skills emphasized on the Literature SAT Subject Test as identified by the College Board.

English students in grades 9 through 11 are not asked to demonstrate their understanding of literature in a multiple-choice format. Although, Eleventh grade students who are enrolled in the AP English course regularly practice answering multiple-choice questions about literature. . For those students who are interested in taking this Subject Test we recommend that they obtain a commercially prepared study guide for the Literature Subject Test in order to prepare independently for the topics not covered in the course; the optimum time for testing is the June following completion of 11<sup>th</sup> grade English.

### **Subject Tests: History**

## **World History**

Students taking Packer’s Modern World History course or AP European History will have studied much, but not all of the material included on the World History SAT Subject Test. For those students who are interested in taking this Subject Test we recommend that they obtain a commercially prepared study guide for World History in order to prepare independently for topics not covered in the course.

## **US History Subject Test**

It is recommended that students in the AP US History course take the SAT Subject Test in US History after they have taken this AP exam in May.

Students taking 10<sup>th</sup> Grade U.S. History will have studied much but not all of the material included on the American History SAT Subject Test. For those students who are interested in taking this Subject Test we recommend that they obtain a commercially prepared study guide for the US History Subject Test in order to prepare independently for the topics not covered in the course.

## **Subject Tests: Mathematics**

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Students can take the Math Level 1 SAT Subject Test, Math Level 2, or both. Both Subject Tests cover a breadth of topics and students need not master all topics to score well on these tests. Packer’s math courses cover approximately 90% of the topics on the tests. While math teachers may use some class time to assign and review test questions in appropriate math classes, Packer’s courses are focused primarily on teaching mathematics content. We advise that students prepare independently for these tests. SAT Subject Test preparation guides are available for sign-out during the day from the math office.

### Math Level I

Students will have studied requisite content for the Math Level I Subject Test after completing Algebra II or Algebra II A. However, approximately 40% of the test is on geometry topics however it is advisable that students review geometry concepts prior to taking the exam. In addition, because of the cumulative nature of mathematics courses, students may choose to take this exam after completing Precalculus or Precalculus A.

### Math Level II

Students will have studied requisite content for the Math Level II Subject Test after completing Precalculus or Precalculus A.

## **Subject Tests: Science**

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### **Physics**

The goal of the SAT Subject Test is to “measure understanding of physics at a level suitable for college preparation.” Packer’s Computational Physics course covers approximately 50% of the material required for the physics SAT Subject Test, including kinematics, dynamics, energy, gravity, electric fields, forces, potentials, circuit elements and DC circuits, introductory electromagnetism, and analytical skills. Because of the depth and breadth of the exam, it is not recommended that students take the physics SAT Subject Test based solely on completing the freshman Computational Physics course at Packer. However, if

students make the decision to take the test, however we recommend they complete a program of independent study in the following areas not generally covered by Computational Physics: geometric optics, circular motion, simple harmonic motion, capacitance, thermodynamics, and modern physics.

Packer's AP Physics course is a suitable program for preparing students for the SAT Subject Test in physics. Although all areas are adequately covered by the AP Physics course, it is recommended that students wait to take the SAT Subject Test until *after* sitting for the AP Physics exam. It is also recommended that students obtain a commercially prepared study guide for the physics SAT Subject Test and work with it prior to taking the test.

