

# THE PHELPS SCHOOL

FOR A BETTER MAN



## COURSE CATALOG 2022-2023

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## Curriculum Overview

The Phelps School's curriculum is designed to help boys succeed academically, personally, and socially in a positive, caring environment. Each student's course plan is tailored to his own educational needs, goals, and interests. Small classes, a disciplined atmosphere, and regular tutorial sessions provide consistent structure and support.

Beyond the classroom, social-emotional education is pre-eminent. School-wide assemblies, grade-level meetings, and special presentations focus on character and leadership development. Faculty advisors provide personal counseling, encouragement, and help with organizational skills and study habits. Through it all, Phelps boys learn how to learn, how to live lives of purpose and meaning, how to become better men.

## Graduation Requirements

Students must earn at least 24 credits beginning in ninth grade.

English/ESL	4	Social Studies	3	Arts	1
Mathematics	4	World Language	2	Electives	7
Science	3				

Health and Physical Education credits are earned by participating in afternoon activities or a PE class during the academic day, such as Strength & Conditioning. Students are expected to participate each season in an activity of their choice.

## Grading Scale

The "grade scale" generally used to convert 100-point scores into letter grades:

Note: Honors-designated and Laurel Program courses receive a 0.3 enhancement to their semester grade. For example, a student earning a B in an Honors-designated course would have 3.3 rather than 3.0 for GPA calculation purposes.

A: 93-100

A-: 90-92

B+: 87-89

B: 83-86

B-: 80-82

C+: 77-79

C: 73-76

C-: 70-72

D+: 67-69

D: 63-66

D-: 60-62

F: 59 and below

## Typical Course Progression by Subject Area

*Grade levels vary. Each student's course assignment is based upon previously completed work.*

	Grade 6 & 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12 & PG
<b>English &amp; ESL</b>	Middles School Literature & Composition I	Middle School Literature & Composition II	Intro to Genre I  English ESL (by placement)	Intro to Genre II  ESL (by placement)	American Literature  ESL (by placement) Honors English Literature	British Literature  Honors English Literature  English Composition (LP)
<b>Social Studies</b>	Geography	Ancient History	World Cultures	Civics	US History  Honors US History	Psychology  Sociology  Honors Comparative Government & Politics  International Relations (LP)  Anthropology  American Politics (LP)
<b>World Languages</b>		Spanish 1	Spanish 1	Spanish 2	Spanish 3	Spanish 4  Spanish 5
<b>Math</b>	Pre-Algebra	Algebra 1	Geometry	Algebra 2	Pre-Calculus	Statistics (LP)  Calculus
<b>Computer Science</b>			Intro to Computer Science & Coding	Intro to Computer Science & Coding	Advanced Computer Science	Advanced Computer Science
<b>Science</b>	General Science	Life Science	Physical Science	Biology	Chemistry; Honors Chemistry	Physics  Environmental Science  Anatomy & Physiology  Forensics
<b>Art</b>	Studio Art 1	Studio Art 1	Studio Art 1	Studio Art 2	Studio Art 2  Art History	Art History (LP)  IS Studio Art/Art Portfolio
<b>Clubs &amp; Other Activities:</b> Vary according to student interest						
<b>PE/Health</b>	PE/Health 1	PE/Health 1	Strength & Conditioning	Strength & Conditioning	Strength & Conditioning	Strength & Conditioning

*Note: LP next to a course denotes "Laurel Program" course.*

## Laurel Program

The Laurel Program at The Phelps School includes all courses that have the potential for college credit through a dual-credit agreement with one of our partner institutions. These classes are offered to students that have exceeded the core curriculum requirements and want to take on the challenge of a college-level course. Laurel Program courses are designed to have the same rigor and expectations as an introductory-level undergraduate course at a major college or university, although the pacing of these courses is adjusted. Questions should be addressed to Dr. Jack Hasler, Director of the Laurel Program (jhasler@thephelpsschool.org).

### Students should expect:

- To have approximately 30-45 minutes of homework per night
- To have final exams and/or essays that will count for a significant portion of their grade
- To actively participate in class discussions in a seminar-style format
- To do a substantial amount of reading and writing
- To be graded in accordance with the standards established by the partner institution

Who can enroll in a Laurel Program course? Post-graduate students may opt to enroll in Laurel Program courses in addition to other senior-level courses. Seniors and juniors at Phelps may also enroll in Laurel Program courses with permission from the Associate Head of School and Director of the Laurel Program.

