

Maclay Upper School Curriculum Guide 2020-2021



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Table of Contents

English Department	Pg. 4
History & Social Sciences Department.....	Pg. 11
Math Department.....	Pg. 20
Science Department	Pg. 26
World Languages Department.....	Pg. 31
Fine Arts Department.....	Pg. 37
Computer Science & Engineering Department.....	Pg. 41
Health and Physical Education Electives.....	Pg. 43
Non-Academic Electives.....	Pg. 45
Concentrations	Pg. 47



MacLay School Graduation Checklist

Name: _____

Date: _____

English*

Course	Year	Unit
Total:		4

*Seniors must take at least one English course with emphasis on contemporary literature

Mathematics*

Course	Year	Unit
Total:		4

*Must include Algebra I, Geometry, Algebra II

World Language

Course	Year	Unit
Total:		2

History/Social Science*

Course	Year	Unit
Total:		4

*Must include Economics

Laboratory Science*

Course	Year	Unit
Total:		3

*Must include Biology, Physics, Chemistry

Fine Arts/Humanities

Course	Year	Unit
Total:		.5

Electives*

Course	Year	Unit
Total:		5.5

*3.5 units must be academic electives

Life Management/Health (.5) Physical Education (.5)

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Middle School Credits*

Course	Year	Unit
Total:		

*Does Not Count Towards 24

Notes: _____

CUMULATIVE TOTAL:	
	24

English Department

English Department Policy: The English Department designates certain language arts skills to be mastered at each grade level. These skills will be taught throughout the year, and a test of skill mastery will be given. This assessment test comes at the end of 9th, 10th, and 11th grades. Students who do not achieve mastery of skills designated at their grade levels will be required to complete additional IXL work over the summer and are recommended to attend summer school (if available) or to receive tutoring help.

Required Courses:

Completed	Grade	Course
Y	9	Honors English 1 or Advanced Honors English 1
Y	10	Honors English 2 or Advanced Honors English 2
Y	11	Honors English 3 or AP English Language and Composition
Y	12	Honors English 4 * Seniors must take at least one English course with emphasis on contemporary literature

Elective Courses:

- ☐ Journalism (Yearbook)
- ☐ Journalism (Newspaper)
- ☐ Creative Writing: Literary Magazine
- ☐ Holocaust Literature and Film
- ☐ AP English Literature and Composition *
- ☐ Honors English 4: Contemporary Literature *
- ☐ Honors English 4: Southern Literature *
- ☐ Honors English 4: World of Short Story *
- ☐ Honors English 4: Mystery and Detective Literature *
- ☐ Honors English 4: Digital Writing

Individual Plan:

Grade	Gr 9	Gr 10	Gr 11	Gr 12
Course				

English Department Course Descriptions

Honors English 1

- ❖ Grade Level: 9th Grade
- ❖ **Prerequisites: None**
- ❖ Literature includes study of classroom novels, classical drama, nonfiction, poetry, and short stories. A concentrated focus on expository writing will cover comprehensive grammar units as well as the basic modes of exposition. Standardized achievement test preparation and vocabulary skills will also be covered. This course seeks to develop the reading, writing, and thinking skills necessary for the study of English in the Upper School.

Advanced Honors English 1

- ❖ Grade Level: 9th Grade
- ❖ **Prerequisites: Average of at least an A- in 8th grade English, teacher recommendation, and high percentile standardized achievement test scores. Must also pass a skills test.**
- ❖ **Note:** may be substituted for Honors English 1
- ❖ Course includes all the basic reading and writing requirements of Honors English 1, as well as a research-based essay, and a more intensive study of vocabulary, exposition, and literary analysis. Practical applications of grammar usage, sentence completion, and passage-based reading comprehension skills as they apply to exposition will be required, in addition to supplemental reading. This course seeks to develop the reading, writing, and thinking skills necessary for the study of English in the Upper School.

Honors English 2

- ❖ Grade Level: 10th Grade
- ❖ **Prerequisites: English 1**
- ❖ Literature includes a study of challenging texts in a variety of genres (fiction, nonfiction, poetry, and drama) and from a variety of cultures. Students will continue to practice active reading skills, focusing on vocabulary in context and literary-rhetorical techniques. English 2 includes a review of principles of grammar and composition and modes of essays covered in English 1. New modes of composition include extended definition and argumentation/persuasion, with a full unit on research and bibliography skills. English 2 seeks to create students who more skillfully employ a wide range of strategies as they write and who more self-sufficiently use different writing process elements to communicate with different audiences for a variety of purposes (NCTE Standards).

Advanced Honors English 2

- ❖ Grade Level: 10th Grade
- ❖ **Prerequisites: Minimum B+ average in Advanced Honors English 1 or A- average in Honors English 1. Must also pass a skills test. Teacher recommendation is also a factor.**
- ❖ **Note:** May be substituted for Honors English 2. No student with a B average or less in English 1 will be accepted. Recommended as a precursor to either AP English course.
- ❖ This year-long study of literature includes a survey of major writers and genres, including numerous poetic forms, nonfiction, drama, and fiction. The course includes additional readings beyond those required in Honors English 2. In addition, essay-writing techniques are integrated throughout the year's studies. This includes systematic grammar review, instruction in the major modes of exposition, several research-based assignments, analysis of rhetorical devices in literature, and argumentation/persuasion, with a full unit on research and bibliography skills. This course seeks to create students who more

skillfully employ a wide range of strategies as they write and who more self-sufficiently use different writing process elements to communicate with different audiences for a variety of purposes (NCTE Standards).

Honors English 3

- ❖ Grade Level: 11th Grade
- ❖ **Prerequisites: English 2**
- ❖ This course includes a study of American literature in the context of the culture and history of the United States. Students read and analyze representative nonfiction, fiction, drama, and poetry as they continue to develop a more advanced understanding of how writers manipulate language to achieve many different purposes. Moreover, through their reading, students will build an understanding of texts, of themselves, and of the culture of the United States and the many dimensions of the human experience – philosophical, ethical, and aesthetic (NCTE Standards). This intensified writing course includes a review of outlining, grammar, and punctuation skills, with an increased focus on expert usage. Research techniques, including note cards, bibliography, in-text citations, and support for thesis culminate in two full-length research papers, one each semester.

AP English Language and Composition

- ❖ Grade Level: 11th Grade
- ❖ **Prerequisites: A- average in Advanced Honors English 2 or A average in Honors English 2. Teacher approval needed. Students who took Honors English 2 or students with averages less than these prerequisites may be considered for admission to the class after writing a timed, impromptu essay. No student with a B average or less in English 2 will be accepted. All students new to MacLay must write the impromptu essay and submit a writing sample.**
- ❖ **Note:** May be substituted for English 3. All students are required to take the AP exam in May.
- ❖ In this college-level course, using American Literature as a basis for understanding prose and poetry, students will analyze literature written in a variety of periods and disciplines with an emphasis on rhetorical devices and argumentation techniques. Also included are the basics of documentation as part of the research paper requirement. Students read a wide range of print and nonprint texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world, all in an attempt to build an awareness of the many dimensions – philosophical, ethical, aesthetic – of human experience (NCTE Standards).

Electives

Journalism (Yearbook)

- ❖ Year-long course
- ❖ **Prerequisites: None**
- ❖ **Note:** Acceptance is by application and teacher approval.
- ❖ Students are responsible for all aspects of producing the school's yearbook, *The Marauder*. This year-long class incorporates skill in design, writing, photography, marketing, advertising, computer software, time management and computer skills. Additionally, students will learn to write for newspapers and magazines.

Journalism (Newspaper)

- ❖ Year-long course
- ❖ **Prerequisites: None**
- ❖ **Note:** Acceptance is by application and teacher approval.

- ❖ Students are responsible for producing all aspects of the school's newspaper, *The Andalusian*. Students will learn about and create content for both digital and print media outlets. Students will also learn and gain experience writing for different newspaper sections or beats (news, opinions, sports, features, etc.). Additionally, this year-long course will incorporate and help develop skills in design, photography, marketing, advertising, computer software and time management.

Creative Writing: Literary Magazine

- ❖ **Offered:** Both semesters, may be repeated
- ❖ **Prerequisites:** None
- ❖ This workshop course will introduce students to the conventions and techniques of creative writing and literary publishing. By studying published works and by creating their own original works, students will develop their creative writing abilities. Students will engage with class discussions, present to the class once a quarter, keep a reading journal, and create a portfolio of work for the entire semester. Additionally, students will be required to submit work to and help publish the corresponding semester's issue of *Notes from the Underground*, Maclay's literary magazine.

Honors English 4: Digital Writing

- ❖ Grade Level: 12th Grade Journalism students only
- ❖ **Offered:** Second semester only
- ❖ **Prerequisites:** None
- ❖ Digital Writing will include compositions, including blogs, created for reading or viewing on a computer or other devices that are connected to the Internet. Projects on readings and class activities will give students opportunities to refine their writing skills, learn principles of effective design, exercise their creativity, and gain experience by bringing together text, graphics, and other media in the production of print and online documents. Advanced computer skills are not required, but willingness to learn new software is essential. The final exam-for all students, no exemptions-will be a portfolio.

Holocaust Literature and Film

- ❖ Grade Level: 9-12th Grade
- ❖ **Offered:** Both semesters
- ❖ **Prerequisites:** None
- ❖ This course encourages students to analyze a wide array of materials from many perspectives in historical context. Photographs, artwork, diary entries, letters, government documents, maps, poems, visual history testimony, and other source material help students construct an authentic and comprehensive portrait of the past as they frame their own thoughts about what they are seeing or reading, resulting in a deeper level of interest and inquiry.

