

## (Free) Online High School Courses & Curriculum Materials

[http://www.hoagiesgifted.org/online\\_hs.htm](http://www.hoagiesgifted.org/online_hs.htm)

Listings compiled and courses reviewed by Kathi Kearney – 11/13/06

Also visit [Free Online Text Materials](#) for great online resources, [Internet Investigations](#) for free curriculum units right on the 'net, and [\(Free\) Materials for Gifted Classrooms](#), terrific educational materials.

**NEW!** [The Online Bargain Basement](#) (PowerPoint) explains how to select and use an online course for your student, and offers samples of a variety of the best free online high school courses. Also get the handout, **NEW!** [Using the Online Bargain Basement](#) (Word). Presented at NAGC, Charlotte, November 2006.

### Course Collections

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### Course Collections

<i>Collection Subject</i>	<i>Resource &amp; Description</i>
<b>Various</b>	<a href="#">Annenberg Media Learner.org</a> Annenberg Media uses media and telecommunications to advance excellent teaching in American schools. This mandate is carried out chiefly by the funding and broad distribution of educational video programs with coordinated Web and print materials for the professional development of K-12 teachers

### English

<i>Course Title</i>	<i>Resource &amp; Description</i>
<b>English Composition</b>	<a href="#">Paradigm Online Writing Assistant</a> This online course provides instruction and practice in the development of basic writing composition skills necessary for college-bound students. Each explanatory section comes complete with assignments. Also included is instruction in how to write four different types of essays: Informal, thesis/support, argumentative, and exploratory. This course

	<p>could be used as a stand-alone course in composition, or the course segments distributed over several years of high school as part of another English course.</p> <p><a href="#"><u>Principles of Composition</u></a> is a complete course in English composition with interactive exercises and assignments, covering patterns and structures of composition. (Capital Community College, Hartford, CT)</p> <p>Supplemental Resource: <a href="#"><u>The Elements of Style</u></a>, by Strunk</p>
<b>English Grammar</b>	<p><a href="#"><u>The Internet Grammar of English</u></a> is an online course in English grammar originally designed for university undergraduates. It incorporates interactive and self-correcting exercises, and is a complete course in English grammar, easy to use. Because this is a British site, grammar terms may be slightly different than those commonly used in the United States. (English Department, University College London)</p> <p><a href="#"><u>Traditional English Grammar: Description and Use</u></a> is an online text/course with built-in, self-correcting quizzes. This grammar course is in-depth, intensive, and for advanced students. (Don Hardy, Colorado State University)</p> <p><a href="#"><u>Grammar and Writing</u></a> is an interactive course in grammar applied to writing. Includes many online interactive quizzes and complete explanations of English grammar, with applications to written composition. (Capital Community College, Hartford, CT)</p>
<b>Literature</b>	<p><a href="#"><u>SCORE CyberGuides, 9-12</u></a> The SCORE CyberGuides are model literature units based on the California state standards. Each unit provides comprehension, analysis, and extension activities based on literature. 43 different book units are available; select according to student interest and reading level. All are appropriate literature selections for high school study.</p> <p>NOTE: You will need to locate a copy of each book. Some units use books that are available completely online. The following books from the SCORE CyberGuides unit series may be read online or downloaded free in their entirety:</p> <p><a href="#"><u>Huckleberry Finn</u></a> (also available on <a href="#"><u>audiobook</u></a>)  <a href="#"><u>The Canterbury Tales</u></a>  <a href="#"><u>Cyrano de Bergerac</u></a>  <a href="#"><u>Great Expectations</u></a> (also available on <a href="#"><u>audiobook</u></a>)  <a href="#"><u>Hamlet</u></a></p>

