



2018-2019 COURSE GUIDE

The following are descriptions of courses offered at Research Triangle High School for the 2018-2019 school year. Please choose from the following courses as you complete your enrollment form for next school year. Please consult with Mrs. Cook (rising 9th and 10th grade) or Mrs. LeMay (rising 11th and 12th grade) to see what courses you should be taking. Honors sections are available in many core courses.

English

English I is organized around the overarching theme of "Who Am I?" Instruction is aligned with the Common Core Standards for English Language Arts. Students study literature from a variety of genres including novels, plays, poetry, short stories and nonfiction, all exploring the coming-of-age story and the question of how personal identity is formed by the cultural influences surrounding each of us. The instructional emphasis is on close reading and using textual examples to draw specific conclusions about a work. Vocabulary, grammar and composition skills are integrated into the literature units, which may include creation stories from around the world, Greek and Shakespearean drama such as *Oedipus Rex* and *Romeo and Juliet*, novels such as *To Kill a Mockingbird* and *Great Expectations*, and a variety of poems, nonfiction essays and texts.

English II Following the overarching theme of "Who Am I?" in 9th grade, sophomore English is a world literature course aligned with the Common Core Standards and will follow the theme of "Who Are YOU?" Students will examine texts from around the world as they explore conflicts and culture in literature. Major units may include study of titles like *Antigone*; *All Quiet on the Western Front*; *Cry, the Beloved Country*, and literature from the Holocaust. Students will also build their research and writing skills as they prepare for the English II EOC and other standardized tests.

Pre-AP Honors English II is not an AP course but intended to prepare students for the demanding and rigorous writing and analysis found in eleventh and twelfth grade AP® English courses. The objectives and readings are similar to English II but the level of analysis, amount of writing, and degree of quality and expected effort of students is much higher. Summer readings are required. Instructor approval is required.

English III What is the "American Dream?" How is the American experience reflected in the literature of the United States? This junior year course is aligned with the Common Core standards and will explore the overarching question of "Who are WE?" as we examine novels, plays, poems, and nonfiction spanning the history of the United States. Literature may include texts from Native Americans and the Colonial period; studies of the writings and documents from the American Revolution; essays by Emerson and Thoreau; plays by dramatists like Arthur Miller; novels such as *The Scarlet Letter*, *The Great Gatsby*, *Their Eyes Were Watching God*, and *Of Mice and Men*, works by North Carolina authors, such as Kaye Gibbons' novel *Ellen Foster*, and a large variety of short stories and poems from different literary periods by American authors. Vocabulary, writing skills and research skills will be incorporated into the literature units.

English IV “Of Heroes, Monsters and Mankind” is the theme for this course. British Literature is the study of both the foundations of the English language and the foundation of much of American culture. This course will cover several time periods of British literature and will look at the heroes and monsters of great stories, as well as the way humanity has always struggled between these two opposing “heroic” and “monstrous” parts of our nature as individuals and as societies. Literature may include excerpts from epic tales and poetry such as *Beowulf*; *The Canterbury Tales*; Arthurian legend; novels such as *1984*, *A Tale of Two Cities*, and *Skellig*, and dramas such as *Hamlet*, *Pygmalion* and *The Importance of Being Earnest*. Students will study assorted works of nonfiction and poetry, in addition to exploring the literary time periods of the Anglo-Saxons, the Middle Ages, the Renaissance, the Victorians, and the Romantics, and end with utopian and dystopian fiction of the modern world. Writing emphasis will be on literary analysis and research formats in preparation for college-level courses.

AP® Language and Composition Using American literature as a source for texts, AP® English Language and Composition will focus on developing skilled readers of prose and poetry from a variety of rhetorical contexts and developing skilled writers who compose for a variety of purposes. Both their writing and their reading should make students aware of the interactions between a writer’s purposes and audience expectations as well as the way genre conventions and the resources of language contribute to effectiveness in writing. This is a college-level course and the work will be fast-paced. Students should be prepared to read about 30 minutes outside of class each day and to compose a text about once per week. The course is designed to prepare students for the AP® English Language and Composition exam in the spring. Advanced and motivated students may register for AP® Composition and Literature in place of English III. AP® contract and instructor recommendation is required.

