CURRICULUM GUIDE

SOUTHERN PREPARATORY ACADEMY

www.southernprepacademy.org

174 Ward Circle, Camp Hill, AL 36850

ENGLISH DEPARTMENT

English 9: Literary Genres

In this course students will read and analyze a variety of literary genres: stories, poetry, drama, epics, novels and prose. Students will develop and refine critical thinking and writing skills. Students will write in different modes, including argumentation/persuasion, literary analysis, comparison/contrast, and personal narrative. At least one essay will be documented in correct MLA format. Fact vs.opinion, quality of sources, understanding of MLA format will be stressed in the documented essay(s). Vocabulary study will be incorporated along with literature and composition. Students will not only review grammar, punctuation, and sentence structure but will also work on style in writing and proofing skills.

English 10: World Literature

This course integrates the study of world literature, grammar, vocabulary, and composition. The focus of the class is on critical reading as well as composition skills. Students will study representative works of literature and write a minimum of five major essays, including argumentation/persuasion, literary analysis, narrative, definition, and comparison/contrast. Two essays will be documented in correct MLA format. Grammar and vocabulary will be stressed through literary selections and students' writing. Throughout the year students will assume a greater responsibility for proofreading their essays and making revisions.

English 11: American Literature

This course uses a thematic approach to understanding the rich history of American literature. Each quarter will be dedicated to a particular theme (American Dreams, Frontiers, Higher Powers, The Individual vs. Society), and each theme will have central questions that are introduced at the beginning of the quarter that will guide writing assignments. Texts for these themes are chosen from authors throughout American history, including those from Native Americans and early colonists to authors of the 21st century. Course work emphasizes critical thinking, the ability to draw connections between texts and relate them back to the themes, and writing skills that reveal a sophisticated development of English grammar and vocabulary. Composition assignments target a range of audiences and include a documented essay and literary analysis.

English 12: British Literature

This course is rooted in the study of the history of British literature, proceeding from the Anglo Saxons to the Middle Ages, the Renaissance, the Restoration, Romanticism, and beyond. Interspersed among works of the canon are contemporary works—short stories, novels, and poems. All literature requires critical thinking, with students producing literary analyses both in and outside the classroom. Students perform research on literary works; research on nonfiction results in an argumentative essay combining other modes of development: definition, cause and effect, narration, and so forth. This course prepares students for the rigors of college writing, with an emphasis on unity, coherence, strength in mechanics and grammar, proper MLA documentation, and economy.

MATH DEPARTMENT

Algebra 1A

Algebra IA is the first year in a 2 year sequence covering the same content of Algebra I, however, extra emphasis will be placed on remediation of prerequisite skills and problem solving in order to ensure all students can successfully master the concepts of Algebra. The course is designed to guide students through cooperative investigations of the major topics of Algebra I. The topics are covered through a combination of numerical, analytical, and graphical approaches. Student literacy in the structure and application of Algebra is the goal of the course. Non-graphing calculators are required as they are used throughout the curriculum. Topics include: Sequences, solving equations and inequalities, functions, and writing and graphing linear equations in two variables. Evaluation in this course is determined by homework checks, various formative assessments, projects, quizzes, tests, a midterm exam, and a final exam. A non-graphing calculator is required for this course.

Algebra 1B

Algebra 1B is the second course of a two-semester series. The course prepares and sets the foundation for all math courses after Algebra 1, such as Geometry, Algebra 2, and PreCalculus. Algebra 1B continues the knowledge of solving equations but expands to include quadratic equations and exponential functions, plus a variety of algebraic tools that are useful beyond Algebra 1 and prepare students for Algebra 2. Most importantly, all the topics taught in the course include connections and applications to the real-world to further understand and appreciate the use of Algebra in solving daily problems. Upon completing this course students will be able to: graph linear, quadratic and exponential functions; solve linear and quadratic equations with a variety of methods; describe and interpret function behavior in appropriate notations; and solve and apply systems of equations and inequalities