### **Chemistry**

The goal of the SAT Subject Test is to “measure understanding of chemistry at a level suitable for college preparation.” The science department's quantitative chemistry course covers approximately 75% of the material required for the SAT Subject Test, including the nature of matter, atomic theory, bonding, chemical reactions, stoichiometry, solutions, and gas laws. Because of the depth and breadth of the exam, it is not recommended that students take the Chemistry SAT Subject Test based solely on completing Packer's quantitative chemistry course. However, if students make the decision to take the test, however we recommend they complete a program of independent study in the following areas not generally covered by quantitative chemistry: colligative properties, acid-base chemistry, redox reactions, chemical equilibrium systems, entropy, Hess' Law, and introductory organic chemistry. It is also recommended that students obtain a commercially prepared study guide for the chemistry SAT Subject Test and work with it prior to taking the test. Packer's AP Chemistry course is a suitable program for preparing students for the SAT Subject Test in chemistry. Although all areas are adequately covered by the AP Chemistry course, it is recommended that students wait to take the SAT Subject Test until *after* sitting for the AP Chemistry exam. It is also recommended that students obtain commercially prepared study guide for the chemistry SAT Subject Test and work with it prior to taking the test.

### **Biology**

The goal of the Biology-E and Biology-M SAT Subject Tests are to “measure understanding of biology at a level suitable for college preparation.” Packer's biology course covers approximately 75% of the material required for the SAT Subject Test, including cellular and molecular biology, ecology, genetics, evolution and biodiversity. Because of the depth and breadth of the exam, it is not recommended that students take the Biology SAT Subject Test based solely on completing Packer's biology course. However, if students make the decision to take the test, however we recommend they complete a program of independent study in organismal biology, which makes up 25% of the SAT Subject Test. Packer's AP Biology course is a suitable program for preparing students for the SAT Subject Test biology test. Although all areas are adequately covered by the AP Biology course, it is recommended that students wait to take the SAT Subject Test until *after* sitting for the AP Biology exam. It is also recommended that students commercially prepared study guide for the biology SAT Subject Test and work with it prior to taking the test.

## **Subject Tests: World Language**

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### **Latin**

The SAT Subject Test in Latin is a comprehensive exam that essentially tests students on

the cumulative grammatical material acquired throughout the range of Packer’s Latin program, that is, from Latin 50 through Latin IV. The Latin examination focuses upon such topics as grammar and syntax, English derivatives, translation and reading comprehension, and poetry and scansion. Because poetry and poetic meter are not introduced until the second semester of our Latin IV course, we do not recommend that our Latin students sit for the SAT Subject Test Latin exam prior to the completion of Latin IV. Because the second semester of Latin IV entails not only the introduction of poetry, but also specific preparation for this exam, the optimum time for testing is the June following completion of Latin IV or when they are enrolled in AP Latin.

### **Spanish**

Spanish language students who have completed Packer’s Level IV Advanced Spanish Language course (*Advanced Spanish Grammar, Composition and Style*) are prepared to take the SAT Subject Test in Spanish. In this advance language course, students work with a rich array of vocabulary and master strategies that assist with their preparation for the vocabulary section of the exam. The course syllabus also includes a comprehensive review of key grammar topics and exercises which are similar to the exam in structure. Additionally, the class works with texts and literature, similar to those used in the reading and comprehension portion of the test. During the fourth quarter, students have the opportunity to complete a several practice tests, which help to determine their level of

preparedness for the exam. The optimum time for testing is the June following completion of Packer’s Level IV Advanced Spanish Language when they are enrolled in AP Spanish.

### **Chinese**

The Chinese program at Packer emphasizes four specific language acquisition skills: listening, speaking, reading and writing, in order for students to become fluent in the target language. Ninety percent of the topics included in the Chinese SAT Subject Test (ex. travel and transportation, eating in a restaurant, hobbies, weather, school life, making appointments, attending meetings and parties, etc.) and approximately 70% of the grammar topics have been studied by all students who have completed Packer’s Level IV Chinese course. Students interested in taking the subject test however will need to study independently those topics such as the adverbial expression using “de”, dynamic particle “zhe”, repetitive adverbial expressions, and passive voice independently, which are not introduced until Level V\*.