	<p><a href="#"><i>Julius Caesar</i></a>  <a href="#"><i>My Antonia</i></a>  <a href="#"><i>Romeo &amp; Juliet</i></a>  <a href="#"><i>The Tempest</i></a></p> <p><b><a href="#">British Poetry of World War I</a></b> A series of free online seminars exploring the poetry of World War I. In addition to traditional literary analysis, teaches students to evaluate original manuscripts (provided in digital format). For advanced students. (Oxford University, England)</p>
<b>Creative Writing</b>	<p><b><a href="#">BBC's Get Writing Course</a></b>  Beginning, intermediate, and advanced levels of instruction and practical application exercises. Explore the site, then click on "mini-courses" to get started. (British Broadcasting Corporation)</p>
<b>Screenwriting</b>	<p><b><a href="#">The Basics of Screenwriting</a></b>  A six-module course covering these topics: The Premise, Character Development, Screenplay Structure and Visual Storytelling, Setting the Scene, and Formatting Your Masterpiece. (American Film Institute)</p>
<b>Journalism</b>	<p><b><a href="#">News Writing</a></b> is a video instruction series in the basics of journalism. 15 half-hour video segments, using online video-on-demand, with commentary by leading journalists.  NOTE 1: Requires broadband connection.  NOTE 2: There is an optional a student text and teacher's guide to accompany this video online course, but they must be purchased. The books are not absolutely necessary to use the video course. You may wish to listen to each segment, then design your own assignment to practice the video segment topic.</p>
<b>Debate</b>	<p><b><a href="#">Debate Central</a></b> will link you to many resources on debate, including a 13-part "<a href="#">Critical Advocacy</a>" streaming video series on the how-tos of debate (at least the free version of RealPlayer must be downloaded to your computer to view these videos). Also included is the free syllabus, course instruction videos, and free online debate textbook used for <a href="#">Dr. Snider's Fundamentals of Debate</a> course at the University of Vermont. Used together, these resources could comprise a full-year debate course for high school English. (University of Vermont)</p>

## Mathematics

<i>Course Title</i>	<i>Resource &amp; Description</i>
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<b>Algebra I</b>	<p><a href="#"><u>Patterns, Functions, and Algebra</u></a> Basic Algebra course; interactive with online video. Originally designed for teacher training. (Annenburg/CPB)</p> <p>Supplement this course with free <a href="#"><u>online Algebra I textbook, Understanding Algebra</u></a> (Boise State University)</p> <p>Supplement this course with <a href="#"><u>video lectures for Algebra</u></a> NOTE: Requires broadband connection</p>
<b>Geometry</b>	<p><a href="#"><u>Geometry</u></a> Basic geometry course; interactive with online video. Originally designed for teacher training. (Annenburg/CPB)</p> <p><a href="#"><u>Geometry of Art &amp; Architecture</u></a> This companion site to a Dartmouth College course provides an approach to geometry that may be particularly appealing to arts-oriented students. (Dartmouth College)</p> <p>Supplement this course with <a href="#"><u>Euclid's Elements</u></a></p>
<b>Algebra II</b>	No free online course yet located
<b>Financial Mathematics</b>	No free online course yet located
<b>Advanced Mathematics</b>	No free online course yet located
<b>Pre-Calculus</b>	<a href="#"><u>Calculus on the Web</u></a> (see Calculus below)
<b>Calculus</b>	<p><a href="#"><u>Calculus on the Web</u></a> COW is an internet utility for learning, practicing and experimenting with the ideas and techniques of calculus (ongoing work of Gerardo Mendoza and Dan Reich of the Mathematics Department at Temple University)</p> <p><a href="#"><u>Monterey Institute for Technology &amp; Education AP Courses</u></a> Monterey Institute offers free online AP courses:  <a href="#"><u>Calculus AB</u></a> This calculus course covers functions and graphs; limits and continuity; derivatives; applications of derivatives; antiderivatives &amp; definite integrals;...  <a href="#"><u>Calculus BC</u></a> This course is meant to help high school student study for the Advanced Placement BC Calculus test offered yearly by the College Board</p>
<b>Probability &amp; Statistics</b>	<p><a href="#"><u>Elementary Statistics</u></a> A basic elementary statistics course complete with 12 thirty-minute <a href="#"><u>video lectures</u></a>, assignments, quizzes, online calculator, and exams with answer keys. A complete statistics course. (Sofia Open Content Initiative)</p> <p><a href="#"><u>Against All Odds: Introductory Statistics</u></a> This online video course includes 26 half-hour video modules and introduces the basic principles of statistics.</p>

	<p>NOTE 1: Requires broadband connection. NOTE 2: Optional textbooks to accompany this course may be purchased.</p> <p><a href="#"><u>Advanced Placement Statistics</u></a> This website offers the course outline, course materials, readings, teacher resources, assignments, projects, and sample tests for the Advanced Placement Statistics course taught at the prestigious Buckingham, Browne, &amp; Nichols independent school in Cambridge, MA. You will need to purchase or borrow the required textbooks and calculator. (Buckingham, Browne, &amp; Nichols School, Cambridge, MA)</p> <p><a href="#"><u>Supplemental Resource: AP Statistics Course Description and Syllabi</u></a> You must register (it's free) first, then you may download any AP Course Description and sample syllabi</p>
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## Science