AP® Literature and Composition The AP® English Literature and Composition course focuses on reading, analyzing, and writing about imaginative literature (fiction, poetry, and drama). Using advanced texts drawn mainly from the British tradition, students will craft interpretations of literature based on a careful observation of textual details, consideration of the works’ structure, style, and themes, as well as the social and historical values they reflect. Analysis will be an emphasis of the course, such as the use of figurative language, imagery, symbolism, and tone. This is a college-level course with rigorous requirements designed to prepare students for the AP® English Literature and Composition exam in the spring. AP® contract and instructor recommendation is required.

Social Studies

World History This survey course is designed to provide an overview of global history from prehistoric times to the modern era. Using project-based learning and research, students will discover how the use of technology, the spread of ideas, and interactions among civilizations have changed throughout history and shaped the modern world. Honors-level World History is also available. This course is open to all students.

American History I: The Founding Principles spans the European exploration of the new world through Reconstruction. Students will examine the historical and intellectual origins of the United States from European exploration and colonial settlement to the Revolutionary and Constitutional eras. Students will learn about the important political and economic factors that contributed to the development of colonial America and the outbreak of the American Revolution as well as the consequences of the Revolution, including the writing and key ideas of the U.S. Constitution. Students will also study the establishment of political parties, America's westward expansion, the growth of sectional conflict, how that sectional conflict led to the Civil War, and the consequences of the Civil War, including Reconstruction. This course is open to all students who have completed World History.

American History II This course examines the political, economic, social and cultural development of the United States from the end of the Reconstruction era to present times by tracing the changes in the ethnic composition of American society, including the movement toward equal rights for racial minorities and women and the role of the United States as a major world power. An emphasis is placed on the expanding role of the federal government and federal courts as well as the continuing tension between the individual and the State. This course is open to all students who have completed American History I.

AP® World History This course is an in-depth study of major time periods from ancient times to the present. The course is organized around six themes that correspond to major chronological periods. Students will have the opportunity to earn college credit by taking an exam at the end of this course that is a combination of multiple choice and free response. Students should have an interest in historical inquiry, be able to express historical understandings through discussion and written analysis, and be willing to commit to independent reading assignments in addition to video lectures. This course prepares students to take the AP® World History exam in May. Instructor recommendation and an AP® contract are required.

AP® European History This course provides an opportunity for the rigorous study of Europe from 1450 to the present. The course focuses on the major developments of European History as part of an interconnected, ongoing global narrative. Students will work to develop cognitive skills (e.g., written composition, critical reading, and data analysis) that are crucial to success both within and beyond the field of history. Students who enjoy history, who possess strong reading and writing skills, and who are diligent enough to complete nightly reading assignments can expect to succeed in this course. This course prepares students to take the AP® European History exam in May. Instructor recommendation and an AP® contract are required.

AP® Psychology is designed to introduce students to the study of behavior and cognitive processes in humans and, in some cases, other animals. Students will study psychology facts and phenomena associated with each of the major subfields within psychology, including cognitive, social, experimental and clinical. They will also learn about the ethics and methods

psychologists use in their science and practice as well as the process for analysis and interpretation of experimental results. The course is the equivalent of a college-level introductory psychology course and is designed to prepare students for the AP® Psychology exam in May. This course requires instructor approval.

AP® US History This course is an in-depth survey of the political, economic, and social history of the United States from pre-colonial times to the present. There is a strong focus on reading and interpreting primary source material as well as evaluating and discussing historical debates and completing independent research. Students will be expected to do summer reading and work over breaks. Students read challenging material each night. In addition, students will be expected to learn and retain a large amount of factual information, as well as doing a substantial amount of writing. Students should have a strong interest in history and be prepared to devote considerable time and energy to this class.

This course prepares students to take the AP® exam in US History in May. Students who take this course must also take a History or Social Science elective in order to meet graduation requirements. Instructor recommendation and an AP® contract are required. This course replaces the American History I and II sequence.

Civics & Economics is a study of economic, legal, and political institutions and workings at both the United States and North Carolina levels, utilizing both history and current events. Students will engage in research and projects in topics such as the court system, voting and elections, and basic economic theory.

College Level Civics & Economics is a rigorous, fast-paced course designed to largely mirror the curriculum of Advance Placement (AP) U.S. Government and Politics. This is not an AP course and students will not receive AP credit or AP quality points for their grade. Students will do in-depth studies of state- and federal-level political and legal history and workings, in addition to learning about various types of economic systems. Students in this course will have the opportunity to take the AP U.S. Government and Politics exam in May for college credit. Approval of the instructor is required.