**\*Note:** The majority of students who enroll in Chinese V are in the 12<sup>th</sup> grade.

### **French**

Advanced French Composition and Grammar, is designed to not only assist students in their preparation for taking the AP French Language course, but also to prepare for the SAT Subject Test. A range of grammar topics are included in this course ( conjugations of present tense verbs, regular irregular, all forms of the past tense: passé composé, imparfait, plus-que-parfait, passé simple, the future tense, the present and past subjunctive, relative pronouns, the uses of articles). Additionally, students complete a close study of various French texts from the 19th and 20th century that include genres such as poetry, fiction, essay and theater. The study of literature enables students to improve their reading comprehension, build their vocabulary, and hone their analytical skills. Students listening skills are refined throughout the course as a result of the class being conducted entirely in

French and the inclusion of a listening exercise on each assessment. These Advanced French students also regularly write and revise original essays and creative pieces. It is recommended, though not required, that students take the SAT Subject Test in French after completing this course or while they are enrolled in AP course French.

## **Frequently Asked Questions**

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About the SAT Reasoning Test and SAT Subject Tests

### **1. What is the testing timeline for most Packer students who take the SAT Reasoning Test (formerly the SAT I)/ SAT Subject Tests?**

The majority of Packer students do not take their first SAT Reasoning Test until the spring semester of their junior year (either March, May or June), which allows them to achieve the most benefit from the Packer English and math curricula that include content knowledge and skills covered on the SAT. Students can also choose to take the SAT Reasoning Test an additional time in the fall of their senior year. The timeline for taking SAT Subject Tests is based upon several variables, making the choice for when to take a specific test an individualized decision. Most students begin to take Subject Tests in the spring of their junior year. In some cases, students may want to consider taking a Subject Test prior to their junior year. For example, a student who is enrolled in level IV pre-Advanced Placement language class and/or pre-calculus is likely to be well prepared to take the Subject Test in June of the year in which he/she is completing the course. A PSAT score that indicates that a tenth grade student has already developed key test taking skills, such as critical reading and reasoning and who has also experienced success in Packer's American history or AP American history course, or in one of Packer's chemistry courses in 10th grade, may consider taking the corresponding SAT Subject Test in June of sophomore year.

The best way to assess student readiness is to take a practice test and to let the score be a guide. If a student is not satisfied with their practice test results and plans to continue to study the discipline the following year, it is perfectly reasonable to wait to take it the following year when they will have had further coursework and more time to prepare.

### **2. What are SAT Subject Tests? (What content do they cover and what do they measure?)**

The College Board website, [www.collegeboard.com](http://www.collegeboard.com) states that, "SAT Subject Tests are a battery of one-hour, mostly multiple-choice tests that measure how much students know about a particular academic subject and how well they can apply that knowledge. Students take the Subject Tests to demonstrate to colleges their mastery of specific subjects like English, history, mathematics, science, and language. The tests' content evolves to reflect current trends in high school curricula, but the types of questions change little from year to year. Many colleges use the Subject Tests for admission, for course placement, and to advise students about course selection." SAT Subject Tests fall into five disciplines: English, history, mathematics, language and science. The College Board website can provide more detailed information regarding the purpose of the tests, subject matter and format, as well as test-taking tips, and practice test questions.

### **3. How many SAT Subject Tests should students plan to take before applying to college?**

The number of tests students are required to take will vary from college to college. Ninety percent of all the colleges in the United States do not require SAT Subject Tests of their applicants, but many schools to which Packer students have applied recommend or require two to three Subject Tests. Some colleges specify the Subject Tests that they require for admission or placement; others allow applicants to choose which tests to take.

#### **4. When are the SAT Subject Tests given and how do students register to take them?**

The College Board website offers easily accessible information regarding test dates and registering on-line. Additionally, students can pick up a registration bulletin from Packer's college counseling office that contains test dates and includes a form to register by mail. Please note that there are hard and fast registration deadlines for each test administration. It is each family's responsibility to plan ahead and to register themselves through the College Board. Should you want to secure Packer as a test site, it is best to register well in advance of the deadline.