Geometry

Geometry is the study of points, lines, surfaces, shapes, 3-dimensional solids, and the relationships that exist between them. Fundamental to the study of these objects is the formation of logical arguments that allow someone to make a claim based on previously known truths. Upon completing this course you will be able to: determine coordinates of points located on segments; use the formulas for distance, slope, and midpoint and derive them; verify whether lines are parallel, perpendicular, or neither using formulas; determine the equation of a line that passes through a particular point and is parallel or perpendicular to a given line; transform figures in a plane by dilating, translating, reflecting, and rotating them; describe a transformation in words and in coordinate notation; identify a sequence of transformations that will move one object onto another; distinguish and identify objects that have reflectional and rotational symmetry; identify whether a term is undefined, a definition, a postulate, a theorem, or a conjecture; determine whether a conditional statement is true or false; and if it is true, give a reasonable counterexample; identify, compare, and contrast a conditional statement with its converse, inverse, and contrapositive; prove various theorems about angles and apply these theorems to solve problems; prove triangles are congruent using triangle congruence theorems; apply the definition of triangle congruence to identify congruent sides and angles; and verify theorems about triangles, such as the Pythagorean Theorem, and apply these theorems to solve problems.

Algebra II

The prerequisites for Algebra II are Algebra I and Geometry. Course content includes a study of the real and complex number systems; using algebra and graphing techniques with linear, quadratic, exponential, polynomial, radical and other types of functions to solve problems; working in two or more variables; using equations, inequalities and matrix equations; linear programming; operations with rational and irrational numbers; and an introduction to Probability and Statistics.

Math for College Readiness

A fourth course option for students who have completed Algebra I, Geometry , and Algebra II. The course focuses on key content and practice standards to ensure that students will be ready for post-secondary academic courses. The course will revisit and expand the understanding of content standards introduced in earlier mathematics courses and will emphasize numeracy, algebra and functions, geometry, and statistics in a variety of contexts.

Pre-Calculus

A fourth course options for students who have completed Algebra I, Geometry, and Algebra II. This course focuses on operations in calculus and preparing students for studies in advanced mathematics. Students will be introduced to and gain an understanding of functions, polynomials, and graphing complex mathematical equations.

SCIENCE DEPARTMENT

Physical Science: 9th Grade

Physical Science is a course that investigates the fundamentals of Physics, Chemistry, Astronomy, and Earth Science. Math skills will be called upon as force, motion, and energy are investigated. The properties of matter, atomic structure, and chemical reactions allow the student to acquire an understanding of the world around them at a microscopic level. Electricity, magnetism, and waves will be discussed as the student learns how these are formed and the features that characterize them. The class also incorporates topics concerning the physical processes on the earth, and the motions, characteristics, and forces in space.

Biology

This course develops an understanding of the major themes of biology such as the characteristics of life, chemistry of life, cellular biology, genetics, evolution, anatomy and ecology. Course work will include inquiry-based labs and hands-on activities that will reinforce topics taught during the year.

Chemistry

This course examines the fundamental properties of elements, compounds, and mixtures. Chemical reactions and chemical processes are observed and explained at the atomic and molecular level using the scientific method. Stoichiometry, states of matter, nuclear properties, electronic structures of atoms, periodic properties, and molecular geometry are introduced and examined in depth. Students will integrate conceptual understandings, algebra skills and an ongoing laboratory experience to develop the fundamentals of problem solving, laboratory work, and the practical application of chemistry. These topics will provide the student with a strong background in organic chemistry and provide a gateway into the study of materials and polymers science, leading to further exploration into chemistry at the university level.

Anatomy / Physiology

This course covers the basics of human anatomy and physiology including anatomical terminology, basic biochemistry, cells and tissues, and the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic/immune, respiratory, digestive, urinary, and reproductive systems. Introduces common human disease processes.

