

The Ogburn School

Course Descriptions 9-12

Algebra I – 1.0 Credit

Course Description: Students are introduced to the foundational skills needed for more advanced mathematics courses and develop the skills needed to solve mathematical problems. Students perform operations involving numbers, sets, and variables; know the basic properties of real numbers; solve and use first degree equations and inequalities; understand functions, relations, and graphs; solve and use systems of equations and inequalities; solve problem involving integral exponents; solve problems involving polynomials and rational algebraic expressions; factor polynomials; simplify rational and irrational expressions; solve and use quadratic equations.

Algebra I Honors – 1.0 Credit

Course Description: Students are introduced to the foundational skills needed for more advanced mathematics courses and develop the skills needed to solve mathematical problems. Students perform operations involving numbers, sets, and variables; know the basic properties of real numbers; solve and use first degree equations and inequalities; understand functions, relations, and graphs; solve and use systems of equations and inequalities; solve problem involving integral exponents; solve problems involving polynomials and rational algebraic expressions; factor polynomials; simplify rational and irrational expressions; solve and use quadratic equations. Students extend on these concepts by completing more extensive and challenging assignments. Students complete an independent honors project. *Prerequisite: Completion of a Grade 8 Math course with a 'B' or higher.*

Algebra II - 1.0 Credit

Course Description: Students continue learning and working with the concepts of algebra including operations with matrices, relations, functions, variation, exponential growth and decay, imaginary numbers, complex numbers, logarithmic functions, quadratic equations, graphing, trigonometric ratios, and systems of equations. *Prerequisite: Completion of Algebra 1 and Geometry with a grade of 'C' or higher.*

Algebra II Honors - 1.0 Credit

Course Description: Students continue learning and working with the more advanced concepts of Algebra 1, including operations with matrices, relations, functions, variation, exponential growth and decay, imaginary numbers, complex numbers, logarithmic functions, quadratic equations, graphing, trigonometric ratios, and systems of equations. Students engage in more challenging assignments and complete an independent honors project. *Prerequisite: Completion of Algebra 1 and Geometry with a grade of 'B' or higher.*

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American Government - 0.5 Credit

Course Description: Students will examine important historical documents and interpret their impact on our government and society. Students learn to perform effectively as informed citizens of their community and the United States by acquiring knowledge and skills necessary for active participation in a dynamic, pluralistic and democratic society.

American Government Honors - 0.5 Credit

Course Description: Students will examine important historical documents and interpret their impact on our government and society. Students learn to perform effectively as informed citizens of their community and the United States by acquiring knowledge and skills necessary for active participation in a dynamic, pluralistic and democratic society. Students extend on these concepts by using historical documents as evident for evaluating events and government functions. Students complete an independent honors project.

Prerequisite: Completion of a high school social studies course with a grade of 'B' or higher.

United States History - 1.0 Credit

Course Description: Students research the chronological development of the American people by examining the political, economic, social, religious, military, and cultural events that affected the rise and growth of our nation.

United States History Honors - 1.0 Credit

Course Description: Students research the chronological development of the American people by examining the political, economic, social, religious, military, and cultural events that affected the rise and growth of our nation. Activities include analyzing primary sources and maps, creating timelines, completing projects and written assignments, and conducting independent research. Students complete an independent honors project. *Prerequisite: Completion of Grade 8 social studies with a grade of 'B' or higher.*

Contemporary American Literature - 1.0 Credit

Course Description: Students are exposed to American Literature through a variety of readings and writings such as the novel, drama, and short stories. The writings include the documented essay, persuasive writing, analytical writing, personal narrative and creative writing.

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Anatomy – 1.0 Credit

Course Description: Essential principles of human anatomy and physiology are presented, including an overview of all the body systems to include the organization of the human body, homeostasis and regulation, skeletal system, muscular system, integumentary system, nonspecific defenses, immune response, immune system diseases, environmental problems and human health, circulatory system, blood, respiratory system, food and nutrients, digestive system, the endocrine system, the nervous system. *Prerequisite: Completion of Biology 1 with a grade of 'C' or higher.*

Biology 1- 1.0 Credit

Course Description: Students are introduced to the scientific method, cell biology, basic principles of genetics, biological changes through time, classification and taxonomy, structure and function of plants, structure and function of animals, structure and function of the human body, and ecological relationships. Activities include online lessons, virtual laboratories, and hands-on experiments that can be completed at home.