Science

Biology This course is the study of living organisms. Students do laboratory work and collaborative activities that enhance their understanding of topics including cell processes, genetics, evolution, diversity of organisms, and ecology. Students will also practice the application of technology, scientific tools and critical thinking skills in solving problems. Students will take the North Carolina End of Course exam for Biology at the end of the course. This course is open to all rising 9th grade students.

Chemistry This course is the study of matter and its changes. Laboratory work and collaborative study support standard content including nomenclature, acids and bases, types of reactions, and organic and nuclear chemistry. Chemistry has a rigorous math component. Students should have completed Math I before taking Chemistry.

Earth and Environmental Science This course is the study of physical earth systems, and their interactions with each other and living things. Students will explore how human activity has shaped many of these systems and how to sustainably manage natural resources for a growing human population. Field and laboratory work are an integral part of this course. Earth and Environmental Science is required for graduation from a North Carolina public high school. This course is open to all 11th grade students.

AP® Environmental Science This course is an advanced course in Earth and Environmental Science that prepares students to take the AP® Environmental Science exam in May. Students must sign an AP® contract to take this course and have instructor's permission to enroll.

Physics This course is a study of matter that is centered on math. Students will cover similar topics to Honors Physics but with a more qualitative approach. These topics include mechanics, electromagnetism, heat, waves, and optics. The concepts discussed in class are supplemented with labs and demonstrations. Math III is a co-requisite for this course.

Honors Physics This course is a math-intensive course designed to give students more insight into the natural world. Relevant concepts are discussed in class and problem solving techniques are developed for various topics. These topics include mechanics, electromagnetism, heat, waves, and optics. The concepts discussed in class are supplemented with labs and demonstrations. Math III is a co-requisite for this course. Instructor recommendation is required.

AP® Chemistry This course is comparable to a first-year two-semester college chemistry course. Students study a broad range of topics including atomic structure, mass relationships, gases, thermo-chemistry, chemical bonding, phases of matter, chemical kinetics and equilibrium, electrochemistry, and thermodynamics. Students must be proficient in math and problem solving and have excellent organizational skills to successfully complete this course. Laboratory work is mandatory and students can expect additional work outside of school. Chemistry and Math II are prerequisites for this course.

AP® Biology This course presents the equivalent of a one-year college biology course. Upon successful completion of the course and sufficient performance on the AP® Biology exam a student can earn college credit. The course covers a diverse range of topics including taxonomy, biochemistry, genetics, evolution, population dynamics, anatomy, and physiology, and includes a significant lab component. Students should be independent and interested in

biology. This course is not intended as an initial course in biology. Students must sign an AP® contract to take this course and have instructor's permission to enroll.

AP® Physics 1 is an algebra-based, introductory college-level physics course. Students cultivate their understanding of Physics through inquiry-based investigations as they explore topics such as Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits. The course is based on six Big Ideas, which encompass core scientific principles, theories, and processes that provide a broad way of thinking about the physical world. Students must sign an AP® contract to take this course and have instructor's permission to enroll.

Paired Interest Courses: the courses listed below are one semester courses that are paired so that students take both courses in one year. Combinations are listed below.

Anatomy and Physiology This course provides students an opportunity to explore the relationship between structure and function in the human body. Students will explore topics such as homeostasis, anatomical and physiological disorders, medical diagnosis and treatment, modern and past imaging techniques, biochemistry, cytology, histology, and a survey of human body systems. Laboratory activities reinforce concepts and principles presented in the course. Successful completion of Biology is a prerequisite for this course. This is a semester class which is paired with either Marine Ecology. The two courses must be taken together in one year.

Biotechnology This course introduces students to the varying capacity of biotechnology research and product development. Students learn and use a multitude of methods that manipulate living things to solve problems and create useful products, including gel electrophoresis, PCR, transformation and protein purification. Students apply these methods to simulate the process of research and development, mass-production and marketing of biotech products. Students also analyze the ethics of genetic engineering by using a framework to analyze the rights and responsibilities of stakeholders involved. Successful completion of Biology is a prerequisite for this course. This is a semester class which is paired with either Zoology or Microbiology. The two courses must be taken together in one year.