All Laurel Program courses require an additional fee (between \$225 - \$300 approx.) per course.

Laurel Program courses and their affiliated university:

- College Composition I (Immaculata University)
- International Relations (University of Pittsburgh)
- American Politics (University of Pittsburgh)
- Art History (University of Pittsburgh)
- Statistics and Data Analysis (University of Pittsburgh)

## Honors-Designated & Laurel Program Course Policy

Students must be approved to enroll in Honors-designated or Dual-Credit courses. These courses move at a faster pace than other Phelps college prep courses and students can expect to have more homework. Students who are enrolled in the Honors-designated courses may choose to do some extra work, with the assistance of their teacher, in preparation of taking the appropriate AP exam in May. A student should speak with their teacher early in the fall semester if they plan on taking an AP exam. Taking the AP exam is not required for an Honors-designated course. If a student takes an AP exam, no AP designation will appear on their transcript, although AP scores can be sent to any colleges of the student's choosing. Honors courses do receive a grade point enhancement.

## Academic Departments & Courses

### **English**

Literature & Composition I & II	
Introduction to Genre I	Introduction to Genre II
American Literature	British Literature
Honors English Literature	College Composition (LP)

### **English as a Second Language (ESL)**

English Language: Starting/Emerging	English Language: Developing
Literature & Comp.: Starting/Emerging	English Language: Expanding
TOEFL Prep	Literature & Composition: Expanding
ESL Advanced	

### **World Languages**

Spanish 1-5  
Honors Spanish Language & Literature

### **Social Studies**

Geography	Anthropology
Ancient History	Honors Comparative Government & Politics
World Cultures	Contemporary World Issues
Civics	Psychology
United States History	Sociology
Honors United States History	Latin American History
American Politics (LP)	International Relations (LP)

### **Science**

Earth Science	
Life Science	Physics
Physical Science	Anatomy & Physiology
Biology	Forensics
Chemistry	Environmental Science

### **Mathematics & Computer Science**

Pre-Algebra	Statistics (LP)
Algebra 1	Calculus
Geometry	
Algebra 2	Introduction to Computer Science Principles
Pre-Calculus	Advanced Computer Science

**Academic Support Program**

One-on-one and small group support for reading, writing, math, and study skills. *More information on this program can be obtained by contacting the Director of Admissions and the Director of Academic Support.*

**Fine Arts**

Studio Art 1  
Studio Art 2  
Art History (LP)

**Health & Physical Education**

Middle School Health & PE  
Strength & Conditioning  
Varsity & Junior Varsity Athletics (after school)

**College Counseling**

Transitions to College (Seniors and Postgraduates)

## **Course Descriptions by Department**

### ***English Department***

Courses in the Language Arts (English Literature and Composition, English as a Second Language, and Academic Support classes) are designed to develop confident communicators. Grammar lessons, vocabulary studies, research papers, creative writing, and oral presentations focus on effective expression. Reading strategies enhance comprehension. Literature studies train critical thinking and invite students to engage in the world's essential conversations. Assignments and coursework help develop organizational and study skills, responsibility, and time management.

#### ***Elements of Literature and Composition I & 2 (Middle School)***

This foundational course focuses on Middle School students' reading comprehension, critical thinking, analytical skills, and writing. As they read short stories, novels, poetry, and nonfiction, students learn grammar, literary terminology, and vocabulary in context. Writing assignments introduce them to different rhetorical modes, and they receive feedback and encouragement through each stage of the writing process.

#### ***Introduction to Genre I (Grade 9)***

This course develops language skills and introduces new concepts, strategies, and expectations in an overview of literary genres. Students examine works of fiction, non-fiction, poetry, and drama while developing their knowledge of grammatical and literary terms. Essay composition emphasizes diction, creative thought, and grammar. Students begin developing their own unique voices by giving oral presentations and participating in class discussions.

#### ***Introduction to Genre II (Grade 10)***

As they continue studying fiction, non-fiction, poetry, and drama, students seek a deeper understanding of each work's structure and meaning. Writing ability improves as students learn about and attempt different rhetorical modes. They continue building vocabulary and college-level study skills.