AP English Literature and Composition*

- ❖ Grade Level: 12th Grade only
- ❖ **Offered:** Year-long course
- ❖ **Prerequisites:** A- in previous English courses and teacher approval. Students who took Honors English 3 or students with averages less than these prerequisites may be considered for admission to the class after writing a timed, impromptu essay. No student with a B average or less in English 3 or AP English Language and Composition will be accepted. All students new to Maclay must write the impromptu essay and submit a writing sample.
- ❖ Note: All students are required to take the AP exam in May

- ❖ This college-level course involves an in-depth study and analysis of major works of world literature, including *Hamlet*, *The Sound and the Fury*, and many others. Students will study major literary movements, such as modernism and postmodernism, and will choose several independent study projects. AP students are expected to be skilled in research techniques and citation of sources, as well as to be able to write fluently and analytically within a designated time period.

*Honors English 4: Contemporary Literature**

- ❖ Grade Level: 11-12th Grade
- ❖ **Offered:** First semester only
- ❖ **Prerequisites:** None
- ❖ This course will survey various works from different genres beginning in the late 1950s. We will examine diverse forms of contemporary literature, including film and graphic novel. Through writing, student-led discussions, and group presentations, students will explore the various manifestations of literature in our contemporary moment.

*Honors English 4: Southern Literature**

- ❖ Grade Level: 11-12th Grade
- ❖ **Offered:** First semester only
- ❖ **Prerequisites:** None
- ❖ This course will focus on major works of Southern literature from the 19th century to the present. Through literary analysis, discussion, and group presentations, we will examine how the literature of the American South explores issues of race, identity, geography, nostalgia, and history.

*Honors English 4: World of Short Story**

- ❖ Grade Level: 11-12th Grade
- ❖ **Offered:** Second semester only
- ❖ **Prerequisites:** None
- ❖ While reading some of the world's best short stories and defining the elements of this special type of fiction, students will have the opportunities to create their own short stories.

*Honors English 4: Mystery and Detective Literature**

- ❖ Grade Level: 11-12th Grade
- ❖ **Offered:** Second semester only
- ❖ **Prerequisites:** None
- ❖ This course considers the development and evolution of the mystery and detective fiction genres. We will begin by defining mystery and detective literature, reading works of early practitioners of these genres. Then our discussions will turn to 20th century mystery and detective literature, particularly the crime fiction of Raymond Chandler and Dashiell Hammett. Finally, we will discuss postmodern “mysteries” that deal with the ongoing search for “truth” and “meaning” in our increasingly complex world.

History & Social Sciences Department

History Department Policy: The History Department Policy is for students to be active readers and writers by going beyond simply completing assignments for credit. History Department courses will require students to use primary and secondary sources to compare and contrast, examine cause and effect, and analyze the impact of change over time. Additionally, students will be expected to write in ways that communicate their ideas effectively.

Required Courses:

Completed	Grade	Course
Y	9	Honors Ancient History and Geography or Advanced Honors Historical Methods
Y	10	Honors Modern World History and Geography or AP World History
Y	11	Honors United States History or AP United States History
Y	12	Honors Contemporary U.S. Government and Political History <u>and</u> Honors Economics with Financial Literacy or AP Microeconomics or AP Macroeconomics

Elective Courses:

- ☐ AP Human Geography
- ☐ AP United States Government and Politics
- ☐ AP European History
- ☐ World War II
- ☐ Civil War
- ☐ Risk and Reward
- ☐ Introduction to Entrepreneurship
- ☐ Personal Finance

Individual Plan:

Grade	GR 9	Gr 10	Gr 11	Gr 12
Course				

History & Social Sciences Department Course Descriptions

Honors Ancient History and Geography

- ❖ Grade Level: 9th Grade
- ❖ **Prerequisites: None**

The first semester of this year-long course will begin with an in-depth review of physical geography of the areas to be studied, and a review of map skills, which will be studied all year. Course work will develop an understanding of the ancient world's societies through a study of Ancient Mesopotamia, Egypt, the Ancient Middle East, Greece, and Rome. The second semester will examine Asian, African, and Indian cultures. Major emphasis will be on charting the development and the destruction of feudalism, the Crusades, the Renaissance, and Reformation. This course will focus on enhancing skills such as note-taking and critical and analytical writing with the use of supplemented historical documents.

Advanced Honors Historical Methods

- ❖ Grade Level: 9th Grade
- ❖ **Prerequisites: Minimum of an A- in 8th Grade History, as well as strong scores on standardized testing in reading comprehension, vocabulary, language, expression, listening and thinking skills. Department approval is necessary for admission. Pre-test will be given to help determine placement.**
- ❖ **Note:** May be substituted for Honors Ancient History and Geography.
- ❖ This course is designed to focus on skills students will need on all three Advanced Placement history courses: AP World History, AP United States History, and AP European History. The course is topical in approach. Content from all three of the above courses will allow students to be exposed to key concepts of AP coursework and develop the skills they will need to be successful both in AP courses and on the AP exam for each of the classes. Students will practice the AP skills of interpreting historical context, comparing and contrasting, analyzing cause and effect, and examining continuity and change over time. Students will become familiar with how to analyze and interpret primary source documents, read charts, maps and graphs, and be able to interpret significant works of art.

Honors Modern World History and Geography

- ❖ Grade Level: 10th Grade
- ❖ **Prerequisites: None**
- ❖ This class begins with the Age of Discovery and the impact of the Columbian Exchange, then moves into the Enlightenment, nationalism, industrialization, imperialism, the emergence of communism and fascism, and the World Wars. Class work will focus on developing students' writing, note-taking, critical thinking and presentation skills. Students will also spend considerable time analyzing world geography.

AP World History

- ❖ Grade Level: 10th Grade
- ❖ **Prerequisites: Requires department approval**
- ❖ **Note:** May be substituted for Honors Modern World History and Geography. All students are required to take the AP exam in May.

- ❖ This course seeks to provide students with an understanding of the world's history and societies. In addition to examining the major trends, people, places and events of the world's history, special emphasis will be placed on encounters and interactions among societies. It will help students expand their reading and writing skills, and it will foster critical thinking. The course will encourage students to develop their own abilities and to be part of the learning process. The long-term objective is for students to demonstrate an understanding of how the big picture of world history assists in understanding the complexities of today's world.

Honors United States History

- ❖ Grade Level: 11th Grade
- ❖ **Prerequisites: None**
- ❖ This course is a survey of the United States covering from the framing of the Constitution through the Great Depression. Topics covered include the Constitutional Convention, Jeffersonian Democracy, the Supreme Court, Monroe Doctrine, Jacksonian Democracy, Manifest Destiny, Immigration, the Civil War, Reconstruction, Industrial America, the Gilded Age, the Progressive Era, the Age of Imperialism, World War I, the 1920s, and the Great Depression. Class work will focus on developing students' writing, improving note-taking and study skills, expanding critical thinking, and supplementation with historical documents.

AP United States History

- ❖ Grade Level: 11th Grade
- ❖ **Prerequisites: Department approval required.**
- ❖ **Note:** May be substituted for Honors United States History. Students taking this course must take an additional semester of history elective and economics (usually in their senior year) in order to meet the History Department's requirements. All students are required to take the AP exam in May. Class size is limited.
- ❖ This course is an in-depth analysis of American history from the Colonial period to the present. Social, political, diplomatic, and intellectual developments are explored. Much outside reading is expected to fulfill the AP requirements.

Honors Contemporary U.S. Government and Political History

- ❖ Grade Level: 12th Grade
- ❖ **Offered:** Both semesters
- ❖ **Prerequisites: None**
- ❖ **Note:** Students may be exempted from this course upon previous completion of AP United States History.
- ❖ This course reviews the development and role of government institutions starting in the 1930s. It further investigates their interaction with American politics during the twentieth century, paying special attention to the New Deal, World War II, McCarthyism and the Cold War, and the Watergate scandal.

Honors Economics with Financial Literacy

- ❖ Grade Level: 12th Grade
- ❖ **Offered:** Both semesters
- ❖ **Prerequisites: None**
- ❖ This senior level course is a study of the basic concepts of micro- and macroeconomics which are essential for keeping up with both historical and current economic changes. Economic terminology, a study of capitalism, entrepreneurship, supply and demand, banking and personal finance, the business cycle, the tools of monetary and fiscal policy, and the global trade economy will be introduced. The

stock market game and a game of business decision making will be incorporated into the course. Continual analysis of current economic indicators makes this course particularly relevant to everyday life and deepens the understanding of the causes and effects of economic changes.

AP Microeconomics

- ❖ Grade Level: 12th Grade
- ❖ **Offered:** First semester
- ❖ **Prerequisites:** None
- ❖ **Note:** May be substituted for Honors Economics with Financial Literacy. All students are required to take the AP exam in May. Juniors may take this course with department approval.
- ❖ This course focuses on the principles of economics as they apply to individual decision-making units, including individual households and firms. The course examines the theory of consumer behavior, the theory of the firm, and the behavior of profit-maximizing firms under various market structures. Students evaluate the efficiency of the outcomes with respect to price, output, consumer surplus, and producer surplus. They examine the behaviors of households and businesses in factor markets, and learn how the determination of factor prices, wages, interest, and rent influence the distribution of income in a market economy.

AP Macroeconomics

- ❖ Grade Level: 12th Grade
- ❖ **Offered:** Second semester
- ❖ **Prerequisites:** None
- ❖ **Note:** May be substituted for Honors Economics with Financial Literacy. All students are required to take the AP exam in May. Juniors may take this course with department approval.
- ❖ This course seeks to give students a thorough understanding of the principles of economics that apply to an economic system as a whole. Particular emphasis is placed on the study of national income and price-level determination. This course will also develop students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth, and international economics. Important economic concepts such as scarcity and opportunity costs will also receive coverage, as will the distinction between absolute and comparative advantage. Students will apply the principle of comparative advantage to determine the basis on which mutually advantageous trade can take place between individuals and/or countries and will identify comparative advantage from differences in opportunity costs. The course will also introduce the concept of the business cycle to give students an overview of economic fluctuations and to highlight the dynamics of unemployment, inflation, and economic growth.