Marine Ecology This course provides students the opportunity to explore how biotic and abiotic factors interact in marine ecosystems to influence the distribution, abundance, and diversity of marine organisms. Topics including physical characteristics of marine systems, adaptation to environments, species interactions, and biodiversity will be covered. Students will study human interactions with marine ecosystems and management of marine ecosystems to work towards sustainable interactions now and in the future. Laboratory and field skills will be a large focus of this course. One field trip to the NC coast will be included as part of this course to conduct field exercises. Successful completion of Biology is a prerequisite for this course. This is a semester class which is paired with Anatomy and Physiology. The two courses must be taken together in one year.

Microbiology explores the realm of the tiny living things that inhabit the world. Students will survey a range of organisms and environments, examine the behaviors of these organisms and their impact on humanity and how humans influence them. Students will do lab work and field research. This is a semester class which is paired with Biotechnology. The two courses must be taken together in one year.

Zoology Students will explore physiology, evolutionary origin, taxonomy, and behavior of each kingdom of microorganisms, each phyla of the animals, and each class within the vertebrates. The course will focus on what types of information would prepare students for further study in research, animal husbandry, and veterinary medicine. This is a semester class which is paired with either Zoology or Microbiology. The two courses must be taken together in one year.

Health and Physical Education

Health and PE This course is required for graduation from a North Carolina public high school. Health topics such as nutrition, mental and physical health, and substance abuse are covered. In addition, students pursue physical activities such as strength training, yoga, basketball, and aerobic exercise as well as sport theory. This course is open to all students.

Mathematics

Math 1 This course is the first course in the integrated Common Core math sequence. Students will revisit and strengthen equation-solving and arithmetic skills. Emphasis will be placed on incorporating geometry, data analysis, graphing and linear and non-linear functions to model and solve problem situations. Applications, connections and communication of these concepts will be another core focus. Students will take the North Carolina End of Course test for Math I at the end of the course. Math 1 is open to students who have successfully completed 8th grade math.

Math 2 This course is the second course of the local option Common Core math sequence. The focus of Math II is on quadratic expressions, equations, and functions, comparing their characteristics and behavior to those of linear and exponential relationships from Math I. Additional topics explored in Math II are probability, statistics, geometry, and trigonometry. Please note that Math 2 is not the equivalent of Geometry. Students who have completed Geometry should sign up for Math 2 and **not Math 3.**

Math 3 This course is the final course of the local option Common Core math sequence. It is in Math 3 that students synthesize and apply the material from previous courses. Students apply methods from probability and statistics to draw inferences and conclusions from data. Students expand their repertoire of functions to include polynomial, rational, and radical functions, as well as expand their study of right triangle trigonometry to include general triangles. Students bring together all of their experience with functions and geometry to create models and solve contextual problems. Math 3 is open to students who have successfully completed Math II or Algebra II.

Advanced Functions and Modeling (AFM) will focus on the mathematics of the real world and creating mathematical models. AFM will provide students with an in-depth study of modeling and applying functions that represent home, work, recreation, consumer and scientific investigations. Students will use linear, quadratic, cubic, and exponential functions, as well as trigonometric ratios, to model and solve problems. Students will also use logic, deductive reasoning and statistical analysis to draw conclusions and solve problems. AFM is open to students who have successfully completed Math 1, 2 and 3.

Pre-Calculus completes the formal study of the elementary functions begun in Math 1, 2, and 3. Students focus on the use of technology, modeling, and problem solving. Functions studied include polynomial, exponential, logarithmic, rational, radical, piece-wise, and trigonometric and circular functions and their inverses. Parametric equations, vectors, and infinite sequences and series are also studied. Math 3 is a prerequisite for this course.

Introduction to Calculus and Statistics (Non-AP®) This is a year-long course taken in two parts, both of which must be taken together during one academic year. This course is a rigorous exploration of both statistical analysis and calculus, but is not a college level (AP®) course. Students will represent concepts graphically, numerically, analytically and verbally. Prior mathematical knowledge will be reinforced and leveraged in order to master the concepts of limits and differential calculus. Students will be introduced to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Students are exposed to broad conceptual themes: exploring data, describing patterns and departures from patterns, sampling and experimentation, planning and conducting a study, anticipating patterns, statistical

inference, estimating population parameters, and testing hypotheses. Appropriate use of technology to support learning is incorporated throughout the course. This course is open to students who have completed Math 1, Math 2, Math 3 and Pre-Calculus and requires teacher recommendation.