#### ***American Literature (Grade 11)***

This course further develops reading and writing skills, prepares for college-level research and critical thinking, and provides an overview of literary movements and periods: Native American Writing, Puritanism, Rationalism, American Romanticism, Realism, Regionalism and Naturalism, the Harlem Renaissance, Modernism, and Contemporary Literature. Study of important works in various genres is linked to historical events and concepts in each literary age. Students analyze texts and think critically to develop arguments and craft essays or create projects based on these works.

#### ***British Literature (Grade 12 & PGs)***

This overview of genres covers six essential literary periods: Medieval, Renaissance, 17<sup>th</sup> & 18<sup>th</sup> Centuries, Romantic, Victorian, and The Modern Era. Emphasis is on essay writing, beginning with the college essay and moving through various rhetorical modes, as well as continued vocabulary building, note taking, and development of more sophisticated composition style.

#### ***Honors English Literature (Grades 11 and 12)***

This is an honors-level course that focuses on literary analysis. Students cultivate their understanding of literature through reading and analyzing texts as they explore concepts like character, setting, structure,



perspective, figurative language, and literary analysis in the context of literary works. *Students enrolled in this course need the permission of the Associate Head of School and the instructor.*

### ***College Composition (Laurel Program) – Grades 11, 12, PGs***

This course covers the essential topics of rhetoric: close analysis, argument, and synthesis. Readings, largely non-fiction, spark discussion and written commentary. Students develop richer vocabulary and learn to use precise grammar, clear diction, appropriate syntax, variety of sentence structure, logical organization, consistent voice and tone, and balance of generalization and specific illustrative detail. *Students enrolled in this course need the permission of the Associate Head of School and the instructor. This course is eligible for dual-credit from the Immaculata University.*

## ***World Languages Department***

### ***Spanish 1***

Students learn the basics of Spanish vocabulary, grammar, and Spanish-speaking culture.

### ***Spanish 2***

Students continue building their linguistic skills and vocabulary, learning advanced tenses, syntactic constructions, and idioms. They write short paragraphs and essays to develop their presentation skills while applying Spanish-specific concepts. Spanish 2 emphasizes and requires more translation and aural/oral practice in class.

### ***Spanish 3***

Development of vocabulary and grammar continues. Students engage in higher level analytical work in Spanish. Varied texts, media, and native sources provide real-life application. Emphasis is on students' speaking and thinking in Spanish, in and out of class. Students conduct research in Spanish to prepare for the rigors of the college classroom.

### ***Spanish 4***

This rigorous course is taught almost exclusively in Spanish. Students are also encouraged to engage in conversation with native Spanish speakers outside of class. Modes of communication include interpersonal, interpretive, and presentational. Studies include literary and non-literary texts as well as Spanish newscasts, podcasts, movies, and music.

### ***Spanish 5***

This rigorous course is available for students who have completed the Spanish 4 course.

## ***English as a Second Language Department***

Students are placed in ESL classes based on their TOEFL Jr. or ITEP tests and an assessment conducted by the Director of ESL. Students can eventually transfer into mainstream classes upon meeting the ESL Program’s exit requirements: demonstrating a well-balanced skillset and a composite score of 80 or more on a TOEFL taken on one test date or as a MyBest Score combination. Once they mainstream, ESL students are encouraged but not required to study another foreign language, such as Spanish.

Level 1: Foundations	Level 2: Intermediate	Level 3: Transition
*English Language: Starting/Emerging *Literature and Composition: Starting/Emerging	*English Language: Developing *Lit. & Composition: Developing *TOEFL Prep	*English Language: Expanding *Lit. & Composition: Expanding *ESL Advanced

*Each ESL course develops all four language domains: reading, writing, speaking, and listening.*

### ***English Language: Starting & Emerging***

At this early stage, focus is on basic vocabulary, grammatical structures, and reading comprehension to build a strong foundation as international students advance through the ESL program. The *Oxford Q: Skills for Success* series includes eight units with relevant contemporary themes. Workbooks and online components provide reading and writing practice. Students learn to write sentences and paragraphs of increasing complexity and create theme-based projects to demonstrate mastery.