Physics

The course is designed to provide students with a general understanding of the concepts of physics. Topics include free-body motion, Newton’s Laws, forces, gravitation and planetary motion, momentum, fluid dynamics, thermodynamics, electricity and magnetism, work and energy, vibrations and waves, sound, optics, and a brief introduction to atomic and nuclear physics. Students will develop a conceptual understanding through first-principle algebraic derivation of physical processes and proper experimentation techniques. This provides the students with a solid foundation for further exploration into physics at the university level.

SOCIAL STUDIES DEPARTMENT

World History I: World History to 1500 - 8th Grade

Students in the eighth grade can be described as curious and independent learners, discovering who they are and determining their place in the world. As they begin to assert independence from adults and become more reliant on peers, they continue to need a great amount of guidance. Through instruction that includes various media and first-hand experiences, students become more aware of events on a global scale and learn how these events affect them.The study of world history in Grade 8 addresses the time period from prehistoric man to the 1500s. Content standards for this grade incorporate the strands of economics, geography, history, and political science, with an emphasis on the history and geography strands. Course content focuses on the migrations of early peoples, the rise of civilizations, the establishment of governments and religions, the growth of economic systems, and the ways in which these events shaped Europe, Asia, Africa, and the Americas. Unique to this course are experiences that provide for the study of the how human beings view themselves over time.To address the independent and curious nature of eighth graders, instruction is designed to actively involve students in critical thinking and the exchange of ideas, including critical evaluation, interpretation, reasoning, and deduction. Instruction of this nature can best be accomplished through the use of electronic media such as the Internet, videos, and television as well as by participation in small- group and individual activities.Abbreviated terms used in Grade 8 content standards include A.D. (abbreviation of anno Domini, Latin for “in the year of our Lord”) and B.C. (“before Christ”). These designations are used to label years on the Gregorian calendar. The terms C.E. (meaning “in the Common Era”) and B.C.E. (meaning “before the Common Era”) are beginning to be utilized by some schools of theology as well as appear in some publications such as state and national assessments and national history standards. The use of the abbreviated terms of C.E. and B.C.E., also based on the Gregorian calendar, does not in any way, diminish or negate the importance of the terms A.D. and B.C.

World History II: 1500 to Present - 9th Grade

In the ninth grade, students develop strong personal opinions, beliefs, or positions on current issues and events of the past. Teachers capitalize on this developmental stage to stress the importance of grounding positions and opinions in knowledge. As students transition from middle school to high school, they can understand and use complex concepts such as adaptation, assimilation, acculturation, diffusion, and historical knowledge and inquiry to study the past, including its relationship to the present and its impact on the future. Students in Grade 9 are able to think critically and logically about personal, national, and global issues. This enables them to apply and utilize their knowledge and curiosity to develop informed opinions about issues such as the quest for peace, human rights, trade, and global ecology.At this grade level, students continue the study of world history from 1500 to the present. Through historical inquiry, students gain an understanding and appreciation of history as a story of people much like themselves, and they become increasingly able to understand global interdependence and connections among world societies. The course directs students to think critically about the forces that combined to shape the world today. It allows them to analyze development and changes in the European, Asian, African, and American civilizations and the ways in which interactions of these cultures have influenced the formation of today’s world.

Knowledge of other cultures enables students to develop a better appreciation for the unique American heritage of liberty. Geographic concepts increase learners' comprehension of global connections as they expand their knowledge and understanding of a wide variety of cultures, both historical and contemporary.Ninth-grade students continue to have preferred learning styles. Therefore, the use of a variety of instructional strategies and techniques is effective in helping students gain the knowledge and skills this course requires. Well-equipped classrooms include an array of visual stimuli such as charts, globes, graphs, and maps whereby multiple opportunities are provided for students to participate in instructional activities that include the use of electronic and print media and small-group interaction.