AP® Calculus AB This course is an advanced course primarily concerned with developing students' understanding of the concepts of calculus and providing experience with its methods and applications with the goal of preparing students to take the AP® Calculus AB exam in the spring. The course emphasizes a multi-representational approach to calculus, with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. This is an intense, fast-paced course that requires strong student interest and independence. An AP® contract is required, as well as instructor recommendation. Students are expected to take the AP® Calculus AB exam.

AP® Calculus BC This course is a college level math class for which most colleges grant advanced placement and credit. Calculus BC follows Calculus AB and includes topics covered in Calculus AB, along with additional topics. Students will continue to represent functions graphically, numerically, analytically, and verbally. Students will understand the meaning of derivatives and definite integrals and understand how they relate to each other to solve problems. Students will model physical situations with a function, a differential equation or an integral. Calculus BC is open to students who have successfully completed Calculus AB. An AP® contract is required, as well as instructor recommendation. Students are expected to take the AP® Calculus BC exam.

AP® Statistics This course introduces students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Students are exposed to broad conceptual themes: exploring data, describing patterns and departures from patterns, sampling and experimentation, planning and conducting a study, anticipating patterns, exploring random phenomena using probability and simulation, statistical inference, estimating population parameters, and testing hypotheses. Students who successfully complete the course and pass the exam may receive college credit. Students are expected to take the AP® exam. An AP® contract is required and instructor recommendation is required. Open to students who have completed Math 1, 2, and 3.

Calculus III builds on previously studied Calculus concepts. Whereas AP Calculus focuses on functions of one variable that are graphed in a two-dimensional plane, *Calculus 3* will extend the concepts of differentiation and integration to three-dimensional surfaces and solids and to higher-dimensional functions. Topics will include vector geometry, multiple variable functions, partial derivatives, multiple integrals, line and surface integrals. This course will be conducted at a college level. Success with the pace and depth of study in this course will require a high level of dedication. This course does not earn AP or college credit.

World Languages

Note: all students are expected to complete two courses in the same world language, including at least one year in high school.

Spanish I is designed to give students a basic understanding of the Hispanic culture and the four language skills: writing, reading, listening, and speaking. Students are expected to engage in communicative tasks that are relevant to their lives and authentic to the Spanish-speaking world, through the use of extensive concrete practice of open-ended, personalized speaking and writing tasks. Technology, peer interactions, vocabulary in context, grammar, physical actions (such as role-playing and creating dialogues in the target language) are all part of the curriculum. This course is open to all students.

Spanish II is a continuation of Spanish I. Students will develop reading, writing, listening, and speaking skills within cultural contexts. Themes include school, holidays, childhood, fashion, directions, natural disasters, cooking, and career choices. RTHS students are required to complete two courses of the same language.

Spanish III Honors is a continuation of Spanish II for students that are interested in developing their language proficiency. Students will develop reading, writing, listening, and speaking skills within cultural contexts. Themes include fairy tales, history, art, travel, health and nutrition, conflict resolution, technology, and finance. Students must be recommended for Spanish III by their Spanish II teacher. In order to be recommended, students must complete all of the power and additional focus areas for Spanish II.

Spanish IV is an exploration of advanced grammar and authentic Latin American and Spanish literature. Spanish IV requires instructor approval to register.

AP® Spanish Literature and Culture uses a thematic approach to introduce students to representative texts (short stories, novels, poetry, and essays) from Peninsular Spanish, Latin American, and United States Hispanic literature. Students develop proficiencies across the full range of communication modes (interpersonal, presentational, and interpretive), thereby honing their critical reading and analytical writing skills. Literature is examined within the context of its time and place, as students reflect on the many voices and cultures present in the required readings. The course also includes a strong focus on cultural connections and comparisons, including exploration of various media (e.g., art, film, articles, literary criticism). This course requires instructor approval to register.

German I is the entry level course in the study of the German language. Students will learn to write, read, and speak, as well as study aspects of German culture. This course is open to all students.