Electives

AP United States Government and Politics

- ❖ Grade Level: 11-12th Grade
- ❖ **Offered:** Second semester
- ❖ **Prerequisites:** None
- ❖ **Note:** All students are required to take the AP exam in May. Class size is limited.
- ❖ This course is designed to provide students with a learning experience equivalent to an introductory college course in American Government. Students will study the U.S. Constitution and its foundations in the current political system. Students will become familiar with individuals, ideas, and groups that influence the government. This course is designed to provide students with the information necessary to become active participants in the American system of government.

AP European History

- ❖ Grade Level: 10-12th Grade
- ❖ **Prerequisites: None**
- ❖ **Note:** All students are required to take the AP exam in May.
- ❖ This course is a college-level introductory European history course. Students cultivate their understanding of European history by analyzing historical sources and learning to make connections and craft historical arguments as they explore concepts like the interaction of Europe with the rest of the world, economic and commercial developments, cultural and intellectual developments, states and other institutions of power, social organization and development, national and European identity, as well as technological and scientific innovation.

AP Human Geography

- ❖ Grade Level: 10-12th Grade
- ❖ **Prerequisites: None**
- ❖ **Note:** All students are required to take the AP exam in May
- ❖ This course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications.

World War II

- ❖ Grade Level: 11-12th Grade (& select sophomores)
- ❖ **Offered:** First semester
- ❖ **Prerequisites: None**
- ❖ World War II had a profound political, economic, social and scientific impact on world history. The course shows how World War I set the stage for another world war, the causes and growth of European fascism, Communism, and Japanese ultra-nationalism, and immediate events leading up to the war. Detailed study will be made of the war's military campaigns, peoples, and home fronts using primary and secondary readings, Socratic lecture, project presentations, field trips, military simulations, and World War II music and multi-media.

Civil War

- ❖ Grade Level: 11-12th Grade (& select sophomores)
- ❖ **Offered:** Second semester
- ❖ **Prerequisites: None**
- ❖ An in-depth exploration of America's greatest tragedy. This course examines antebellum America's struggle over slavery, and the causes, major military campaigns, home fronts, and ultimate impacts of the Civil War on American society. Special emphasis will be placed on nineteenth century culture, the lives of famous combatants, lessons in leadership, and period military tactics and weapons. The course material will be conveyed using Socratic lecture, primary and secondary sources, period music, project presentations, and multi-media presentations. Field trips, immersion activities, and military simulations are also important components of this class.

Risk and Reward

- ❖ Grade Level: 11-12th Grade
- ❖ **Offered:** Second semester

- ❖ **Prerequisites: None**
- ❖ This course introduces students to basic principles of macroeconomics, the risks and rewards associated with investment and business, key principles for running a successful company and managing an effective stock market portfolio, how to maximize rewards and minimize risks, and the lessons of financial failure/loss and recovery. The course culminates in a final six-week real world entrepreneurial experience where students will invest small shares of the school's investment funds in a stock market portfolio and/or a pre-approved personal business.

Introduction to Entrepreneurship

- ❖ **Grade Level:** 11-12th Grade (& select sophomores)
- ❖ **Prerequisites: None**
- ❖ Do you like Shark Tank? Have you considered owning your own business? Are you creative and enjoy marketing? If so join us for Introduction to Entrepreneurship. This course teaches the basics of planning and launching a business. Whether you're interested in creating a money-making business or a nonprofit to help others, this course provides the core skills needed to succeed. In the first half of the course students will learn from entrepreneurs in our community, understand the characteristics of successful entrepreneurs, pros and cons of self-employment, and how to attract investors and manage expenses. Students learn how to generate business ideas, create a business plan, mission and vision, and promote and market a company. Topics include exploring factors of business success and failure, core business concepts, economic systems, competition, and production. The second half of the course advances the skills and key business concepts students need to know to plan and launch a business. Students learn about setting personal vision statements and goals, sales stages, opportunities and strategies, planning and budgeting, and interpersonal communication in the workplace. Topics include financing a business, costs and pricing, basic bookkeeping, the role of the government in business, regulations and laws, working with others, and successfully managing employees.

Personal Finance

- ❖ **Grade Level:** 11-12th Grade (& select sophomores)
- ❖ **Offered:** Both semesters
- ❖ **Prerequisites: None**
- ❖ This course will be the foundation of money and how money works. This financial literacy class is specifically focused on basic personal finance skills that are relevant to the lives of teens and young adults. Financial literacy is essential in meeting the financial challenge of the 21st Century. The competencies, which form the basis for this semester course, enable students to analyze their personal financial decisions, evaluate the costs and benefits of their decisions, recognize their rights and responsibilities as consumers, and apply the knowledge learned in school to financial situations encountered later in life.

Legal Issues

- ❖ **Grade Level:** 10-12th Grade
- ❖ **Prerequisites: None**
- ❖ **Offered: Both Semesters**
- ❖ This course examines the role of law in society. Legal Issues is a liberal arts field that incorporates material from history, sociology, philosophy, psychology, political science, and other disciplines. By the end of the course, students will be able to evaluate laws and legal institutions in relation to equality, justice, and fairness. Students will also be able to write a legal essay using the IRAC method.

Math Department

All Upper School mathematics courses require a TI-83, 84 type graphing calculator.

ALGEBRA 1, GEOMETRY, ALGEBRA 2, AND AP CALCULUS PLACEMENTS: All student candidates for Algebra 1, Geometry, Algebra 2, or AP Calculus must take a readiness assessment. The resulting score, along with standardized test scores and teacher recommendation, will be used to place the student in the proper level of the course according to ability.

Required Courses:

Completed	Grade	Course
Y	8/9	Algebra 1 or Honors Algebra 1
Y	9/10	Geometry or Honors Geometry
Y	11	Algebra 2 or Honors Algebra 2 or Advanced Honors Algebra 2

Elective Courses:

- ☐ Pre-College Algebra
- ☐ College Algebra
- ☐ Probability and Statistics
- ☐ Advanced Honors Pre-Calculus/Trigonometry
- ☐ Advanced Honors Calculus
- ☐ AP Calculus AB
- ☐ AP Calculus BC
- ☐ AP Statistics

Individual Plan:

Grade	GR 9	Gr 10	Gr 11	Gr 12
Course				

Math Department Course Descriptions

Algebra 1

- ❖ Grade Level: 8-9th Grade
- ❖ **Prerequisites: None**
- ❖ This course will cover the topics of algebra including order of operations; variables; problem solving; properties of real numbers; solving linear equations; graphing linear equations and functions; writing linear equations; solving and graphing linear inequalities, systems of linear equations and inequalities; exponents and exponential functions; quadratic equations and functions; polynomials and factoring; and rational expressions and equations.

Honors Algebra 1

- ❖ Grade Level: 8-9th Grade
- ❖ **Prerequisites: Successful completion of the Algebra 1 readiness assessment and teacher recommendation.**
- ❖ This course is a first-year algebra course with emphasis on properties of real numbers, simplifying equations, as well as solving equations, systems of equations, and inequalities. Quadratic equations will be solved by graphing, factoring, and the quadratic formula. Functions and other polynomials will be explored as well as rational expressions and an introduction to irrational numbers and radicals. This course covers all the topics of Algebra 1 but at a deeper level and moves at a quicker pace.

Geometry

- ❖ Grade Level: 9-10th Grade
- ❖ **Prerequisites: Algebra 1**
- ❖ Students will develop their powers of deductive reasoning in this course. Topics covered include the study of parallelism and perpendicularity in two and three dimensions; angle measurements; congruencies and similarities of plane and solid figures; algebraic and geometric proof; logic; right triangle geometry and trigonometry; lateral area, surface area and volume of solid figures.

Honors Geometry

- ❖ Grade Level: 9-10th Grade
- ❖ **Prerequisites: An average of at least a B+ in High School Honors Algebra 1 or A- in High School Algebra 1 or B+ in Middle School Algebra 1, teacher recommendation, and successful completion of the Geometry readiness assessment.**
- ❖ This course is designed to develop the students' powers of deductive reasoning. Subject matter will include the study of parallelism and perpendicularity in two and three dimensions; angle measurements; congruencies and similarities of plane and solid figures; algebraic and geometric proof; logic; right triangle geometry and trigonometry; lateral area, surface area and volume of solid figures; and transformational geometry.

Please Note: Any students who wish to take Geometry and Algebra 2 concurrently, must score 90-100% on the Algebra 2 Readiness Assessment and have an A- or higher average in Honors Algebra 1.

Algebra 2

- ❖ Grade Level: 10-11th Grade

- ❖ **Prerequisites: Successful completion of Algebra 1 and Geometry.**
- ❖ **Note:** This course satisfies the Algebra 2 requirement for graduation.
- ❖ This course includes a review of the properties of integers and real numbers with an emphasis on equation solving. Other topics include inequalities, absolute value, graphing, functions, systems of equations, exponents, polynomials and factoring, rational expressions and equations, radical expressions and equations, and quadratic equations.

Honors Algebra 2

- ❖ Grade Level: 10-11th Grade
- ❖ **Prerequisites: Students must have an average of B- or higher for the year in Honors Algebra 1 and Geometry, teacher recommendation, and successful completion of the Algebra 2 readiness assessment.**
- ❖ This course is designed to give the students in-depth exposure to mathematical functions. Linear equations and inequalities as well as systems of linear equations and inequalities are studied. Quadratic functions and inequalities are thoroughly explored. Other topics include higher degree polynomial functions; radical expressions and equations; rational exponent expressions and equations; absolute value functions; and mathematical modeling.

Advanced Honors Algebra 2

- ❖ Grade Level: 11-12th Grade
- ❖ **Prerequisites: Students must have an average of A- or higher in Honors Algebra 1, A- in Honors Geometry, teacher recommendation, and successful completion of the Algebra 2 readiness assessment.**
- ❖ This course covers the same material as Honors Algebra 2 with the addition of more advanced functions including (but not limited to) exponential and logarithmic functions and their applications.