US History I: Beginnings to Industrial Revolution - 10th Grade

The study of the early history of the United States in Grade 10 forms the foundation for understanding the development and principles of modern American society. Beginning with the earliest explorations of American continents, this course offers a chronological study of major events, issues, movements, individuals, and diverse groups of people in the United States from a national and an Alabama perspective. In addition to gaining essential knowledge regarding this period of our nation's past, students develop historical-thinking skills, which include chronological thinking, historical comprehension, historical analysis and interpretation, historical research, and analysis and decision making. Content standards build on foundational knowledge and skills learned in the study of United States history in Grade 5 and world history in Grade 8. In addition, content rigor is designed to be developmentally appropriate in order to prepare students for increasingly challenging courses at the high school level.Students in Grade 10 benefit from a classroom environment that provides activities to facilitate historical inquiry. Teachers challenge students with a variety of instructional methods to enhance the development of critical-thinking skills. Methods include analysis of historical documents, map-reading activities, and the use of current technologies. Students are encouraged to explore historical topics and begin thinking like historians while studying key events, people, and ideas in this period of American history.Process skills are an important part of the content of this course. Students are able to understand the importance of learning history and have a deeper understanding of history by using these skills. These process skills, located in Appendix B of this document, are incorporated into this course and are referenced in brackets following each content standard.

US History II: Industrial Revolution to Present - 11th Grade

This course builds upon the foundation of knowledge and skills gained in Grades 9 and 10 United States history curricula by providing a study of the modern history of the United States that expands students' understanding of the principles of American society. Beginning with America's shift to a more industrialized society, this course offers a chronological study through the twenty-first century of major events, issues, movements, individuals, and diverse groups of people in the United States from a national and an Alabama perspective. While learning essential knowledge regarding this period in America's past, students develop historical-thinking skills, including chronological thinking, historical comprehension, historical analysis and interpretation, historical research, and analysis and decision making. In addition, content rigor is developmentally appropriate and prepares students for increasingly challenging courses at the high school level.Students in Grade 11 benefit from a classroom environment that provides activities to facilitate historical inquiry. Teachers challenge students with a variety of instructional methods to enhance development of critical-thinking skills.

Methods include analysis of historical documents, map-reading activities, creative problem solving, simulations, and use of current technologies such as interactive digital video sources. Students are encouraged to explore historical topics and continue thinking like historians while studying key events, people, and ideas in this period of American history. Process skills are an important part of the content of this course. Students are able to understand the importance of learning history and have a deeper understanding of history by using these skills. These process skills are incorporated into this course and are referenced in brackets following each content standard.

US Government

This course is a ½ semester required course for students in Grade 12. The course goal is for students to develop the civic knowledge necessary for becoming active participants as citizens of this nation. Achievement of this goal prepares students to participate as informed citizens through voting, serving on a jury, holding political office, and deliberating public policy.In this course, students broaden knowledge and critical-thinking skills learned in grades 9-11 and deepen their understanding of the origin, structure, and function of government at all levels. Content focuses on intellectual, political, and economic factors that influenced the development of a republic based on rule of law, freedom of opportunity, individual liberty, and representative government. Democratic principles that served as a foundation for the development of our nation are embedded in a detailed study of the Constitution of the United States, a key component of the course.Twelfth grade students are developing a sense of maturity necessary for analysis of the role of government in the lives of individuals and in the nation. An effective instructional environment promotes critical thinking and research provides opportunities for civic participation. Classroom activities that include debate, creative problem solving, collaborative group work, and evaluation of electronic and print media foster long-term learning of content and encourage students to understand the value of their roles as citizens in a democracy.

Economics

Economics is a ½ semester required course for students in Grade 12 that addresses essential concepts necessary for students to completely and effectively participate in a complex global society. Content encompasses both microeconomic and macroeconomic principles. Key elements include the study of scarcity, supply and demand, market structures, the role of government, national income determination, money and the role of financial institutions, economic stabilization, and trade. Students use knowledge and critical-thinking skills learned in previous social studies courses to analyze issues and problems and contemporary economic systems. They examine consequences of public policies and their impact on a free market economy. Mastering economics knowledge and skills enable students to anticipate changes in economic conditions and take appropriate action to improve not only their lives, but also society in general.Students in Grade 12 are developmentally capable of sophisticated analytical thinking and are active participants in the current economy as consumers, employees, or both. Instruction that combines required content and effective strategies encourages students to develop skills for understanding how economies function, recognizing economic and social problems, and evaluating costs and benefits of choices. Instructional activities address decisions made regarding public policy, including their impact on current economic issues. Grade 12 economics instruction includes an analysis of primary sources and economic data, economic research using technological resources, group presentations using computer technology, and other active learning opportunities.