### ***English Language: Developing***

Students develop their English-speaking skills by answering questions, listening and responding to classmates, and making oral presentations. Emphasis is on spoken delivery, including pronunciation, eye contact, and body language. Students improve their auditory processing skills and their English comprehension by listening to lectures, conversations, music, and videos. The *Oxford Q: Skills for Success* text series provides speaking and listening practice, with text and online components.

### ***English Language: Expanding and Bridging***

At the beginning of the year, students set individual goals for expanding their English listening comprehension and speaking skills. Students continue to practice active listening and speaking strategies and expand their knowledge of academic vocabulary based on the Academic Word List (AWL). Although the course focuses on building listening comprehension and speaking skills, level-appropriate informational texts are read and discussed, and grammar topics are explicitly taught throughout the year. Students expand their understanding of American culture and share their home country cultures with their classmates.

### ***TOEFL Prep***

Students learn preparation strategies and test-taking tips for each of the four sections. Throughout the year, they take practice tests scored similarly to the TOEFL exam to assess strengths and weaknesses and develop personalized plans to improve their scores. Students use a variety of texts to increase their English vocabulary and general knowledge to make test material more accessible.

### ***Literature and Composition: Starting & Emerging***

This course emphasizes reading comprehension and academic writing and analysis. Students begin their transition from textbook-based coursework to direct engagement with literary works, progressing from short stories to plays and novels. Explorations into literature encourage students to “think big” about the world and themselves. They build their vocabulary and they work on writing creatively and analytically, attempting various genres and creating theme-based projects to demonstrate mastery. Class discussions and reading aloud reinforce speaking and listening skills.

### ***Literature and Composition: Developing***

Students read novels, plays, and poetry of increasing length and complexity, using comprehension strategies presented at the start of the course. Literature studies continue to improve students’ English vocabulary as they broaden their perspectives and understanding. Class discussions and reading aloud continue to improve speaking and listening skills.

### ***English Language Expanding and Bridging***

Students develop skills in extemporaneous speaking and in presenting logical, coherent arguments. They practice basic public-speaking strategies for various situations and purposes; craft position papers to develop skills in research, writing, and citation; and learn to avoid logical fallacies and other weak argumentation. In various debate formats, they present prepared statements and extemporaneous rebuttals. Exploring contemporary issues and long-standing philosophical questions helps them better understand themselves and their world.

### ***ESL Advanced***

This course focuses on students improving their comprehension of English. They will read primary sources, learn to compare and contrast interpretations, recognize bias, question, analyze, interpret, and evaluate.

## ***Social Studies Department***

Social Studies courses teach students to inquire about history and the nature of humankind. The curriculum develops analytical and critical thinking skills and multicultural perspectives. Its overarching goal is to help students become productive citizens in a democratic society.

Courses develop historical literacy about world events, traditions, patterns, and changes; understanding of the human experience and how individual and group behaviors impact diverse populations; and economic literacy and understanding of the allocation of resources. *Elective courses are not offered every year.*

### ***World Geography (Middle School)***

This course examines the physical aspects of various continents and regions as well as human culture, government, politics, economics, and conflicts around the world. Students explore physical and climate characteristics, demographics, historical changes, economic activity, and land use. Students learn to question, read, analyze, interpret, and evaluate different forms of information.

### ***Ancient History (Middle School)***

This course examines ancient civilizations (2000 BCE to 1500 CE), their impact on one another, the reasons for their rises and falls, and the traces of their history and traditions that continue today -- as

seen through discussion of selected current events. Higher order thinking is developed and assessed in various formats: tests, quizzes, essays, oral presentations, notebook checks, research projects, and reaction papers.

### ***World Cultures (Grade 9)***

This course examines diverse cultures and the conditions that gave rise to them. Students use a variety of resources to develop their understanding of civilizations throughout history, leading to present-day family life and structure, social and community organizations, approach on education, religious beliefs and institutions, political movements, economic trends, and the intellectual and artistic achievements of people within their cultures.