German II continues with German II. Advanced topics include...For graduation from a North Carolina High School all students must complete two years of the same foreign language. This course is open to students who have successfully completed German I.

Honors German III Students intending to take German III must have completed German II or demonstrate mastery of German at the second year level by interview with the instructor. Honors German III requires instructor approval to register.

Honors German IV

Latin I exposes students to the language, culture and history of the Romans. An introduction to the language through *Wheelock's Latin* emphasizes comprehension of the Latin language by reading it and thus understanding the social and political history of the Romans, especially during the first century AD. The result of the student's study of Latin is improved knowledge of both English vocabulary and grammar, an expanded understanding of the relationship of the ancient world to Western culture, and appreciation of other foreign languages and culture.

Latin II is designed as a continuation of Latin I. We will finish studying the grammar of the language paying close attention to complex constructions and idiomatic phrasing. In addition to cultural studies, i.e. housing, social structure, political and military history, we will begin translating original texts from such authors as Cicero and Caesar. Completion of Latin I or permission of the instructor is required.

Latin III Cave laborem. Completion of Latin I or permission of the instructor is required.

Electives

AP® Computer Science A This course is designed to prepare a student for the Advanced Placement® Computer Science exam, level A. Topics include: simple, user defined and structured data types, algorithm development, decisions and loops, arrays, recursion, searches and sorts, data abstraction, and classes. Writing code in Java requires a sound mathematical background and strong problem solving skills. While previous computer programming experience is not required, familiarity with functions and the use of functional notation is important. Successful completion of Math II Honors is a prerequisite for this course. Students must sign an AP® contract to take this course and have a recommendation from a current math teacher to enroll.

AP® Studio Art students create a portfolio of work to demonstrate the artistic skills and ideas they have developed, refined, and applied over the course of the year to produce visual compositions. Students work with diverse media, styles, subjects, and content. Each portfolio consists of three sections: Breadth, Concentration and Quality. An AP contract and teacher recommendation is required.

Art I Art I is an entry-level class that establishes a standard and consistent foundation in the discipline of visual art. This course will provide opportunities to examine, explore, and manipulate several different mediums in art. There will be a strong focus on learning to draw from direct observation. This will be accomplished through the process of art production, the study of art history, the practice of art criticism, and the exploration of aesthetics in art. This course is open to all students.

Art II provides students with the opportunity to build on skills developed in Art I and provides for more self-expression and creative problem solving with open-ended projects. The importance of craftsmanship is stressed. Students will begin to develop a personal style and compile a portfolio. This will be accomplished through the process of art production, the study of art history, the practice of art criticism, and the exploration of aesthetics in art. This course requires completion of Art I.

Art III is for highly motivated and independent students eager to concentrate on improving visual arts skills. We will work on a variety of themes to focus on personal expression. High standards for quality and productivity will be emphasized. This course requires completion of Art II.

Art IV is an advanced projects class, run in parallel with other advanced arts classes as part of the Senior Arts Lab, encouraging collaboration among disciplines. Students will propose and pursue high-level projects in a wide range of materials and themes. Students must have instructor approval to register for Art IV.

Creative Writing This student driven elective course delves into books selected by students and results in writings and creations by students. Students will study a variety of texts, ranging from *The Hobbit* to Adele lyrics to *Maus*. Then, using these texts as inspiration, students create their own fantastical worlds and write their own fantasy short stories; they create their own music and write their own song lyrics, create their own graphic novels, and write their own biography through dialogue. Therefore, this course is for the student writer who is seeking an

opportunity to encounter, explore, explain, and expand. We will encounter new genres of literature, explore various writing techniques, explain our literary visions in workshop settings, and expand on our own identities as authors. This is an elective course that revolves around creativity of thought, creativity of action, and (ultimately) creativity of writing.

Digital Art is an introduction to digital imaging and computer-based art. Students will explore different avenues of visual communication, self-expression, and creative problem solving through the creation of commercial, interactive, and fine art. All work is based upon the study, aesthetics, purpose, and criticism of digital art forms. This course requires the completion of Art I.

Digital Art II is a digital imaging and computer-based art class concentrating on learning Adobe® Photoshop®. Students will explore different avenues of visual communication, self-expression, and creative problem solving through the creation of commercial, interactive, and fine art. Art I is a prerequisite.