ELECTIVES AND ARTS

Physical Education

Physical Education classes are designed to practice and develop skills in activities that will help students maintain fitness throughout their life. Students' fitness levels will be assessed in the following areas: cardiovascular endurance, flexibility, muscular strength and muscular endurance. From these assessments we will develop a baseline in which we will use to set personal fitness goals. We will explore fitness activities designed to improve all areas of fitness. Our goal is that by the end of the year students will improve their scores on their baseline fitness tests through regular cardiovascular endurance training, muscular endurance training, and activities designed to increase current levels of fitness. Students will be introduced to life-long activities designed to increase their likelihood of exercising in the future. Students will understand the benefits that regular exercise can provide for a person's mental, physical, and social health.

Health

Health Education is designed to give students an awareness of the importance of one's health in improving the quality of life. It is a subject that includes: choosing and financing health services; communicable diseases; chronic disorders; abuse of drugs, alcohol, and tobacco; and other topics related to developing health-educated individuals.

Computer Science

This course is a basic well-rounded introduction to computers, the internet, and programming. Topics include the internals of a computer, hardware and software. The ethical and safe use of the internet, by discussing cyber-security, and safe-browsing. How to use the internet for productive searching. Students will be introduced to using the computer for productivity by practicing with basic word processing, spreadsheet and presentation programs using Google Apps (Docs, Sheets, and Slides). The course will expose the student to basic programming skills using Scratch Programming (scratch.mit.edu). Programming concepts such as events, loops, conditional statements, and graphics are all included in this introductory course.

Personal Finance

This class will give the student "life skills" when working with money, and career decisions. The class is designed to introduce basic money and financial topics including, banking, loans/debt, investing, insurance and taxes. Practical problem situations are are given to students to help them discover solutions to keep them on track and heading for success. The course assists with career-related decisions while learning to budget, and managing their personal finances. Students are walked through the "life" process of - getting a job, earning an income, dealing with student loans, family responsibilities, credit reporting, purchasing a car (or property), investing/saving for future goals or expenses, and planning for emergencies.

Speech

This course introduces students to public speaking and the various types of speeches. Students will develop confidence in their ability to speak in front of groups and will improve their ability to write and deliver multiple types of speeches.

Foreign Language: Spanish I

This course will provide the student with a general introduction to the Spanish language including: sound system, pronunciation, functional vocabulary related to everyday life, cultural information and basic grammatical structures. Emphasis will be on the acquisition of four skills: listening, speaking, reading and limited writing. There are two main objectives to the course. Foremost is to give the students the ability to carry on a simple conversation. The second is to provide the students with instruction that teaches a basic understanding of Spanish culture, vocabulary, and grammatical concepts.

Creative Writing

Students will write about various topics using various styles covered. Students will improve their skills at interpreting various writings from various authors and will also improve their research skills as they develop their own writing style.

Journalism

Students will study various aspects of journalism to include the history of journalism and develop a journalistic writing style. Students will assist in the production of a school newspaper by serving as reporters and editors.

JROTC: Leadership Education Training

The JROTC program prepares cadets for leadership roles, giving practical lessons that help them develop into active and engaged learners and leaders. The program promotes academic achievement and leadership development, providing cadets with skills that they will use for the rest of their lives. The Academy's JROTC program consists of four levels of Leadership Education Training (LET) instruction. The JROTC curriculum is based on the principles of performance-based, learner-centered education, and is linked to the McREL (instructional leadership resource) national standards. Every lesson and assessment actively engages students' higher-order thinking and skill performance.