### ***Civics (Grade 10)***

This course explores such fundamental principles as the growth of democracy, federalism, separation of powers, and checks and balances. Students discuss current events, government's impact on everyday life, the Constitution, the Presidency, the Supreme Court, Congress, the making of domestic and foreign policy, state and local government, and federal branches. Coursework develops students' ability to read, question, analyze, synthesize, interpret, and evaluate information.

### ***United States History (Grade 11)***

This course begins with a comprehensive view of America from colonization through the Civil War. Focus begins on relationships between colonies and how life, society, and culture evolved in different regions. It then turns to how the colonies compromised and overcame their stark differences, gained their collective independence, formed a sovereign nation, and quickly impacted the world. Next, it examines the nation's cultural and political evolution and its development as a world leader from the Civil War through the present. Assignments and projects entail significant research, analysis, and writing that develop higher-order thinking skills.

### ***Honors United States History (Grade 11)***

Relying on primary and secondary sources, students analyze differing views of history from 1492 to the present. They develop critical-thinking skills by questioning and analyzing information and arguments about American and national identity; migration and settlement; politics and power; work, exchange, and technology; America in the world; geography and the environment; and culture and society. Students enrolled in this course can take on additional assignments and preparation for the AP exam.

Below are Social Studies Department electives: Please note that not all electives are offered every year.

### ***Honors Comparative Government and Politics***

This course introduces students to the rich diversity of political life outside the United States. The course uses a comparative approach to examine the political structures, policies, and political, economic, and social challenges among six selected countries: Great Britain, Mexico, Russia, Iran, China, and Nigeria. Additionally, students examine how different governments solve similar problems by comparing the effectiveness of approaches to many global issues. Students enrolled in this course can take on additional assignments and preparation for the AP exam.

### ***International Relations (Laurel Program)***

International Relations is the study of how countries interact with one another. Many of its subfields include the study of war, international political economy, institutions and organizations, foreign aid, and terrorism. This class considers the theories that have been developed by major scholars and applies

them to real world cases from the last 150 years of world politics. We augment the textbook with readings from International Relations scholars that showcase important and recent research in the field. Students will be challenged with problem sets that introduce game theory, quantitative and qualitative research methods, and persuasive essay writing. *Students must have the permission of the instructor to enroll. This course is eligible for dual-credit from the University of Pittsburgh.*

### **Psychology**

This course introduces students to the history, major principles, and various types of psychology: clinical, abnormal, adolescent, developmental, environmental, experimental, forensic, community, counseling, and organizational. Topics include human development, abnormal behavior, research and development, perception, consciousness, cognition, motivation, and emotion. The course's scope is broader but less in-depth than the AP Psychology course.

### **American Politics (Laurel Program)**

American Politics is a college-level course that seeks to provide students with the political knowledge and reasoning processes to participate meaningfully and thoughtfully in discussions and debates that are currently shaping American politics and society. Students will examine the interconnectedness of the different parts of the American political system as well as the behaviors and attitudes that shape this system and are the byproduct of this system. Students will study both the historical foundations of American government and constitutionalism and the ways in which they have developed over time. By the end of the course, students will be able to analyze current and historical political events and develop factually accurate, well-reasoned, thoughtful arguments and opinions that acknowledge and grapple with alternative political perspectives. Students will be expected to read primary texts as well as secondary source material that provide insights into American government and political thought. *This course is eligible for dual-credit from the University of Pittsburgh.*

### **Sociology**

This course introduces students to the discipline of sociology, readings, projects, and assignments reveal how societal groups interact and impact each other and influence everyday life. Students develop the capacity to view and understand their world from a sociological perspective.

### **Economics**

Beyond bear and bull markets, gross national products, and fiscal policy, economics addresses basic societal issues: root causes of unemployment; rising healthcare, tuition, and housing prices; increasing drug-related incarceration rates. This course's flipped-classroom approach facilitates discussion and collaborative projects such as film skits demonstrating economic concepts. Assessments focus on 21<sup>st</sup> century skills, teamwork, collaboration, creative projects, and classroom discourse.

### **Ethics**

Students read traditional fables, discuss current events, and conduct historical research to consider universal ideas and timeless ethical questions. Assessment is based on class participation, research, vocabulary, and thoughtful attention to questions presented in classroom discussions.

### **Anthropology**

This course is a study of culture and society, combining elements of biology, evolution, archaeology, language, and art. Students explore the foundations of human life, the evolution and impact of social institutions, and the many aspects of the human experience — gender, ethnicity, politics, and more.