Biology 1 Honors - 1.0 Credit

Course Description: Students engage in the extensive research of cell biology, basic principles of genetics, biological changes through time, classification and taxonomy, structure and function of plants, structure and function of animals, structure and function of the human body, and ecological relationships. Activities include online lessons, virtual laboratories, and hands-on experiments that can be completed at home. Students complete an independent honors project. *Prerequisite: Completion of a Grade 8 or 9 science course with a grade of 'B' or higher.*

Biology Laboratory - 0.5 Credit

Course Description: Students are introduced to the scientific method, cell biology, basic principles of genetics, biological changes through time, classification and taxonomy, structure and function of plants, structure and function of animals, structure and function of the human body, and ecological relationships.

Chemistry - 1.0 Credit

Course Description: Students investigate the composition of matter and the physical and chemical changes it undergoes. Students use science process skills to study the fundamental structure of atoms, the way atoms combine to form compounds, and the interactions between matter and energy. *Prerequisite: Completion of two high school science courses with a grade of 'C' or higher.*

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Chemistry Honors - 1.0 Credit

Course Description: This course investigates all key concepts including atomic structure, chemical bonding and reactions, solutions, stoichiometry, thermochemistry, organic chemistry, and nuclear chemistry, enhanced with challenging model problems and assessments. Students complete community-based written research projects that require individual research and reporting. *Prerequisite: Completion of one high school science with a grade of 'B' or higher.*

Earth Science I - 1.0 Credit

Course Description: Students use the scientific method to solve problems, describe and compare scientific theories of the origins of the universe, identify the layers of the earth's interior, distinguish formation of old and new mountains and rivers, describe the types of erosion its consequences, explain the hydrological cycle, understand the geological time frame, identify various fossil types, describe the earth/moon relationships, identify methods used to conserve renewable and non-renewable resources, and recognize how the earth sciences interact and reflect the advances in technology and society.

Earth Science I Honors - 1.0 Credit

Course Description: Students extend on the concepts included in Earth Science through extensive research and completion of application problems to solve global issues involving the earth's resources. Students complete an independent honors project. *Prerequisite: Completion of a Grade 8 or 9 science course with a grade of 'B' or higher.*

Economics with Financial Literacy- 0.5 Credit

Course Description: Students are involved in discovering the definition of economics, the concept of scarcity, supply and demand, resource allocation, institutional and governmental effects on consumer behavior, unemployment, regional, national and global competitive situations, the economic cycle, and the production of goods and services by industry and government.

Economics with Financial Literacy Honors - 0.5 Credit

Course Description: Students are involved in discovering the definition of economics, the concept of scarcity, supply and demand, resource allocation, institutional and governmental effects on consumer behavior, unemployment, regional, national and global competitive situations, the economic cycle, and the production of goods and services by industry and government. Students engage in extensive research into a chosen relevant topic to complete an independent honors project. *Prerequisite: Completion of a high school social studies course with a grade of 'B' or higher.*

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English 1 - 1.0 Credit

Course Description: Students are actively engaged in language studies through guided writing practical exercises for mastering English grammar, mechanics, grammar, usage, and structure in preparation for research based writing assignments. Students must complete both sections of this course to earn English I.

English I Honors - 1.0 Credit

Course Description: This is an accelerated course in which students think deeply about both fiction and non-fiction from classic and contemporary works. Language study continues through the application of rules for sentence formation, usage, spelling, and mechanics. Students apply their understanding of grammar, capitalization, punctuation, spelling, sentence structure, and paragraphing to writing assignments. Students complete an independent honors project. *Prerequisite: Completion of a Grade 8 language arts course with a grade of 'B' or higher.*

English II - 1.0 Credit

Course Description: Students engage in various integrated language arts activities to include reading, writing, speaking, listening, language, and literature in preparation for college and career readiness. Students develop writing skills through guided creative and practical writing activities and compositions. Language study continues through the application of rules for sentence formation, usage, spelling, and mechanics. Students apply their understanding of grammar, capitalization, punctuation, spelling, sentence structure, and paragraphing writing assignments.