Psychology

This is an introduction to psychological science -- the study of behavior and mental processes. It surveys the major subdisciplines of the field, including such topics as the brain and neuroscience, behavioral genetics, cognitive and social development, perception, learning, memory, decision-making, language, consciousness, emotions, motivation, psychological disorders, social identity, interpersonal interactions and group and cultural processes.

ACT Prep: Math Focus

This course will prepare you for the math portion of the ACT. It is intended to strengthen test-taking skills by focusing on familiarization with ACT-type math questions, developing test-taking strategies, managing test panic, increasing confidence and speed. A review of test content includes basic math, algebra, geometry, data analysis, statistics, and probability. Practice with real, timed ACT test sections is an integral part of the course.

Aviation Weather

This course will instruct students in the methods of identifying atmospheric properties, describing weather producing changes, translating flight planning weather products, predicting operations outcomes in varying weather conditions, and understanding the impact of weather on flight operations. This course can count as a core science, if needed.

Drones

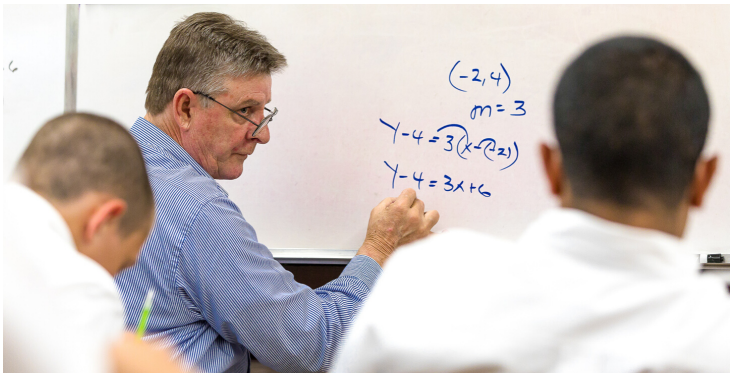
This course closely mirrors the Private Pilot course but uses drones to reinforce topics learned for students not old enough to take that course. This course combines ground course sessions, introduction to the aviation industry and a hands on flight lab. Students will learn how weather occurs and how to predict it as well as how to utilize weather briefing outlets. Aerodynamics, unmanned aerial systems, flight planning, aviation regulations and human factors are also taught. The student has accomplished all class goals upon successful completion of their written and hands on finals demonstrating a working knowledge of the topics covered as well as command of their drone in flight.

Aviation Studies (Private Pilot)

This course combines required ground course sessions, Federal Aviation Administration written test preparation, Introduction to the aviation industry and a hands on flight lab at the local airport. The class is designed to combine each portion to aid the student in earning his private pilot license. Students will learn how weather occurs and how to predict it as well as how to utilize weather briefing outlets. Aerodynamics, airplane systems, flight planning, aviation regulations and human factors are also taught. The student has accomplished all class goals upon successful completion of their FAA written test and soloing in the airplane.

Online Course Opportunities

In addition to our offered courses, we can also provide credit recovery, certain electives, and ACT/SAT prep through our online educational partnership with Edgenuity. In addition, cadets have the opportunity to take Honors courses and Advanced Placement (AP) courses.



CERTIFY-ED (VIRTUAL REALITY)

Southern Prep has partnered with Certify-ED and the Edward Bell Career Technical Center to provide our students with a different, more visual way to learn. This curriculum is designed to provide learners with authentic learning experiences that will lead to industry certifications and/or college credit. There are currently several courses available.

Carpentry

This competency-based course provides the students with a solid foundation in carpentry. Students will engage in virtual reality and interactive videos designed to teach students how to use basic measuring tools, hand tools and machines commonly used in carpentry, to construct basic projects. Additionally, students will examine various wood construction materials and their properties. Throughout the course, students will learn components of site and personal safety, and how to interpret detailed drawings used for construction. Upon completion of this course, the students will be equipped with work-related knowledge and the skills necessary for careers in carpentry, a digital badge in Carpentry, and will be better prepared for the Carpentry Certification Exam.