## **Mathematics & Computer Science Department**

Students learn best through self-discovery. The math department therefore designs instruction to encourage both independent and collaborative work while integrating the use of technology in problem-solving. All math classes are scaffolded with differentiated instruction and assessments to support students' learning needs. Hands-on projects relate to real-world experiences, and students use technology and online resources to learn.

### **Pre-Algebra**

Students will learn the basics of modeling sentences with algebraic expressions. Students will also be able to manipulate simple equations and inequalities, solving for a single variable. Basic number theory will be covered, distinguishing between integers, rational, and real numbers. Students will study basic geometric concepts, including plane figures and solid calculations. Finally, students will study ratios, percentages, and probability.

### **Algebra I**

Students learn to represent linear functions graphically, algebraically, and numerically. Other topics include linear inequalities, systems of linear equations, exponential functions, polynomials, factoring, and probability.

### **Geometry**

Students learn to apply inductive and deductive reasoning to a variety of mathematical applications, including informal and formal proofs. Other topics include properties of triangles, including basic trigonometry, angle relationships, segment lengths in circles involving tangents and chords, perimeter, circumference, area, and similarity in a variety of plane figures leading into surface area, volume, and similarity for three-dimensional solids. Algebraic concepts are included in all geometric applications.

### **Algebra II**

Algebra II focuses on the concepts of functions and relations with emphasis on linear, quadratic, exponential, logarithmic, radical, and rational functions. Students apply algebraic concepts to a variety of real-world situations that can be modeled mathematically. All topics are approached through an exploration of numerical, algebraic, and graphical methods using a TI-84 graphing calculator.

### **Statistics and Data Analysis (Laurel Program)**

Major topics include experiments and observational studies, descriptive statistics, probability, hypothesis testing for binary, categorical, and numeric data, linear regressions, and nonlinear models. The course introduces students to the R statistical programming language, which is used in academia and jobs related to data analysis and data science. *Students need the approval of the instructor to enroll in this course. This course is eligible for dual-credit from the University of Pittsburgh.*

### **Pre-Calculus**

Previous study of algebra, geometry, and mathematical functions into a preparatory course for calculus. The course focuses on mastery of critical skills and exposure to new skills necessary for success in subsequent math courses. Topics include fundamental concepts of algebra, functions and graphs, polynomials and rational functions, exponential and logarithmic functions, trigonometric functions, analytic trigonometry, systems of equations and inequalities, matrices and determinants, conic sections and parametric equations, polar coordinates, sequences and series, and an introduction to limits.

## ***Calculus***

Major topics include limits and continuity, derivatives, integrals, and functions (logarithmic, exponential, logistic, trigonometric, and inverse trigonometric). Applications of derivatives include optimization, related rates, movement (position, velocity, acceleration). Applications of integration include slope fields, volume (cross sectional area, disk, washer) and accumulated rate of change. Students explore numerical, algebraic, and graphical methods.

## **Computer Science Courses**

### ***Introduction to Computer Science & Coding***

Students examine the foundations of computer science and basic programming with an emphasis on logical thinking and problem solving.

### ***Advanced Computer Science***

This introduces students to the breadth of the field of computer science. In this course, students will learn to design and evaluate solutions and to apply computer science to solve problems through the development of algorithms and programs. They will incorporate abstraction into programs and use data to discover new knowledge. Students will also explain how computing innovations and computing systems, including the Internet, work, explore their potential impacts, and contribute to a computing culture that is collaborative and ethical. This course does not have a designated programming language. Teachers have the flexibility to choose a programming language(s) that is most appropriate for their students to use in the classroom.

## ***Science Department***

Courses explore scientific principles, concepts, and methodologies that explain the natural world. Students learn to conduct experiments, collect and analyze data, make calculations, interpret information, hypothesize and test predictions, and draw well-reasoned conclusions. Teachers scaffold lessons based on each student's needs, abilities, and interests. Projects address real-world scientific issues and challenge students to find possible solutions and assess relative risks. Courses incorporate laboratory work and inquiry-based field investigations to develop such 21st-century skills as collaboration, innovation, and critical thinking.