Electives

Pre-College Algebra

- ❖ **Prerequisites: Successful completion of Algebra 2**
- ❖ This course is intended for students who have completed Algebra 2 who may need some additional instruction in content to prepare them for success in college-level mathematics. Topics covered will include, but are not limited to, Number Systems, Algebra, Problem Solving, Graphing, Statistics, and Functions including Exponential and Logarithmic. The topics covered in the course are those deemed necessary for entry-level college courses.

Probability and Statistics

- ❖ **Prerequisites: Minimum of B- in Algebra 2 (any level)**
- ❖ **Note:** May be taken concurrently with College Algebra, Advanced Honors Precalculus/Trigonometry or Advanced Honors Calculus
- ❖ This is an introductory course in probability, statistics, and data analysis. Topics covered include the language and vocabulary of statistics, data collection techniques, descriptive statistics, interpreting graphical displays of distributions of univariate data, summarizing and comparing distributions of univariate data, exploring categorical data, exploring bivariate data, correlation and regression, exploring discrete and continuous random variables, counting methods, probability theory including the binomial and Normal distributions. If time permits, a unit on personal finance will also be covered.

College Algebra

- ❖ **Prerequisites:** Students must have at least a C average in Advanced Honors Algebra 2, B- in Honors Algebra 2, A- in Algebra 2 and teacher recommendation
- ❖ This course is designed to prepare the student for work in trigonometry, statistics, or finite mathematics. Topics covered are those that a student would encounter in a post-secondary Algebra course. They include algebraic expressions; equations and inequalities; linear, quadratic, exponential and logarithmic functions; techniques and applications of graphing; zeros of polynomials; sequences and systems of equations and matrices; conic sections; and introduction to probability.

Advanced Honors Pre-Calculus/Trigonometry

- ❖ **Prerequisites:** Students must have a B- in Advanced Honors Algebra 2, A- in Honors Algebra 2, and teacher recommendation
- ❖ **Note:** This course can be taken concurrently with AP Statistics with department approval
- ❖ In the first semester, topics necessary for the study of calculus such as finding zeros of polynomials, the natural logarithm and exponential functions, conic sections, and writing equations of functions that describe real-life phenomena are studied. Parametric equations are introduced if time permits. During the second semester, the trigonometric and circular functions and their inverses are studied. Graphing, identities, equation solving, solving of triangles using the Law of Sines and Law of Cosines, linear and rotational velocity, simple harmonic motion, and modeling of real-life phenomena using trigonometric functions are covered. Additional applications of trigonometry such as vectors, polar coordinates and equations, trigonometric form of complex numbers, and DeMoivre's Theorem are covered.

Advanced Honors Calculus

- ❖ **Prerequisites:** Students must have a B- in Advanced Honors Precalculus/Trigonometry
- ❖ This course is designed to acquaint students with calculus principles such as derivatives, integrals, limits, approximation, applications, and the existence theorems (intermediate value theorem, mean value theorem, Rolle's theorem, etc.). During this course students will gain experience in the use of calculus methods and learn how calculus methods may be applied to practical applications. Topics covered include Limits, Derivatives, Computational Techniques, applications of Differentiation, and applications of Integration.

AP Calculus AB

- ❖ **Prerequisites:** Students must have at least an A- average in Advanced Honors Precalculus/Trigonometry and teacher recommendation
- ❖ **Note:** This course can be taken concurrently with AP Statistics. The College Board AP Calculus course outline is used. All students are required to take the AP exam in May.
- ❖ This is a course in basic differential and integral calculus of a single variable. It is concerned with developing the students' understanding of the concepts of calculus and providing experience with its methods and applications. The course emphasizes a multi-representational approach to calculus, with concepts, results, and problems being expressed geometrically, numerically, analytically, and verbally. The students and teacher regularly use technology.

AP Calculus BC

- ❖ **Prerequisites: AP Calculus AB**
- ❖ **Note:** All students are required to take the AP exam in May.
- ❖ This course is for students who have completed AP Calculus AB. AB topics will be reviewed in the first four weeks of Q1. The calculus of sequences and series, polar equations, vector equations, and parametric equations, logistic growth and decay, separable differential equations, and topics from the College Board AP Calculus BC outline will be added to the AP Calculus AB curriculum.

AP Statistics

- ❖ **Prerequisites: B or above in Probability and Statistics and Department approval.**
- ❖ **Note:** This course can be taken concurrently with Advanced Honors Precalculus/Trigonometry, Advanced Honors Calculus, or AP Calculus. All students are required to take the AP exam in May.
- ❖ This course is designed to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Topics covered are (1) exploring data: observing patterns and departures from data; (2) planning a study: deciding what and how to measure; (3) anticipating patterns: producing models using probability and simulation; (4) statistical inference: confirming models.

Science Department

All Maclay students are required to take a high school level course in each of the three core sciences: Biology, Chemistry, and Physics. This requirement may be satisfied by taking one class in each of the three groups listed. **Directed Individual Study (DIS)** is available for accelerated students who wish to study science areas not available in the regular curriculum. See Department Chair for more information.

All students will be required to take a diagnostic exam in class for placement in biology, physics, and chemistry classes. Students must take the AP diagnostic exam prior to taking their first AP science course. These results are used with grades, standardized test scores, performance in math classes, and teacher recommendations to determine students' recommended future placement.

Required Courses:

Completed	Grade	Course
Y	9	Honors Biology or Advanced Honors Biology
Y	10/11	Physics or Honors Physics or AP Physics C: Mechanics
Y	10/11	Chemistry or Honors Chemistry or Advanced Honors Chemistry

Elective Courses:

- ☐ AP Biology
- ☐ AP Chemistry
- ☐ AP Environmental Science
- ☐ Honors Marine Biology
- ☐ Honors Human Anatomy and Physiology
- ☐ Honors Exercise Physiology
- ☐ Honors Brain and Behavior
- ☐ Honors Human Physiology Research Measurement Techniques
- ☐ Honors Human Physiology Research Thesis

Individual Plan:

Grade	GR 9	Gr 10	Gr 11	Gr 12
Course				

Science Department Course Descriptions

Honors Biology

- ❖ **Prerequisites: None**
- ❖ This course is designed to introduce students to the modern concepts of biology. The Honors Biology course includes lecture, laboratory investigations, critical thinking activities and individual and group research opportunities. Topics covered include the molecular basis of life, basic cell biology, comparative physiology and anatomy of eukaryotic organisms, mitosis, meiosis, genetics, and evolution. This is the first course in the Upper School Science sequence.

Advanced Honors Biology

- ❖ **Prerequisites: Successful completion of the readiness assessment; B+ average in Middle School Science, departmental approval.**
- ❖ This course is designed to follow the Advanced Placement Biology curriculum and uses an advanced college text. Topics covered include cell biology, an in-depth taxonomic survey of the biological kingdoms, plant morphology and physiology, animal morphology, and ecology.

Physics

- ❖ **Prerequisites: Biology, Algebra 1, Department Approval**
- ❖ This year-long course is a conceptual introduction to physics. The aim of the course is to prepare the student for further science courses through the study of concepts such as motion, momentum, energy, gravity, waves, heat, light, magnetism, and electricity. Laboratory and quantitative problem-solving activities are employed. Problem-solving activities focus on the understanding of concepts. The nature and scope of the relationships between physics, engineering and the other sciences is emphasized. This physics course is designed for students who need to improve their critical thinking and mathematics skills. Students will be encouraged to move beyond memorization and apply the skills needed for successful scientific investigation and problem-solving in general in the context of physics.

Honors Physics

- ❖ **Prerequisites: Biology, Algebra 1, Geometry**
- ❖ This year-long course is a conceptual introduction to physics. The aim of the course is to prepare the student for further science courses through the study of concepts such as motion, momentum, energy, gravity, waves, heat, light, magnetism, and electricity. Laboratory and quantitative problem-solving activities are employed. Problem-solving activities focus on the understanding of concepts. The nature and scope of the relationships between physics, engineering and the other sciences is emphasized.

AP Physics C: Mechanics

- ❖ **Prerequisite: Advanced Honors Precalculus and Trigonometry**
- ❖ **Corequisites: AP Calculus AB, Honors or Advanced Honors Chemistry**
- ❖ **Note:** All students are required to take the AP exam in May
- ❖ This year-long course is equivalent to a semester-long calculus-based, college-level physics course. The course is designed for highly motivated, able students. It seeks to foster deep conceptual understanding using student-centered, inquiry-based instructional practices. Topics covered include kinematics; Newton's laws of motion; work, energy, and power; systems of particles and linear momentum; circular motion and rotation; oscillations; and gravitation. Laboratory work is an integral component of this

course. Technology, including graphing calculators, probeware, graphing and data analysis software, and physics apparatus, is used throughout this course.

Chemistry

- ❖ **Prerequisites: Biology, Physics, Geometry, and Department Approval**
- ❖ **Note:** May NOT be taken before the 11th Grade
- ❖ The macroscopic and microscopic aspects of the world of chemistry are investigated through laboratory experiences, problem-solving exercises, lecture and cooperative learning. This chemistry course is designed for students who need to improve their critical thinking and mathematics skills. Students will be encouraged to move beyond memorization and apply the skills needed for successful scientific investigation and problem-solving in general in the context of chemistry. Students will build an understanding of the structure and properties of matter, regularities in chemistry, and energy changes in chemistry as they learn and apply the skills needed to succeed in more advanced levels of the science.

Honors Chemistry

- ❖ **Prerequisites: Biology, Physics, Algebra 2, and Department Approval**
- ❖ **Note:** May not be taken before the 11th Grade without department approval
- ❖ The macroscopic and microscopic aspects of the world of chemistry are uncovered through laboratory experiences, problem-solving exercises, lecture, and cooperative learning. Students are encouraged to reexamine concepts introduced in previous science classes and to construct new ideas about the nature and behavior of the world around them. Topics covered include atomic structure, chemical composition, chemical reactions, physical and chemical properties, organic molecules, and stoichiometry.