Criminal Justice

This competency-based course is designed to provide students with an overview of the criminal justice system. In the Criminal Justice course, students will engage in virtual reality and interactive videos designed to test their visual memory and ability to apply their skills to effectively manage a crime scene. Students will become immersed in topics that include criminal and constitutional law, security, and communications. Students will review basic law enforcement skills, which cover tactics, methods, and skills utilized by law enforcement. These concepts should be taken into consideration when taking this course and assessing implementation options. Upon completion of this course, students will be equipped with the knowledge and skills to earn a digital badge in Criminal Justice, and will be better prepared for the certification exam.

Culinary Arts

This competency-based course provides an overview of the basic culinary fundamentals and standard practices leading into a career pathway to Culinary Arts. In this course, students will learn culinary techniques, such as knife handling skills and the recognition, selection and proper use of tools and equipment. An emphasis will be placed on identifying and preparing a variety of foods and recipes, as well as mastering conversions through the use of proper scaling and measurement techniques. Using virtual reality, students will prepare standard recipes while effectively managing time, accurately measuring ingredients, and appropriately using kitchen equipment. Food safety and sanitation techniques will align to industry-recognized certifications. Upon completion of this course, students will be equipped with the knowledge and skills to earn a digital badge in Culinary Arts, and will be better prepared for the certification exam.

Fundamentals of Robotics

Robotics continues to grow, and so will the demand for people who work with them. This competency-based course is designed to provide students with the fundamentals of electronics, computer programming, and engineering design that will lay a foundation on which to build a solid knowledge base about robotics. Students will become immersed in topics that include Ohm's Law, series and parallel circuits, direct and alternating current, DC motors, robot sensor operation, and much more! The students will use interactive video and virtual reality to learn how to program a robot. Upon completion of this course, students will be equipped with the knowledge and skills to earn a digital badge in Fundamentals of Robotics, and will be better prepared for the certification exam.

Medical Assistant

This competency-based course is designed to prepare students with the knowledge and clinical skills necessary to assess, plan, provide, and evaluate care to patients in varied healthcare settings. Students will engage with interactive videos learning first aid principles, diagnostic testing, and laboratory procedures. Emphasis will be placed on safety, medical law, and medical interventions. Upon completion of this course, students will be equipped with the knowledge and skills to earn a digital badge as a Medical Assistant, and will be better prepared for the certification exam. Ultimately, this course was designed to provide students with a competitive edge for entry into the healthcare global marketplace.

Promobotics

Promobot, is an autonomous robot, designed for a variety of business applications. This competency-based course is designed to teach students how to program the Promobot. Students will apply the knowledge and skills necessary to program and operate the Promobot in virtual reality, or by using the Promobot itself. Through interactive videos, the students will learn robotic operations and system configurations. Students will code, compile, and debug programs using the robotic programming language. Upon completion of this course, students will be equipped with knowledge and skills to earn a digital badge in Promobotics, and will be better prepared for the certification exam.

Welding

This competency-based course is designed to provide students with knowledge of the basic manufacturing processes, properties of metals, and safe operating skills needed to demonstrate use of equipment in oxyfuel, shielded metal arc welding (SMAW), and gas metal arc welding (GMAW). The students will use virtual reality to perform oxyfuel cuts, shielded metal arc welding (SMAW), gas metal arc welding (GMAW), and Gas Tungsten Arc Welding (GTAW). The students will perform welds using SMAW and GMAW to current industry standards. Welding symbols will be used to interpret detailed drawings used for fabrication. Upon completion of this course, the students will be equipped with work-related knowledge and the skills necessary for careers in welding, a digital badge in welding, and will be better prepared for the Welding Certification Exam.

TRADITIONAL COURSE PROGRESSION

	9th	10th	11th	12th
English	English 9	English 10	English 11	English 12
Math	Algebra 1A / 1B	Algebra 1B/ Geometry	Geometry/ Algebra II	Algebra II/ Pre-Calculus
Science	Physical Science	Biology	Chemistry	Physics/ Anatomy & Physiology
Social Studies	World History II	US History I	US History II	Government & Economics

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