English II Honors - 1.0 Credit

Course Description: Students will improve their reading skills, especially in vocabulary, attention to detail, identifying theme and tone, and analyzing the effect of literary techniques on meaning. The writing focuses on content, organization, style, complex sentence structure, and conventions. Students also practice revising work and develop presentation projects in multi-media formats. Students complete an independent honors project. *Prerequisite: Completion of English I with a grade of 'B' or higher.*

English III - 1.0 Credit

Course Description: Students compose readers' responses that demonstrate a thorough analysis to a variety of classical literature selections, including knowledge of literary techniques that affect the meaning of a literary work. Language study continues through the application of rules for sentence formation, usage, spelling, and mechanics. Students apply their understanding of grammar, capitalization, punctuation, spelling, sentence structure, and paragraphing to writing assignments.

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English III Honors – 1.0 Credit

Course Description: Students read and analyze a variety of literary and nonfiction texts, comparing themes of various works and analyzing expository materials to draw conclusions. Language study continues through the application of rules for sentence formation, usage, spelling, and mechanics. Students apply their understanding of grammar, capitalization, punctuation, spelling, sentence structure, and paragraphing to writing assignments. With an emphasis on persuasive writing, students apply their skills and adapt content, vocabulary, voice, and tone to a specific audience and purpose. In the research process, students analyze, evaluate, synthesize, and organize information from a variety of sources to produce a research product. Students complete an independent honors project. *Prerequisite: Completion of English II with a grade of 'B' or higher.*

English III - 1.0 Credit

Course Description: Students develop a foundational understanding of contemporary literature through integrated educational experiences in the language arts strands. Emphasis will be on works of major contemporary authors, representing various cultures, whose writings reflect the characteristics, problems, and themes of modern culture and society.

English III Honors – 1.0 Credit

Course Description: Students read and analyze a variety of literary texts, recognizing major forms and their stylistic elements. Using nonfiction texts, students will analyze and synthesize information to solve problems. Writing includes the production of informational, expository, and persuasive/argumentative papers, logically organized demonstrating knowledgeable judgments, and effective conclusions. Students apply their communication skills to create multi-media presentations and analyze the relationships among purpose, audience and content of presentations. Students complete an independent honors project. *Prerequisite: Completion of English III with a grade of 'B' or higher.*

Environmental Science - 1.0 Credit

Course Description: Students develop elementary concepts about man's interaction with the environment, including technology, air, water, and land pollution, conservation of natural resources, and society's impact on the environment.

Environmental Science Honors - 1.0 Credit

Course Description: Students engage in research based activities including man's interaction with the environment, including technology, air, water, and land pollution, conservation of natural resources, and society's impact on the environment. Students complete an independent honors project. *Prerequisite: Completion of one high school science with a 'B' or higher.*

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Geometry – 1.0 Credit

Course Description: Students experiment with transformations in the plane, understand congruence in terms of rigid motions, prove geometric theorems, make geometric constructions, understand similarity in terms of similarity transformations, prove theorems involving similarity, understand and apply theorems about circles, find arc lengths and areas of sectors of circles, explain volume formulas and use them to solve problems, visualize relationships between two-dimensional and three-dimensional objects, and apply geometric concepts in modeling situations by using traditional and real world mathematical practices.

Geometry Honors– 1.0 Credit

Course Description: Students master all of the topics in Geometry but engage in more challenging research assignments, including an independent honors project. Topics include transformations in the plane, understand congruence in terms of rigid motions, prove geometric theorems, make geometric constructions, understand similarity in terms of similarity transformations, prove theorems involving similarity, understand and apply theorems about circles, find arc lengths and areas of sectors of circles, explain volume formulas and use them to solve problems, visualize relationships between two-dimensional and three-dimensional objects, and apply geometric concepts in modeling situations by using traditional and real world mathematical practices. Students complete an independent honors project. *Prerequisite: Completion of Algebra 1 with a grade of 'B' or higher.*

Critical Thinking and Research Skills – 1.0 Credit

Course Description: Students conduct research that promotes an understanding of global awareness and the interconnectedness of the global human population as well as its dynamic interactions with the natural world. To acquire an appreciation of the interconnectedness of global and local events, processes and structures, students examine a range and diversity of global topics.

