

Overview of High School Gifted and Talented Education Curriculum 2010 - 2011

Grade	ENGLISH	MATH
9	<p><i>Foundations of Western Literature</i> examines the evolution of Western artistic, literary, and cultural thought through the use of several approaches to literary criticism. Students use these approaches to examine the universal themes expressed in a variety of genres and forms from both early and modern literature. Open-ended and structured writing experiences, research opportunities, and frequent oral/aural activities ensure the continued development of all major skill areas.</p>	<p><i>GT 9/IB Geometry</i> involves the study of Euclidean geometry from a transformational approach. Non-Euclidean geometry, conic sections, coordinate geometry, and logic are included in the course of study. Students use exploration, measurement, and technology to develop and defend conjectures.</p>
10	<p><i>The Theme of Identity in World Literature</i> is organized thematically to present the universality of the search for identity through its expression in a variety of cultures and historical time periods. The focus on literary criticism is continued with the introduction of three new approaches and is synthesized with the study of a literary work which addresses the interplay of all the approaches. A formal research paper, frequent open-ended and structured writing experiences, and specific attention to syntactical structures, usage, and mechanics further the development of composing and language skills.</p>	<p><i>GT 10/IB Precalculus: Functions and Graphs</i> involves the study of function theory, advanced algebraic topics, trigonometry, and analytic geometry in preparation for courses in calculus. Students will work extensively with graphing calculators to explore and analyze functions, curves, and statistical data.</p>
11	<p><i>AP English II</i> is an in-depth study of influential authors who represent important literary periods, significant themes, and individual styles in American literature. There are opportunities for critical and analytical examination of nonfiction, rhetorical and stylistic analysis, and the study of argumentation that will prepare students for success on the AP English Language and Composition examination. Students continue to develop their knowledge of formalized critical approaches to literature and apply this knowledge to analytical compositions culminating in the production of a formal research paper on a topic in American literature.</p>	<p><i>GT 11/AP Calculus I and II</i> is designed for students who desire advanced standing in college. It deals with the theory and techniques of differential and integral calculus with applications. Students will study limits, continuity, differential calculus, and integral calculus. Students are provided a structured preparation for the Advanced Placement Examination (AB).</p>
12	<p><i>AP English 12</i> is a multi-layered study of British literature that includes an examination of the social, political, cultural, and philosophical contexts that helped shape the dominant writers of each major literary period. A unifying thread throughout this study is a focus on the growth and development of the English language. Students compose a variety of analytical and creative pieces as they continue to develop and refine their own writing style. This course involves intensive preparation for the AP Test in English Literature and Composition.</p>	<p><i>GT 12/AP Calculus III</i> is designed to provide students with a sound background in multivariable calculus. Students will study vector-valued functions, partial derivatives, directional derivatives, multiple integrals, vector fields, line and surface integrals, and Green's and Stoke's Theorems. Students are provided a structured preparation for the AP Examination (BC).</p>

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Grade	SCIENCE	SOCIAL STUDIES
9	<p>GT 9 Biology provides a high-level introduction to biology using a college text. The course includes a survey of cell physiology, genetics, evolution, taxonomy and organism diversity, animal system biology, evolutionary theory, and ecology, with an emphasis on biochemical and quantitative aspects.</p>	<p>GT 9 American Government is a study of the American political, economic, and social life at the national, state, and local levels. Attention will be on political, economic, and social issues and preparation for responsible citizenship.</p>
10	<p>GT 10 Chemistry includes quantitative, qualitative, and descriptive chemistry with an emphasis on computational and problem-solving skills. The laboratory program stresses qualitative as well as analytical chemistry. Students study the relationships among atomic theory, electron configuration, bonding, molecular geometry, and periodic properties of atoms and molecules. Other topics include thermodynamics, kinetics, physical and chemical equilibria, oxidation-reduction, electrochemistry, and drug education.</p>	<p>GT 10 World History explores in depth significant episodes from western and non-western history. This course spans from ancient civilizations through the modern era. Emphasis is placed on the use of primary source materials. Units are Emergence of Civilization, Development of Hemispheric Civilization, Growth of European Ideas, Institutions and Influence, Establishment of European Global Domination, Impact of European Imperialism in China, End of European Hegemony, and Challenge of Global Interdependence.</p>
11	<p>GT 11 Physics emphasizes mathematical treatment of the fundamental laws of physics. The course uses a college text, physics periodicals, seminars, and educational and industrial community resources for enrichment. Major areas of concentration are mechanics, electricity, magnetism, light, and modern physics.</p>	<p>GT/AP U.S. History is chronologically organized to address political, economic, social, diplomatic, intellectual, and cultural history. Since this course involves intensive preparation for the Advanced Placement Test in U.S. History, students are expected to take the AP test. Units are Early National Period, Era of Jacksonian Democracy, Civil War and Reconstruction, Industrialization, Imperialism and World War I, 1920s and 1930s, Global Responsibilities, and Recent America.</p>
12	<p>Advanced Science courses are offered in the fields of Biology, Chemistry, and/or Physics. They are uniquely designed to offer topics from biology, chemistry, biochemistry, and physics that are not included in previous gifted and talented science programs. These courses are offered as enrollments justify.</p> <p>Advanced Placement courses are also scheduled wherever enrollments justify. AP courses may include Biology, Chemistry, Environmental Science, and Physics.</p>	<p>GT Government and Public Issues provides in-depth analysis of constitutional, judicial, political, and international issues, comparing political behaviors with philosophical questions. (1/2 credit)</p> <p>Social Studies Grade 12 GT presents in-depth study of human behavior in society. Topics include Politics and Effective Citizenship, Psychology and Understanding Human Behavior, and Seminar Discussions based on philosophical questions. (1 credit)</p>