Advanced Honors Chemistry

- ❖ **Prerequisites: Biology, Geometry, Department Approval, and successful completion of the readiness assessment**
- ❖ **Corequisite: Advanced Honors Algebra 2**
- ❖ This course is a rigorous introduction to chemistry and covers essentially the same topics as Honors Chemistry. The course takes a highly quantitative and analytical approach to many topics, so advanced mathematical and reasoning skills are expected. This course is designed for students interested in a career in Science, Technology, Engineering, or Mathematics. Students should expect a challenging workload.

Electives

AP Biology

- ❖ **Prerequisites: Advanced Honors Biology or Honors Biology, successful completion of the AP readiness assessment, Honors or Advanced Honors Chemistry**
- ❖ **Corequisites: Advanced Honors Chemistry**
- ❖ **Note:** All students are required to take the AP exam in May
- ❖ AP Biology is a high school course designed to be equivalent to a two-semester college introductory biology course for biology majors. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: evolution, cellular processes, energy and communication, genetics, information transfer, ecology, and interactions.

AP Chemistry

- ❖ **Prerequisites:** Advanced Honors Chemistry or Honors Chemistry, with successful completion of the AP readiness assessment, Algebra 2
- ❖ **Note:** All students are required to take the AP exam in May
- ❖ AP Chemistry is a high school course designed to be equivalent to a two-semester college introductory chemistry course for chemistry majors. Students cultivate their understanding of chemistry through inquiry-based investigations, as they explore content such as atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics, and equilibrium.

AP Environmental Science

- ❖ **Prerequisites:** Biology, Chemistry, Algebra 2 and departmental approval, with successful completion of the AP readiness assessment
- ❖ **Note:** All students are required to take the AP exam in May
- ❖ AP Environmental Science is a high school course designed to be equivalent to a one-semester introductory college course in environmental science. It is designed to engage students with the scientific principles, concepts, and methodologies required to understand the interrelationships within the natural world. The course requires that students identify and analyze natural and human-made environmental problems, evaluate the relative risks associated with these problems, and examine alternative solutions for resolving or preventing them. Environmental science is interdisciplinary, embracing topics from geology, biology, environmental studies, environmental science, chemistry, and geography.

Honors Brain and Behavior

- ❖ **Offered:** First semester only
- ❖ **Prerequisites:** Biology and Chemistry
- ❖ This introductory course is a one-semester course designed to provide an overview of the biology of the brain, how the environment affects brain function, and how we study the brain from molecules to behavior.

Honors Marine Biology

- ❖ **Offered:** Second semester only
- ❖ **Prerequisites:** Biology and Chemistry
- ❖ This course is designed to introduce the student to Marine Biology, Marine Ecology, and Marine Science. Areas of study include marine ecosystems, plants and animals, and oceanography. Field trips, including overnight trips, are scheduled to enhance the course with a hands-on application.

Honors Human Anatomy and Physiology

- ❖ **Offered:** First semester only
- ❖ **Prerequisites:** Biology
- ❖ Human Anatomy and Physiology is an introductory course for students interested in the structural organization of the human body and its associated organ systems. Students will gain awareness and understanding of human anatomy and physiology through lecture, workbook completion, study of three-dimensional models, and dissection. Physiology will be primarily addressed in the areas of muscle activity, the cardiovascular system and respiration.

Honors Exercise Physiology

- ❖ **Offered:** Second semester only
- ❖ **Prerequisites:** **Biology and Honors Human Anatomy and Physiology**
- ❖ Honors Exercise Physiology is an applied course for students interested in acute and chronic effects of exercise and the environment on the human body. Special emphasis is placed on cardiovascular and skeletal muscle adaptations to training and on the effects of ergogenic aids. Students will complete workbook activities, observe lab testing and surgery, and conduct research literature reviews.

Honors Human Physiology Research Measurement Techniques

- ❖ **Offered:** First semester only
- ❖ **Prerequisites:** **Honors Human Anatomy & Physiology, Honors Exercise Physiology**
- ❖ This is the third course in an evolving biomedical studies track. It is designed to provide students a fuller understanding of physiology measures that are typically obtained through human performance research, and the opportunity to develop expertise in these measures. Students will conduct measures on both resting and active subjects, with the intent of exploring the acute and chronic effects of exercise.

Honors Human Physiology Research Thesis

- ❖ **Offered:** Second semester only
- ❖ **Prerequisites:** **Honors Human Anatomy & Physiology, Honors Exercise Physiology, Honors Human Physiology Research Measurement Techniques**
- ❖ This is the capstone course in an evolving biomedical studies track. It is designed to promote integration of the students' knowledge and skills that were developed in previous courses. Based on a thorough review of human physiology research literature, students will generate and test original theses through the design and conduct of their own studies. The ultimate goal of this course is to inspire student research that may be published. It is recommended that students in this course take either AP Statistics or Probability and Statistics.

World Languages Department

The World Languages Department feels that all students should be exposed to all facets of the languages and culture. This includes history, language acquisition, and culture. In view of the globalism of our current society, the acquisition of another language is a critical asset for today's youth. This skill would afford a competitive edge for those vying for a position in any job market. **All new students to Maclay must take the placement test.**

Students may choose which language to study; Spanish, French, or Latin.

Required Spanish (Alternate to required French or Latin):

Completed	Course
Y	Spanish 1
Y	Spanish 2 or Honors Spanish 2

Spanish Electives:

- ☐ Honors Spanish 3
- ☐ Advanced Honors Spanish 3
- ☐ Advanced Honors Spanish 4
- ☐ AP Spanish Language 5
- ☐ Spanish Conversation
- ☐ Honors Collegiate Spanish Conversation A and B

Required French (Alternate to required Spanish or Latin):

Completed	Course
Y	French 1
Y	Honors French 2

French Electives:

- ☐ Advanced Honors French 3
- ☐ Advanced Honors French 4
- ☐ AP French

Required Latin (Alternate to required Spanish or French):

Completed	Course
Y	Latin 1
Y	Honors Latin 2

Latin Electives:

- ☐ Advanced Honors Latin 3

- ☐ Advanced Honors Latin 4
- ☐ AP Latin

World Languages Department Course Descriptions

Required Spanish Courses:

Spanish 1

- ❖ **Prerequisites: None**
- ❖ This is an introductory course focusing on listening and speaking with an emphasis on reading and writing skills. The course includes beginning vocabulary in a variety of situations, basic grammatical structures, and verb conjugations. Culture from a variety of Spanish-speaking countries is introduced.

Spanish 2

- ❖ **Prerequisites: Spanish 1 or Department approval**
- ❖ **Note:** This course may be taken in place of Honors Spanish 2
- ❖ During the first semester, an extensive review of concepts covered in Spanish 1 will be conducted along with introduction of new concepts. Culture will be included throughout the year. Students will have additional practice and move at a different pace than the Honors class. At the conclusion of this class students will be prepared for Honors Spanish 3, but may move up to Advanced Honors Spanish 3 with departmental approval.

Honors Spanish 2

- ❖ **Prerequisites: B+ average or higher in Spanish 1 and Department approval**
- ❖ This course is designed to follow Spanish 1 for more motivated students. Students will be challenged from day one and a brief review of concepts presented in Spanish 1 will be included along with the presentation of new material. Additional cultural topics and readings will also be included. The class will be conducted in Spanish as much as possible. This level will provide the grammatical basis needed for more advanced studies and lead to Advanced Honors Spanish 3.

Spanish Electives:

Honors Spanish 3

- ❖ **Prerequisites: Spanish 2 and Department approval**
- ❖ **Note:** This class will not prepare students to continue in Advanced Honors Spanish 4
- ❖ This course is designed to follow Spanish 2. Students review vocabulary and basic grammar and continue to add more complex usage of the language. Culture topics and readings are presented to give a real-life view of the Hispanic world. Listening, speaking, reading, and writing skills will continue to be emphasized. While students will be pushed to use the language at a higher proficiency level, Spanish 3 is considered a “bridge year” that will help students transition from the skills learned in Spanish 2 to the skills needed in Spanish conversation. Considering this transition, the second semester of the course will be taught primarily in Spanish and students will be expected to speak in Spanish during the majority of class time. This class will not prepare students to continue to Advanced Honors Spanish 4.

Advanced Honors Spanish 3

- ❖ **Prerequisites:** A- average in Honors Spanish 2 and Department approval
- ❖ **Note:** This course is taught primarily in Spanish. Students will be required to take this class to continue in Advanced Honors Spanish 4
- ❖ This class focuses on allowing students to implement much of the vocabulary and grammar mastered in Honors Spanish 2. Students will learn more complex structures within the language. Listening, speaking reading, and writing skills are emphasized as these structures are implemented. Culture study and short narratives provide reading practice appropriate at this level. While students will be pushed to use the language at a higher proficiency level, Advanced Honors Spanish 3 is considered a “bridge year” that will help students transition from the skills learned in Honors Spanish 2 to the skills needed in Advanced Honors Spanish 4. Considering this transition, the second semester of the course will be taught primarily in Spanish and students will be expected to speak in Spanish during the majority of class time.

Advanced Honors Spanish 4

- ❖ **Prerequisites:** Advanced Honors Spanish 3 or teacher recommendation
- ❖ **Note:** This course is taught in Spanish, and will lead to AP Spanish Language 5
- ❖ This course is designed to teach the history, culture, and literature of Spain. Other Spanish-speaking countries are studied using literary excerpts and web-based activities highlighting current issues. Oral, reading, and written skills are emphasized. More advanced grammar is presented and is used in all skills mentioned above.

AP Spanish Language 5

- ❖ **Prerequisites:** Advanced Honors Spanish 4
- ❖ **Note:** All students are required to take the AP exam in May
- ❖ This class employs the study of both original, unabridged literary works and contemporary journalistic writing to teach the Spanish language. Several authors of Spain and Latin America are studied through the genres of novel, short story, poetry, and drama. Students read and write in Spanish at a college-level with particular emphasis on literary criticism. Contemporary journalistic writing includes a systematic review of the grammar taught in Spanish 3 and 4, which is introduced and reinforced through literature. Oral practice comes through daily discussion as well as specific weekly activities. Culture is taught in tandem with the literature being studied.