Humanities Survey – 1.0 Credit

Course Description: Students demonstrate knowledge of how culture is expressed through visual and performing arts; analyze how historical events shape the development of culture; understand why certain literary works are considered classics; how ideas and beliefs, decisions, and chance events have been used in the process of writing and interpreting history; understand some of the implications of intentions and purposes in particular works of art; synthesize information from multiple sources to draw conclusions, and identify personal artists they feel have contributed to the broad field of humanities.

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Introduction to Art History - 1.0 Credit

Course Description: Students develop an appreciation of art through the sequential study of art history and theory. Students use skills of visual analysis to critique masterworks using the elements of art and principles of design. This includes art vocabulary and visual language; major artists, architects, and masterworks; elements of art and principles of design; critical thinking and visual analysis; role, impact, and reciprocal relationships of art in history, culture, and society; Information resources and strategies; personal and social benefits; community resources; career opportunities.

Journalism I – 1.0 Credit

Course Description: Through practical applications, students develop fundamental skills in the production of print or electronic journalistic media using AP guidelines.

Life Management - 1.0 Credit

Course Description: Students identify and learn to apply coping skills to manage daily stress and build positive relationships at home and in the workplace.

Mathematics for College Liberal Arts – 1.0 credit

Course Description: This course strengthens the understanding of expressions and equations, the number system, functions, algebra, geometry, number and quantity, statistics and probability.

Mathematics for Data & Financial Literacy - 1.0 Credit

Course Description: The purpose of this course is to extend knowledge of mathematical concepts to real-world applications involving number theory, banking, finance, data representation, data interpretation, integer operations, linear equations, and problem-solving techniques.

Outdoor Education - 1.0 Credit

Course Description: Students acquire knowledge of the history and purpose of outdoor education, develop skills in outdoor education activities (hiking, biking, orienteering, water sports, team sports, or others as approved by the school) and maintain or improve health-related fitness.

Personal Financial Literacy - 1.0 Credit

Course Description: Students learn the concepts of personal and family financial management that includes money management, saving and investing, spending and credit, the role of financial institutions and the consumer, consumer information and taxation and financial planning.

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Creative Photography - 1.0 Credit

Course Description: Students explore the aesthetic foundations of art making using beginning photography techniques that include color and/or black and white photography via digital media and/or traditional photography. Students become familiar with the basic concepts of compositional foundations and evaluating a successful print through creation of a portfolio of images.

Physics – 1.0 credit

Course Description: Physics covers the basic concepts, principles, and history of physics. Course topics will include selected topics in mechanics, heat, light, sound, electricity, magnetism, and modern physics to include velocity, acceleration, force, inertia, mass, work, energy (kinetic, potential, etc.) momentum (linear and angular), gravity, tides, power, pressure, density, temperature, thermal expansion, heat, specific heat capacity, waves, sound, electric charge, current, magnetism, electromagnetic waves (including light), photons, and radioactivity; types of motion, Newton's Laws (including his Universal Law of Gravitation), the conservation laws of physics, the laws of electricity and magnetism.

Physical Science - 1.0 Credit

Course Description: This course explores the physical world, focusing on the interaction of matter and energy, real life applications, utilizing the scientific method and the process of science. Students will gain the skills needed to be successful in Chemistry and Physics.

Probability & Statistics – 1.0 credit

Course Description: This course is designed to provide a basic understanding of descriptive and inferential statistics. Topics include the measures of central tendency, standard deviation, combinations and permutations, probability, sampling, and various distributions. Emphasis is on applications of statistical concepts.