#### **5. What courses at Packer Collegiate Institute will prepare students to be successful on the SAT Subject Tests?**

Since the SAT Subject Tests are independent of any particular textbook or method of instruction, there is not a direct correspondence between Subject Tests and Upper School course offerings. Beginning in ninth grade, students are introduced to test taking skills that apply to the format of the SAT Subject Tests, such as analytical reading and deductive reasoning. Additionally, AP courses further develop test taking skills while covering a broad range of topics applicable to the Subject Tests. Required courses offered by the history and science departments are not structured to prepare students for Subject Tests, but students who are interested in these subject(s) should seriously consider if they could be successful preparing independently for a Subject Test. An easy way to determine how much preparation would be required is to take an SAT Subject practice test.

Students who are enrolled in an advanced language, advanced math and Advanced Placement courses will discover that each of these programs of study naturally correspond to the range of topics covered on the corresponding SAT Subject Tests.

The Upper School's required series of English courses provides every student with a carefully designed syllabus to develop skills such as literary analysis and to study an array of genres, both of which will contribute to a student's success on the SAT Subject Test in Literature.

The required courses in history (Ancient History, American and Modern World History) and science (physics, chemistry and biology) are not structured to prepare students for SAT Subject Tests. These two departments have made pedagogical decisions to offer curricula that value depth over breadth and critical thinking and analysis over memorization and repetition. As a result of this in-depth study and the development of critical thinking skills, students who are successful in any of these courses may confidently choose to pursue independent/personal preparation for SAT Subject Tests in these disciplines.

#### **6. How will Packer Collegiate Institute faculty, college counselors and the Upper School administration support students who take the SAT Subject Tests?**

Through the academic planning and registration process for 11th and 12th grade, students are given the opportunity to work with their advisors and deans to select courses that will provide an appropriate level of challenge to meet their long range goals of graduation and college admission. During this process, each student's four-year plan is reviewed by his/her dean. Additionally,

starting in the second semester of the junior year and as part of the college counseling process, each student also works closely with his/her college counselor, which further guides the choices he/she will make regarding the selection of and timeline for SAT Subject Tests.

### **7. How do colleges use the SAT Subject Tests?**

Many colleges use the Subject Tests for admission, for course placement, and to advise students about course selection. Used in combination with other background information (high school record, scores from other tests like the SAT Reasoning Test, teacher recommendations, etc.), Subject Tests are believed to provide a national measure of a student's academic achievement and are used as a predictor of future performance.

### **8. How can students find out if they are prepared to take an SAT Subject Test? What preparation strategies have Packer students used in the past?**

The best predictor of a student's success on an SAT Subject test is the score he/she earns on a practice test. Students considering taking an SAT Subject Test should begin by taking a practice test. The College Board website includes detailed information about each Subject test. Packer's college counseling office has SAT Subject Test practice books for most tests and local bookstores often have an array of such books available for purchase.

Packer does not endorse a particular form of test preparation, but the school's deans and college counselors are prepared to discuss various strategies that Packer students have found useful. Packer teachers are not expected to provide instruction to prepare students for the SAT Subject Tests beyond what has been previously mentioned.

### **9. What scores do colleges see?**

Starting in March 2009, students are able to select which scores go on their score report when they request that the College Board sends their scores to colleges. Students will be able to select, for most colleges, which scores they send to colleges by sitting (test date) for the SAT and by individual test for the SAT Subject Tests. While a student may not have to reveal every test score to college, Packer does not recommend students spend unnecessary amounts of time preparing for tests and sitting for tests multiple times simply because there may be no risk to low scores. It is important that students take the tests when they are most prepared to do so. Simply taking a test multiple times without substantial preparation has not proven to impact scores in any way that is significant. Moreover, devoting excessive amounts of time to test preparation minimizes the amount of time students can spend on what is most significant in their college profile: their academic record, engagement with learning and pursuit of their own interests outside of the classroom.