Spanish Conversation

- ❖ **Prerequisites:** Honors Spanish 3 or Advanced Honors Spanish 3, or Department approval
- ❖ This is a class for students who want to continue above Spanish 3 and improve their oral skills. It will focus on real-life situations, current events, and practical language usage. It will strengthen basic language skills through a thematic study of vocabulary.

Honors Collegiate Spanish Conversation A and B

- ❖ **Prerequisites:** Enrollment in or completion of Honors Spanish 4 or AP Spanish 5
- ❖ **Note:** This course may be taken for one or both semesters. Students enrolling for second semester only must receive approval from the teacher.
- ❖ This course is intended for students who have successfully completed or are concurrently enrolled in Spanish 4 or 5 and is specifically intended for seniors who wish to preserve the language skills already acquired before taking the college language placement exam. The class focuses on sharpening speaking and listening skills in Spanish through a variety of genres including website reviews, classroom oral activities, and Spanish-language cinema. Reading skills will be rehearsed through the reading of a children’s novel in Spanish.

Required French (Alternate to Required Spanish or Latin)

French 1

- ❖ **Prerequisites: None**
- ❖ This is an introductory course focusing on listening comprehension and speaking skills, as well as reading and writing skills. The course includes beginning vocabulary in a variety of real-life contexts, basic grammatical structures, and verb conjugations. Students will learn about culture in France and a variety of francophone countries. Students will be able to hold a basic conversation and read/write French throughout the course.

Honors French 2

- ❖ **Prerequisites: French 1 or teacher approval**
- ❖ **Note:** This course is taught primarily in French with English used to clarify grammar explanations when necessary
- ❖ Students use skills acquired in French I and add vocabulary, more complex grammatical structures, and verb tenses not introduced in French 1. Most of the French 1 material is reviewed at the beginning of the course. An emphasis is placed on aspects of popular culture such as media, entertainment, and music. This level prepares the student to pass on to a more advanced and in-depth study of the French language.

French Electives

Advanced Honors French 3

- ❖ **Prerequisites: Honors French 2 or teacher approval**
- ❖ This course provides an in-depth study of grammar in authentic cultural contexts. Culture and literature are studied with a view to improving reading, oral, and listening comprehension. Traditional and contemporary French literature is introduced in addition to that available in newspapers and magazines. The course is designed to prepare the students for Advanced Honors French 4 and AP French courses and is taught primarily in French.

Advanced Honors French 4

- ❖ **Prerequisites: Advanced Honors French 3 or teacher approval**
- ❖ This course introduces students to French and francophone literature and culture through short films and literary works. Oral, reading, and written skills are emphasized. More advanced vocabulary and grammar is presented and is to be used in all skills mentioned above. The course is designed to lead to AP French and is taught in French.

AP French

- ❖ **Prerequisites: Advanced Honors French 4 or teacher approval**
- ❖ **Note:** All students must take the AP exam in May
- ❖ The primary goal of this course is to help students develop a college-level fluency in French, in both written and spoken communication. To this end, vocabulary, grammar, syntax, and style are explored through a variety of different materials, including newspaper and magazine articles, literary texts, and other non-technical writings, which will eventually be read and discussed without dependence on a

dictionary. In addition, the students will develop an ability to express themselves coherently, resourcefully, and accurately in both written and spoken French. Spoken communication is explored through materials drawn from a variety of audio and video recordings, while subjects for discussion may come from virtually any French/francophone source. Finally, the writing of engaging, clear, concise, and organized compositions will also be emphasized.

Required Latin (Alternate to Required French or Spanish)

Latin 1

- ❖ **Prerequisites: None**
- ❖ This course is an introduction to the Latin language. Latin, with its unique patterns of inflection and syntax, and the acquisition of an extensive vocabulary, are the major focus of the course whose goal is the ability to read and translate effectively. Roman customs and culture, mythology, and English word derivations supplement the linguistic focus of the course.

Honors Latin 2

- ❖ **Prerequisites: Latin 1 or its equivalent, or teacher approval**
- ❖ This course is a continuation of Latin 1. By the end of the second semester, the student will have acquired all the grammatical knowledge necessary for the reading of original Latin texts. Extensive vocabulary development and experience in reading passages of increasing difficulty in mythology and Latin literature leave the student well equipped to approach the world of Caesar, Cicero, or Vergil. The course is supplemented with a focus on Roman history and culture, mythology, and English derivatives.

Latin Electives

Advanced Honors Latin 3

- ❖ **Prerequisites: Honors Latin 2 or its equivalent, and teacher approval**
- ❖ This course is an introduction into reading original, unmodified Latin. The focus is on improving reading skills. The class will have a continuous review of all grammar and vocabulary learned in Latin 1 and 2 combined with extensive reading of several Latin authors. The student should leave Advanced Honors Latin 3 well prepared for Advanced Honors Latin 4 or AP level work the following year.

Advanced Honors Latin 4

- ❖ **Prerequisites: Advanced Honors Latin 3 or its equivalent and teacher approval**
- ❖ This course is a continuation of reading original, unmodified Latin. The focus is on improving reading skills for those students not wishing to take AP until their senior year. The class will have a continuous review of all grammar and vocabulary learned in Latin 1 and 2 combined with extensive reading of several Latin authors in their original form. The student should leave Advanced Honors Latin 4 well prepared for AP level work the following year.

AP Latin

- ❖ **Prerequisites: Advanced Honors Latin 4, Advanced Honors Latin 3 or Honors Latin 2 with teacher approval and a higher-level AP English class or currently enrolled in one**
- ❖ **Note:** All students are required to take the appropriate AP exam in May

- ❖ This is a college-level Latin translation course. We will adhere to the AP Latin syllabus and read selections from Vergil's Aeneid and Caesar's De Bello Gallico. The course will be a year-long translation course with refresher grammar and vocabulary units spaced throughout the year.

Greek Elective

Greek 1

- ❖ **Prerequisite: None**
- ❖ This course is an introduction to the Ancient Greek language. Ancient Greek, with its unique patterns of inflection and syntax, and the acquisition of an extensive vocabulary, are the major focus of the course. The principal course goal is the ability to read and translate. Ancient Greek customs and culture, mythology, and English word derivations supplement the linguistic focus of the course.

Fine Arts Department

Students planning to participate in Fine Arts classes should refer to the prerequisites that are listed in the course descriptions. Certain courses may require specific materials (sketchbook, camera, instruments, etc.) Please note that not all Fine Arts classes require prerequisite courses.

Non-Academic Courses

- ☐ Foundations of Art
- ☐ Concert Band
- ☐ Songwriting and Music Production
- ☐ Theatre Arts
- ☐ Maclay Strings Orchestra

Academic Courses

- ☐ 2D Studio Art
- ☐ 2D Studio Art 2
- ☐ Digital Photography
- ☐ Ceramics/ Pottery
- ☐ Ceramics/Pottery 2
- ☐ Design Collaboration: Designing Solutions for Art, Work and Life (DIS)
- ☐ Graphic Design
- ☐ AP 2D Art and Design
- ☐ AP 3D Art and Design
- ☐ Americana I
- ☐ Americana II
- ☐ AP Music Theory

Fine Arts Course Descriptions

Non-Academic Courses

Foundations of Art

- ❖ **Offered:** Both semesters
- ❖ **Prerequisites:** None
- ❖ **Note:** This course satisfies the fine arts credit requirement for graduation from Maclay School
- ❖ This introductory studio art class presents a variety of art techniques designed to increase a visual awareness of the elements and principles of design. This course is designed to be an introduction to more advanced art courses and will include units on photography, clay and graphic design. First semester has a focus on drawing and materials include graphite pencil, colored pencil, pen and ink, watercolor, charcoal, and clay. Second semester has a focus on painting and materials include acrylic paint, tempera paint, oil pastels, color pencils, and clay.

Concert Band

- ❖ **Prerequisites:** None
- ❖ **Note:** This course satisfies the fine arts credit requirement if taken for two semesters
- ❖ This course is open to all students who play a band instrument. Beginners may join with the permission of the director. The concert band is a performing group that represents Maclay at concerts, band festivals, and various other events. Students have opportunities to participate in smaller ensembles within the band such as pep band and jazz ensemble. Students also have the opportunity to act as student directors and tutors. Deserving band students are recognized for their achievements with awards given at the district, state, and national level.

Songwriting and Music Production

- ❖ **Prerequisite:** Americana 2 or prior music experience demonstrated in audition with the Instructor
- ❖ **Offered:** Both semesters
- ❖ In this class, students will develop their unique musical expression by studying and practicing the craft of songwriting in conjunction with music production. With complete freedom to pursue individual stylistic interests, each student will receive guidance in creating their own music, culminating in self-produced audio tracks using Ableton Live Intro. Whether pop, rock, folk, country, electronic, dance, or beyond, this course will help realize inspiration into recording.

Theatre Arts

- ❖ **Offered:** Both semesters
- ❖ **Note:** This course fulfills the fine arts requirement
- ❖ This course is designed for the student interested in learning and developing basic acting skills, with an emphasis on participation, collaboration and performance. A wide variety of dramatic experiences will be covered including pantomime, characterization, improvisation, ensemble acting (scene work), roles in the theatre, theatre history, the reading of plays, theatre design and tech, and attendance at a live theatre performance. Student will be involved every class in some performance-based activity. Students will create projects throughout the semester in groups/teams just as they would encounter in the professional theatre world.

Maclay String Orchestra

- ❖ **Offered:** Full Year
- ❖ **Note:** This course fulfills the fine arts requirement
- ❖ This course is open to all bowed string instrument players with at least one year of orchestra experience/private instruction. Emphasis is placed on excellence of instrumental technique, further advancement of music reading and comprehension, independent musicianship, as well as ensemble skills. Literature studied will encompass a broad range of genres from Baroque and Classical music, to pop, jazz, bluegrass and film scores. Students will perform regularly in school concerts as well as in outreach events for the Tallahassee community. As an ensemble, the Maclay String Orchestra will have the opportunity to compete in district and state MPA while individuals will be encouraged to audition and participate in district and all-state orchestra festivals.