### ***Earth Science (Middle School)***

This survey course introduces younger students to the disciplines of earth and space science, as well as basic aspects of physics and chemistry. Emphasis is on inquiry and hands-on activities to develop skills for laboratory investigations.

### ***Life Science (Middle School)***

This survey course introduces topics in biology: cells, genetics, plant and animal diversity, and human systems. Emphasis on inquiry and hands-on activities develops skills needed for higher-level laboratory science courses in high school.

### ***Physical Science (Grade 9)***

This introductory course integrates physics and chemistry into studies of the exosphere (solar system and universe), hydrosphere, geosphere, and atmosphere. Students investigate how each of these "spheres" interact with each other and how the laws of physics and the intricacies of chemistry help us understand

our planet and its systems. Coursework includes hands-on lab activities, discussion of current events in fields of science, research, and written responses, all of which help develop organizational skills.

### ***Biology (Grade 10)***

This required course prepares students for higher-level life science courses by considering a number of themes: science as a way of knowing, continuity and change, how advances in technology impact influence our world and understanding of the biosphere, the diversity and interdependence of living things, and the organization of living things. Significant laboratory work develops students' practical skills and their knowledge base.

### ***Chemistry (Grade 11)***

In this required course (for students who have completed Algebra I), students learn about the classification and properties of matter, mixtures and pure substances, the scientific method, and fundamental concepts of energy, mass, mathematics of counting, and the "mole." Students learn about the periodic table; how elements are classified and named; the structure of the atom; and chemical equations, reaction rates, and chemical equilibrium. Significant laboratory work includes formal lab reports and inquiry-based assessments.

***Science Department electives:*** Please note that not all electives are offered every year.

### ***Physics***

In this elective course (for students who have completed Algebra II), students begin by studying mathematical definitions and applications of position, velocity, acceleration, force, energy, work, and momentum to describe linear and rotational motion. They learn about wave mechanics and electromagnetism. Significant laboratory work includes formal lab reports and inquiry-based assessments.

### ***Environmental Science***

In this elective course, students learn to identify and analyze environmental problems both natural and man-made. Environmental science is interdisciplinary, embracing a wide variety of topics from different areas of study. The curriculum draws upon biology, earth science, and physical science.

### ***Forensics***

Forensic Science is a laboratory-based science class designed for students who are interested in forensic science. The purpose of this course is for students to gain experience in the major investigative techniques currently used by forensic scientists and crime scene investigators, and to develop an understanding of the scientific concepts which serve as the basis for these techniques. This course is an introduction to the basic methods and principles guiding forensic analysis. As we progress through the term, we will discuss how forensic science is applied at the crime scene and throughout laboratory analysis and procedures. You will become familiar with all aspects of forensic science, including setting up a crime scene, collecting and interpreting evidence, and the basic methods and ideas surrounding specialty areas of forensic science, including entomology, anthropology, and psychology. Students will research different methods that forensic scientists use to solve crimes and analyze crime scene data to solve crimes themselves. Topics include collecting evidence, fingerprinting, blood typing, ballistics, trace evidence, anthropology, and of course DNA.

### ***Anatomy and Physiology***

Anatomy and Physiology is a study of the structure and function of the human body. This course is preparation for advanced biological studies, biomedical nursing, and other science-based careers. It is



designed for those students who have taken biology and who wish to further their study of biology. This course will involve laboratory activities, projects, dissections, textbook materials, models, diagrams, journal writings, and clinical studies. Laboratory experiences and text-based activities provide student learning in the following topics: the major body systems; how the body systems work together to provide homeostasis; body functions in the healthy and diseased states; blood typing; muscle action; cranial nerve functioning; and bioethics. The student will also study the structure and function of the various cells, tissues, and integrated systems of the body.

## ***Fine Arts Department***

### ***Studio Art 1 & 2***

Students experience a diverse genre of creative art, working in a variety of media such as clay, paint, collage, and colored pencils. They explore the fundamentals of artwork by designing projects that emphasize self-expression, including some elements of Graphic Design, using programs such as Photoshop, Indesign, and Illustrator to edit photographs, produce magazines, design logos, and create their own marketing brand identity. Studio Art 2 further develops artistic skills and techniques that were learned in Studio Art 1, challenging students to create a portfolio of work that demonstrates competency in various art forms.