Drama I introduces the fundamentals of all major roles in the craft of theatre. The class provides experience in acting, design, playwriting, directing and producing, with a culminating project for each discipline. Drama I is open to all students.

Drama II presents an opportunity to build on the basics introduced in Drama I and do more advanced acting, writing and directing work. The class is structured as a survey of theatre history from ancient Greece to present day, with performance projects tied to each era. Students must have completed Drama I to be eligible for Drama II.

Drama III is a combined junior and senior course for advanced theatre students. It is an entirely project-based class that will give students the opportunity to write, direct, produce and perform material, largely of their choosing, with expert guidance and support. Students must have completed both Drama I & Drama II or Drama I & Web Productions with a B minimum and obtain instructor approval to register for Drama III.

Drama IV is an advanced projects class, run in parallel with other advanced arts classes as part of the Senior Arts Lab, encouraging collaboration among disciplines. Students will propose and pursue high-level projects in the areas of performance, playwriting and screenwriting, theatrical design and film-making. Students must have instructor approval to register for Drama IV.

Digital Music Creation Students will use technology to create, compose, and perform musical works, while learning music history, style, and theory. This course is open to all students.

Digital Music Creation II Students will add performance as well as continue practice of the skills and techniques developed in DMC. Requires completion of Digital Music Creation or instructor approval.

Digital Music Creation III is an advanced projects class, run in parallel with other advanced arts classes as part of the Senior Arts Lab, encouraging collaboration among disciplines. Requires completion of Digital Music Creation II or instructor approval.

Engineering Computing Systems This course is an integrated and exploratory approach to physical computing, computer science, and basic electrical engineering. Students will learn to draft code in a number of different programming languages, including Scratch, Python, and

Java. These programs will be employed to interact with physical hardware systems that students have designed and assembled. Miniature computer boards, resistors, jumper cables, buzzers, and switches will be the mainstays of this course. Topics of study may include video game design, interaction with sensory hardware, block-based and text-based computer programming, and digital music synthesizing. This course is experiential and exploratory in nature, and will ask students to develop their capacities for risk-taking, creativity, and curiosity.

Engineering Disasters offers students the opportunity to think like an engineer and understand more about how engineers shape our world. We do this through the study of things that have gone wrong-badly wrong in most cases. This course has been designed to be interesting and fun. Students will have the opportunity to (virtually) build and test bridges and study disasters that are of interest to them. Course topics include the scientific method, Root Cause Analysis, the engineering design process, technical reporting, forensic engineering, and ethics. This course is open to students in grades 10-12.

Publications Students will learn the basics of reporting, photography, interviewing, journalistic writing, advertising and marketing, all the while working on actual publications such as the school yearbook. Activities may include workshops and field trips for yearbook and newspaper skills as well as basics of layout and design. Students may take the course in multiple years at advanced levels and serve as editors and in other leadership roles. Students can improve their writing skills and gain a deeper understanding of First Amendment and journalism ethics issues in America while they work on real-world publications. This course is open to all students.

Publications II This course is for students who have successfully completed Publications I. This course requires instructor approval for registration.

Publications III This course is for students who have successfully completed Publications II. This course requires instructor approval for registration.

Speech Communication and Debate Students will build skills to become confident presenters for all kinds of formal and informal speaking situations. They will study the use of body language and physicality in speeches, vocal issues such as volume, rate, and expression, and persuasive techniques including an in-depth study of advertising and propaganda. Formats will include speeches to inform, persuade, and demonstrate. Students will have the opportunity, if they wish, to prepare for competitive speech events such as Dramatic Interpretation and different styles of debate such as Lincoln-Douglas and Public. This course is open to all students.

Technical Theatre is an introduction to theatrical design and construction, Technical Theatre both covers in-depth the art of set, costume, lighting and sound design, as well as forming the build and running crew for all RTHS Raptor Repertory productions. This course is open to all students.

Video Production I is a film making and screenwriting course aimed at producing videos for Internet distribution. Students will study and create various forms, including sketch comedy, serial drama, advertising, and educational video. This course is open to all students.

Video Production II is a continuation of Video Productions. Students will engage in more independent project work. Requires completion of Video Production I.

Video Production III is an advanced projects class, run in parallel with other advanced arts classes as part of the Senior Arts Lab, encouraging collaboration among disciplines. Requires completion of Digital Music Creation II or instructor approval.