Academic Courses

2D Studio Art

- ❖ **Offered:** Both semesters
- ❖ **Prerequisites:** Foundations of Art or teacher approval
- ❖ **Note:** This course satisfies the fine arts credit requirement for graduation
- ❖ Students develop and refine technical skills and create 2-D compositions with a variety of media in drawing, painting, printmaking, collage, and/or design. Student artists sketch, manipulate, and refine the structural elements of art to improve mark-making and/or the organizational principles of design in a composition from observation, research, and/or imagination. Through the critique process, students evaluate and respond to their own work and that of their peers. This course incorporates hands-on activities and consumption of art materials.

2D Studio Art 2

- ❖ **Offered:** Year-long course
- ❖ **Prerequisites:** 2D Studio Art and teacher approval
- ❖ Students demonstrate proficiency in the conceptual development of content in drawing, painting, printmaking, collage, and/or design to create self-directed or collaborative 2-D artwork suitable for inclusion in a portfolio. Students produce works that show evidence of developing craftsmanship and quality in the composition. Through the critique process, students evaluate and respond to their own work and that of their peers. Through a focused investigation of traditional techniques, historical and cultural models, and individual expressive goals, students begin to develop a personal art style. This course incorporates hands-on activities and consumption of art materials.

Digital Photography

- ❖ **Offered:** First semester only
- ❖ **Prerequisites:** Foundations of Art or teacher approval
- ❖ **Note:** Students must provide their own camera. This course satisfies the fine arts credit requirement for graduation.
- ❖ This course will include studies on the camera and its functions as well as fundamentals of composition, exposure, and lighting.

Ceramics/Pottery

- ❖ **Offered:** Both semesters
- ❖ **Prerequisites:** Foundations of Art or teacher approval
- ❖ **Note:** This course satisfies the fine arts credit requirement for graduation.
- ❖ Special emphasis is placed on the development of basic technique for throwing pots on the potter's wheel. Craftsmanship, creativity, and an appreciation for the elements that are inherent to well-made functional pottery are emphasized in this class. Students will learn how to finish their pieces with various types of glaze and firing techniques. The terminology and definitions of materials and ceramic processes as well as ceramic art history will be presented.

Ceramics/Pottery 2

- ❖ **Offered:** Second semester only
- ❖ **Prerequisites:** Foundations of Art, Ceramic/Pottery, or teacher approval
- ❖ **Note:** This course satisfies the fine arts credit requirement for graduation.

- ❖ Focus is placed on the refinement in the technique on the potter's wheel as well as the origin and properties of ceramics raw materials and problems in glaze research. This class is designed to allow advanced ceramic students to work on developing a personal expression in clay.

Design Collaboration: Designing Solutions for Art, Work and Life (DIS)

- ❖ **Prerequisites: Teacher approval**
- ❖ Students in this inquiry-based course use arts processes to explore and imagine new connections and/or postulate solutions to real-world problems. Using a combined seminar, studio, and business management approach, this teacher-facilitated, yet highly independent setting requires that students use their individual strengths and interests in one or more arts with current and emerging technology to examine local, cultural, historical, technical, and/or global interests relative to life and work in a creative, global economy. Significant independent research and analysis are required.

Graphic Design

- ❖ **Offered:** First semester only
- ❖ **Prerequisites: Foundations of Art or teacher approval**
- ❖ **Note:** This course satisfies the fine arts credit requirement for graduation.
- ❖ This course involves an examination of the digital tools used in the visual arts. Students are exposed to the theory and function of the major software packages and basic digital design principles utilized in the visual arts. There will be a continuing examination of elements of design, spatial relationships, typography and imagery as they apply to practical visual solutions for print and Web applications. Students are introduced to operating procedures in the art department, design studio, and printing. Topics include operating systems, page layout, PDF creation and editing, elements of design, spatial relationships, typography and imagery as they apply to practical visual solutions for self-promotion, resumes, logo design, and Web design. This course instructs the student in graphic design skills employing traditional and digital tools, materials and procedures employed in the communication arts industry. The focus will be on finding creative visual solutions to communication problems using technical skills.

AP 2D Studio Art and Design

- ❖ Grade Level: 12th Grade; unless special arrangements are made directly with the teacher
- ❖ **Offered:** Year-long course
- ❖ **Prerequisites: Portfolio submission and teacher approval**
- ❖ This course is designed for artistically gifted upper classmen. It follows the AP Studio Course outline presented by the College Board. In lieu of an exam, students are required to submit a portfolio of twenty-four pieces of artwork to the College Board for evaluation in May. This portfolio will concentrate on two sections, Sustained Investigations and Selected Works.

AP 3D Studio Art and Design

- ❖ Grade Level: 12th Grade; unless special arrangements are made directly with the teacher
- ❖ **Offered:** Year-long course
- ❖ **Prerequisites: Portfolio submission and teacher approval**
- ❖ This course is designed for artistically gifted upper classmen. It follows the AP Studio Course outline presented by the College Board. In lieu of an exam, students are required to submit a portfolio to the College Board for evaluation in May. This portfolio will concentrate on two sections, Sustained Investigations and Selected Works.

Americana 1: A History and Application

- ❖ **Grade Level:** 9 – 12th Grade; any musical level
- ❖ **Offered:** Both semesters
- ❖ **Prerequisites:** None
- ❖ **Note:** This course fulfills the fine arts requirement needed for graduation. This course is a prerequisite for Americana 2
- ❖ This course guides students through the rich background of American popular music by means of hands-on music performance, critical examination of influential songs, and contextual history presentations. The historical component ranges from colonial times through the 1970s, but the music students perform may extend to more recent songs. While acoustic guitar is the predominant performance instrument, students may have the opportunity to learn and play piano, keyboard/synthesizer, vocals, bass guitar, electric guitar, and drum set (electronic). The actual instrumental configuration depends on each individual class, taking into consideration logistics and students' interests, backgrounds, and abilities. No prior music experience is required for enrollment.

Americana 2: A History and Application

- ❖ **Offered:** Both semesters
- ❖ **Prerequisites:** Americana 1
- ❖ This course is a continuation and expansion of its prerequisite Americana 1. Students will continue to learn and perform popular music from various genres, but with a focus on band instrumentation (i.e. electric guitar, vocals, bass, keyboard, and drums). With the historical component covering the 1980s to present day, students will further explore American popular music with the technological assistance of the digital audio workstation, Ableton Live Intro.

AP Music Theory

- ❖ **Offered:** Both semesters
- ❖ **Prerequisites:** Basic ability to read music and teacher approval
- ❖ **Note:** It is highly recommended that only students with at least a couple years of experience performing classical music enroll. Students are required to take the AP exam in May.
- ❖ This course is equivalent to Freshman-year music theory taught at the college level. In this class students will learn the core structural and functional components of Western classical music (Bach, Mozart, Beethoven, et al). Course components include developing musicianship skills, music score analysis, sight-singing, and dictation.

Computer Science & Engineering Electives

- ❑ Computer Programming 1 and Cyber Security
- ❑ AP Mobile Computer Science Principles
- ❑ AP Computer Science A
- ❑ Engineering 1- Design and Analysis
- ❑ Engineering 2 – Engineering Applications of Computer Science

Computer Science & Engineering Course Descriptions

Computer Programming 1 and Cyber Security

- ❖ Grade Level: 9-12th Grade
- ❖ **Prerequisites: None**
- ❖ **Note:** Year-long course
- ❖ Learn the basics of computer programming via the Python programming language. This class will cover basic topics related to programming including an introduction to “Object Oriented Programming”. The class is designed for students with little or no programming experience that want to work with one of the most popular programming languages in the world. Additionally, students will be introduced to the main tenants of cyber security as they continue exploring and expanding programming knowledge.

AP Mobile Computer Science Principles

- ❖ Grade Level: 9-12th Grade
- ❖ **Prerequisites: Algebra 2 and teacher permission**
- ❖ **Note:** Year-long course. Students are required to take the AP exam in May. This course is strongly recommended for students who plan to seek a degree in the fields of engineering, science, mathematics, computer or information science.
- ❖ This course offers students a broad view of computing, including problem solving, working with data, understanding the Internet, cyber-security, and programming while building socially useful mobile apps. Those who take this course are required to fulfill all the requirements as stipulated by the College Board.

AP Computer Science A

- ❖ Grade Level: 9-12th Grade
- ❖ **Prerequisites: Algebra 2 and teacher permission**
- ❖ **Note:** Year-long course. Students are required to take the AP exam in May. This course is strongly recommended for students who plan to seek a degree in the fields of engineering, science, mathematics, computer or information science.

- ❖ This course emphasizes object-oriented programming methodology using Java. It is meant to be the equivalent of an introductory college-level course in Computer Science. Those who take this course are required to fulfill all requirements as stipulated by the College Board for the current year.

Engineering 1 - Design and Analysis

- ❖ Grade Level: 9-12th Grade
- ❖ **Prerequisites: None**
- ❖ **Note:** Year-long course. A dual-enrollment opportunity exists for all students enrolled in Engineering 1. The University of Texas System Institutions provides this opportunity. The application and enrollment process begins in the fall and additional coursework for accepted applicants begins in the spring. Students are notified of dual-enrollment admissions decision in December. This course is strongly recommended for students who plan to seek a degree in the fields of engineering, science, mathematics, computer or information science.
- ❖ This course strives to engage students in authentic engineering practices and embrace engineer's habits of mind. Collaborative, student-directed projects work to build resilient problem-solving skills and empower students to think like engineers, adopt engineering processes and allow them to explore the many roles engineers serve while trying to better our world.