### ***Independent Study: Studio Art***

This course is designed for advanced art students who wish to develop a portfolio in the visual arts. *Students need permission from the instructor to enroll in this course.*

### ***Art History (Laurel Program)***

This course involves study in how art has impacted society and world history. The central and key enduring questions that are addressed in this course include the following: What is art and how is it made? Why and how does art change? How do we describe our thinking about art? Through these essential questions, students uniquely explore the big ideas of Art History, effectively and precisely articulating an artwork's meaning and function, its maker's methodology, and the ways it reflects and affects its historical and cultural context. With these enduring questions as the foundation, this Art History course is organized into seven cultural and chronological units, emphasizing daily practice of questioning techniques, methods of discussion, analytical paradigms, guided discovery, and independent learning. These strategies and techniques enable students to develop critical thinking and visual literacy skills with which they can deeply extract meaning from any artwork they encounter throughout their lives. *Students need permission from the instructor to enroll in this course. This course is eligible for dual-credit from the University of Pittsburgh.*

## ***Health & Physical Education***

### ***Health 1 & 2***

Students learn about proper nutrition, human body systems, physical conditioning, and other essential topics to live healthy lives.

### ***Strength & Conditioning***

Students learn about and engage in physical conditioning, plyometrics, basic weight and circuit training, and cardiovascular and overall body fitness.

## **Academic Support Program**

*ASP helps students face learning challenges by providing more than modifications and accommodations suggested by IEPs. The academic learning support specialist provides instruction and learning activities in light of each learner's unique needs. ASP helps students develop practices in time management, organization, concentration, and active listening. Students work with the learning specialist in effort to become a more successful, confident learner who better understands their own learning strengths and needs.*

## **College Counseling**

### **Transitions to College (Grades 12 & PGs)**

Students explore a variety of topics related to the transition from high school to college. Some class time is used as needed to prepare and submit college applications and to explore techniques to improve time management, goal setting, study habits, and relaxation. Students use various tools to learn more about themselves, about how to take full advantage of their academic and personal strengths and how to improve upon their weaknesses.

### **General Information About College Counseling at The Phelps School**

The College Counseling office's main goal is to prepare and educate students on college readiness, career exploration, college applications, and financial aid throughout their secondary education at The Phelps School. By the end of the junior year, students have a better understanding of their individual skills, talents, and career pathways along with an acute knowledge of different college programs and the application process to set them up for a successful application season during their senior year.

- College Readiness
  - Throughout a student's years at The Phelps School, we instill a level of preparedness and enthusiasm for post-secondary education. The best way to do this is through implementation of college readiness programs. A few vital aspects of college readiness that we try to touch upon include:
    - Career Exploration
    - SAT/Test Preparation
    - Dual-Credit (Laurel Program) and Honors Courses
    - Building a resume / staying engaged
- Exploring options
  - A large part of preparing for application season in the beginning of Senior year is exploring different types of programs and options in Sophomore and Junior year. Through personal college exploration, students start to define a specific plan before the

application process begins. Some examples of questions we want to clarify before application season are:

- What type of degree do I want to obtain?
  - What area of study do I want to major/minor in?
  - Do I want a big university or smaller liberal arts college?
  - Do I want to live in an urban, rural, or suburban setting?
  - Does the college have the extracurriculars that I want?
  - How can I pay for college?
- The Application Process
    - The application process is heavily emphasized in the first semester of senior year. During the months of September-December, students meet individually with our College Counselor to determine their college plan. Alongside individual meetings, a course called “Transitions to College” is required of every senior and post-graduate student. In this year-long course, students tackle different parts of the college application process. For example, students can expect to work on essays, completing applications, and applying for financial aid and scholarships.
  - Financial Aid
    - Students will get a general understanding of the financial aid process and spend time filling out applications like FAFSA. Students are given a detailed explanation of each financial aid application, how to apply, what types of financial aid can be rewarded. They eventually will work individually with the college counselor to analyze the financial aid packages they received closer to the end of the year. Our hope is that students will gain the ability to advocate for themselves, gain a greater understanding of finances in regard to higher education, and get to pursue post-secondary education that is affordable.