Psychology - 1.0 Credit

Course Description: Students acquire an understanding of the foundations of psychology theories and an appreciation for human behavior; behavior interaction and the progressive development of individuals that helps them better understand their own behavior and the behavior of others.

Reading 1 - 1.0 Credit

Course Description: Students develop and strengthen reading skills through integrated experiences in the language arts strands using classical and contemporary literature selections.

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Service Learning I - 1.0 Credit

Course Description: Students are provided an introduction to service learning and identify opportunities for leadership in the areas of service-learning and civic responsibility. Academic, personal, and career skills needed for effective service-learning project implementation will be applied through structured service projects that meet real school and/or community needs. Students will actively participate in meaningful service-learning experiences of at least 30 hours duration.

Service Learning II - 1.0 Credit

Course Description: Students continue their participation in their community service activities demonstrating their leadership abilities in the areas of service-learning and civic responsibility. Academic, personal, and career skills needed for effective service-learning project implementation are applied through structured service projects that meet real school and/or community needs. Students will actively participate in meaningful service-learning experiences of at least 40 hours duration.

Sociology - 1.0 credit

Course Description: Students engage in the analysis of the social contexts; groups, neighborhoods, cities, and whole societies in which thoughts, feelings, beliefs, ideas and norms are formed, learning how people function within these societal norms. Using sociologists' tools, students learn to observe, describe, analyze, and sometimes predict people's behavior in certain situations and conditions.

Spanish 1 - 1.0 Credit

Course Description: Students to begin to acquire proficiency in Spanish through a linguistic, communicative, and cultural approach to language learning. Emphasis is placed on the development of listening, speaking, reading, and writing skills and on acquisition of the fundamentals of applied grammar. Cross-cultural understanding is fostered and real-life applications are emphasized throughout the course

Spanish 2 - 1.0 Credit

Course Description: Students enhance proficiency in Spanish through a linguistic and cultural approach to language learning. There is continued emphasis on the development of listening, speaking, reading, and writing skills and on acquisition of the fundamentals of applied grammar. Cross-cultural understanding is fostered and real-life applications are emphasized throughout the course. *Prerequisite: Completion of Spanish I with a grade of 'C' or higher.*

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Trigonometry Honors – 1.0 Credit

Course Description: Trigonometry topics include circular functions, right triangle ratios, solving trigonometric equations, inverses, identities, the Laws of Sines and Cosines, graphing trigonometric functions, and applying trigonometric techniques to solving real-world problems. *Prerequisite: Completion of Geometry and Algebra 2 with a grade of 'B' or higher or completion of Geometry Honors and Algebra 2 Honors with a grade of 'C' or higher.*

Workplace Essentials - 1.0 Credit

Course Description: Students learn and demonstrate the introductory skills essential for gainful employment, including applications, resumes, interviewing skills, follow up, and appropriate business communications.

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Course Descriptions 9-12

World History - 1.0 Credit

Course Description: Students are engaged in the study and research of ancient and modern civilizations, societies, and historical periods leading to the beginning of the 21st Century to build a foundation for understanding the human history across different cultures and civilizations. Emphasis will be placed on the interaction among world cultures, the linking of the past and present, and the importance of the relationship of geography and history.

World History Honors – 1.0 Credit

Course Description: Students conduct extensive research into the study of ancient and modern civilizations, societies, and historical periods leading to the beginning of the 21st Century to build a foundation for understanding the human history across different cultures and civilizations. Emphasis will be placed on the interaction among world cultures, the linking of the past and present, and the importance of the relationship of geography and history. Students complete an independent honors research project.

Prerequisite: Completion of a Grade 8 social studies course with a grade of 'B' or higher.

World Literature - 1.0 Credit

Course Description: This course employs a thematic approach to the study of literature. The development of the hero in literature is traced. Works are read in their entirety and typically include The Odyssey, Gawain and the Green Knight, Oedipus, the King, and Hamlet. Students write literary analysis papers and create multi-media presentations. The mechanics of writing are presented through a prescriptive approach in relation to specific writing tasks. Students are expected to generate their own topics and to develop their own voice and style. Assignments may include a persuasive essay, classification, cause and effect, and definition.