Engineering 2 - Engineering Applications of Computer Science

- ❖ Grade Level: 9-12th Grade
- ❖ **Prerequisites: Engineering 1- Design and Analysis**
- ❖ **Note:** Year-long course. At this time, we cannot guarantee that a dual-enrollment opportunity will exist for this course, but it is a possibility. If it is provided, it will be provided by the University of Texas Systems Institutions and application and acceptance will be solely determined by them. This course is strongly recommended for students who plan to seek a degree in the fields of engineering, science, mathematics, computer or information science.
- ❖ This course continues the foundation created by the Engineering 1 course. Students participate in a combination of project-based, socially relevant design challenges and explorations that introduce students to key computing principles in the context of engineering. Students employ engineering processes, skills, and habits of mind to solve more complex challenges that rely on the computing, programming, data representation and analysis, algorithmic thinking, and modeling skills that are so important in engineering

Health and Physical Education

Required Electives

Completed	Course
Y	Life Management
Y	Physical Education: Personal Fitness/Team and Individual Sports <i>or</i> Physical Education: Strength Training <i>or</i> Lady Marauder Fitness Class

Course Descriptions

Required Courses

Life Management

- ❖ **Offered:** Both semesters
- ❖ **Prerequisites:** None
- ❖ **Note:** There is a \$15 per student fee for CPR training and certification
- ❖ This course is designed to teach students the skills that will enable them to become well-adjusted and informed adults. Topics include emotional development and stress management, communication skills, personality development, goal setting and decision making, nutrition, cancer, cardiovascular health and CPR, human sexuality, substance abuse education, consumer education, domestic and date abuse, and bereavement.

Physical Education: Personal Fitness/Team and Individual Sports

- ❖ **Offered:** Both semesters; may be repeated
- ❖ **Prerequisites:** None
- ❖ Students must take one semester of PE to graduate from Maclay School. The Physical Education program is committed to the development of proficiency and understanding in a wide variety of lifetime sports. Each semester, this course will include units on personal fitness and team and individual sports.

Physical Education: Strength Training

- ❖ **Offered:** Both semesters; may be repeated
- ❖ **Prerequisites:** None
- ❖ This course is designed to increase participant strength, for both general fitness and the demands of specific sports. Students will learn strength training principles and techniques and will apply their learning in a variety of modes, including free weights, plyometrics, and hill resistance drills. Students will have the opportunity to help design and follow a strength-training program tailored to their individual needs. Progress will be measured through evaluations of strength at regular intervals throughout the semester.

Lady Marauder Fitness Class

- ❖ **Offered:** Second semester only
- ❖ **Prerequisites:** None
- ❖ This course offers a variety of fun and exciting training activities to ensure overall health and fitness. The course includes, but is not limited to, weightlifting, discussion topics such as nutrition, fitness games, team sports and much more. The class is designed to engage each student and to ultimately encourage the consistent pursuit of a healthy lifestyle. This course satisfies the Physical Education credit requirement for graduation from Maclay School.

Non-Academic Electives

Non-Academic Electives

- ☐ Directed Individual Studies (DIS) – Video Production
- ☐ Directed Individual Studies (DIS) – Communications and Marketing
- ☐ Directed Individual Studies (DIS)
- ☐ Internship

Course Descriptions

DIS - Video Production

- ❖ **Offered:** Both semesters
- ❖ **Prerequisites:** Students must apply and be approved by the Communications and College Counseling offices
- ❖ Direct Independent Study to create, edit, and produce original videos. At times, this may include short promotional videos for programs and events at Maclay School such as homecoming, athletic events, etc. Students should have strong organizational and writing skills and familiarity with shooting basic video. Adobe Premiere Pro will be the editing platform used in the class, so experience with that or similar programs is a plus. Student will work out of the iTHINK Production Studio in the library and be able to work independently to be able to meet deadlines.

DIS – Communications and Marketing

- ❖ **Offered:** Both semesters
- ❖ **Prerequisites:** Students must apply and be approved by the Communications and College Counseling offices
- ❖ **Note:** Selected students will be required to sign an agreement of conduct and confidentiality of access to outlets that represent or disburse information about Maclay School. **Students must request an interview through the College Counseling Office. Due to limited space, students must apply and be approved by the Communications or Marketing Director.**
- ❖ Students will have the opportunity to experience hands-on marketing and communications under the direct supervision of the Director of Communications in the Office of Advancement. Weekly or bi-monthly assignments may include, but not be limited to, writing assignments published on the website,

Virtu, social media or media outlets, as well as press releases, and creation of web-based marketing content. Students applying should be creative, independent self-starters who enjoy brainstorming and implementing ideas. Strong writing skills are necessary.

Directed Individual Studies

- ❖ **Note:** Approval by Academic Advisor and Dean of Student Affairs must be obtained BEFORE the last day of classes the previous academic semester. For more information, the student should consult the Maclay Upper School Handbook for Students and Parents.
- ❖ Under special situations, a student may take a DIS with a faculty member. **Credit can be academic or non-academic**, depending on the area of study.

Internship

- ❖ Grade Level: Seniors and select Juniors
- ❖ **Offered:** Both semesters
- ❖ **Note:** Students interested in pursuing an internship must meet with their academic counselor and get approval from the FLEX coordinator.
- ❖ An internship is a non-credit, career-focused experience in research, business, industry, education, government, medicine, or social service that allows the student the opportunity to explore and clarify career choices in a particular field of interest while working with a mentor at a worksite for a defined period of time. A complete Internship includes a minimum of 60 hours, career-related experience plus a reflection paper and oral presentation.

Concentrations

STEM Track (Core Science, Bio Med, Computer Science, Engineering & Robotics)

Maclay School has established an interdisciplinary STEM Concentration for rising 10th grade students who relish the study of science, technology, engineering and mathematics. This concentration consists of a core set of interdisciplinary requirements that are augmented by advanced courses in one of three tracks, each containing relevant coursework that lies along one of the many paths that can be followed after leaving Maclay. In addition, students are asked to participate in one of several extracurricular activities that complement the program. Participants must also attend a manageable selection of related events. The underlying goal is to equip graduating students with a range of experiences that prepare them for further opportunities in these fields, while also completing all their graduation requirements. Students who successfully complete all requirements for a Concentration will be recognized at graduation.

At all levels, the curriculum is enhanced by contact with health professionals:

- Demonstrations & lectures,
- Health facility & college tours, field trips
- Internships

Core Requirements

These courses are required of all students seeking this concentration, regardless of the track chosen.

Mathematics (4 Credits)	Science (2 Credits)
<ul style="list-style-type: none">• Geometry (Honors or Advanced Honors)• Algebra II (Honors or Advanced Honors)• Advanced Honors Pre-Calculus/Trigonometry• AP Calculus AB	<ul style="list-style-type: none">• Biology (Honors or Advanced Honors)• Chemistry (Honors or Advanced Honors)

Biomedical Concentration

The biomedical track is an innovative, hands-on program of study designed for students who want to design innovative solutions for the health challenges of the 21st century. Students will work through progressively challenging open-ended problems, addressing topics such as clinical medicine, physiology, microbiology, biomedical engineering, and public health. Students will have the opportunity to work on an independent project with a mentor or advisor from a university, hospital, research institution, or the biomedical industry.

Additional Required Courses for this track: (4 credits)

- Honors Physics or AP Physics C: Mechanics
- Honors Human Anatomy & Physiology (1st semester)
- Honors Exercise Physiology (2nd semester)
- Honors Human Physiology Research Measurement Techniques (1st semester)
- Honors Human Physiology Research Thesis (2nd semester)
- AP Biology or AP Chemistry

Core Science Concentration

For students who desire to pursue a career in a STEM related field, but do not have a specific interest, we have developed the core science track that puts them in a position to enter college with advanced preparation for all of the major fields of science.

Additional Required Courses for this track: (4 credits)

- AP Physics C: Mechanics
- AP Biology
- AP Chemistry
- AP Calculus BC or AP Statistics

Computer Science and Engineering Track Concentration

For students who are interested in Computer Science or Engineering, we have developed the Computer Science and Engineering track that puts them in position to enter college with advanced preparation in the fields of Computer Science and/or Engineering.

Additional Required Courses for this track: (4 credits)

- Honors Physics or AP Physics C: Mechanics
- Engineering I – Design & Analysis (option for 3-unit credit hours via dual-enrollment)
- Two of the following courses
 - Computer Programming 1 and Cyber Security
 - AP Computer Science A or AP Mobile Computer Science Principles
 - Engineering I – Design and Analysis
 - Engineering II – Applications of Computer Science

Business and Entrepreneurial Concentration

The Business and Entrepreneurial Concentration is designed to help students who have an interest in the business and financial world and who want to gain knowledge on how to successfully become global entrepreneurs and business leaders.

Core Requirements

These courses are required of all students seeking this concentration, regardless of the track chosen.

Mathematics (4 Credits)	History (3 Credits)
<ul style="list-style-type: none">Geometry (Honors or Advanced Honors)Algebra II (Honors or Advanced Honors)Advanced Honors Precalculus/TrigonometryAP Calculus AB	<ul style="list-style-type: none">Honors Modern World History and Geography or AP World HistoryHonors U.S. History or AP U.S. HistoryHonors Contemporary U.S. Government and Political HistoryHonors Economics with Financial Literacy or AP Microeconomics or AP Macroeconomics
Foreign Language (2 Credits)	
<ul style="list-style-type: none">Spanish, Latin, or French	

Additional Course Requirements

- Introduction to Entrepreneurship
- Risk and Reward
- Personal Finance

Arts, Inspiration, and Design

The Arts, Inspiration, and Design Concentration has been created for students who wish to showcase their talent, mastery and experience in the visual and creative arts. Students who discover a passion for a specific medium can explore their passion in two categories: 2D Studio Art or 3D Studio Art.

Core Requirement for all tracks:

- Foundations of Art

2D Courses:

- 2D Studio Art
- 2D Studio Art 2
- Graphic Design
- Digital Photography
- AP 2D Drawing
- AP 2D Design
- Design Collaboration

3D Courses:

- Ceramics/Pottery 1
- Ceramics/Pottery 2
- AP 3D Art and Design
- Design Collaboration