<i>Course Title</i>	<i>Resource &amp; Description</i>
<b>Biology</b>	<p><a href="#"><u>AP Biology Online Syllabus</u></a> This is a massive and well-organized site, which includes reading assignments, teacher's lecture outlines, a timetable for the course, selections from online textbooks and hypermedia from leading colleges and universities (including MIT), and a large number of well-selected online activities to support learning the course material, including links to virtual labs. Although technically not an "online course," the materials could be used as is, accompanied by the recommended textbook, to more than meet the instructional requirements of AP Biology. You will need to purchase or borrow the required textbook, <i>Biology</i> (fourth edition), by Peter Raven &amp; George Johnson (McGraw-Hill, Publishers). (site by Chris Halloran, North Warren Regional High School, Blairstown, NJ)</p> <p style="text-align: center;">Laurie Callihan, science teacher and co-author of the book <i>The Guidance Manual for the Christian Home School</i>, writes: "I followed the links on this page and almost forgot there was life outside the internet! An incredible maze of online texts, practice problems, cool sites and lots more – you could spend days here!"</p> <p><a href="#"><u>Supplemental Resource: AP Biology Course Description and Syllabi</u></a> You must register (it's free) first, then you may</p>

	download any AP Course Description and sample syllabi
<b>Chemistry</b>	<p><a href="#"><u>General Chemistry I</u></a> and <a href="#"><u>General Chemistry II</u></a> (Less like a course and more like an online textbook) For advanced students with an excellent math background.</p> <p><a href="#"><u>Concept Development Studies in Chemistry</u></a> An online chemistry textbook.</p>
<b>Physics</b>	<p><a href="#"><u>Physics I Online Course Outline</u></a> This site is actually a hyperlinked online textbook, not a full course. For advanced students.</p> <p><a href="#"><u>Physics I, 8.01</u></a> This course is a first-semester college freshman level physics course available free in its entirety, including 35 videotaped lectures. The entire course, including video lectures, may be downloaded. For advanced high school students who are ready for college-level work. (Massachusetts Institute of Technology OpenCourseWare Project)</p> <p>"8.01 is a first-semester freshman physics class in Newtonian Mechanics, Fluid Mechanics, and Kinetic Gas Theory. The website features lecture notes, problem sets with solutions, exams with solutions, links to related resources, and a complete set of videotaped lectures. The 35 video lectures by Professor Lewin, were recorded on the MIT campus during the Fall of 1999. Prof. Lewin is well-known at MIT and beyond for his dynamic and engaging lecture style."</p> <p><a href="#"><u>Monterey Institute for Technology &amp; Education AP Courses</u></a> Monterey Institute offers free online AP courses:</p> <p><a href="#"><u>AP Physics B</u></a> The fifty-five lessons in this course on Physics cover such topics as Motion, Newtons Laws, Work and Energy, Power, Mass, Impulse &amp; Momentum, Torque &amp; Rotational Statics, Harmonic Motion, Gravity, Pressure &amp; Buoyancy, Bernoullis Equation, Thermodynamics, Electricity, Circuits, Induction &amp; Waves, Light, Atomic Energy, and Wave-Particle Duality.</p> <p><a href="#"><u>AP Physics C</u></a> The thirty-nine lessons in this course in Physics cover such topics as Newtons Laws of Motion, Conservation of Energy, Mass, Impulse &amp; Momentum, Rotational Kinematics, Harmonic Motion, Oscillations, Law of Gravity, Coulombs Law, Electric Fields &amp; Potential, Dielectrics, DC Circuits, Coulombs Law, Forces &amp; Fields, and Maxwells Equations</p>

<b>Earth Science</b>	No free online courses yet located
<b>Environmental Science</b>	<p><a href="#"><u>Nature Transformed: The Environment in American History</u></a> is an extensive interdisciplinary, online, hyperlinked curriculum guide including essays, discussion helps, extensive links to related online resources and readings for each section. Students who complete all essay readings, participate in discussions if possible, and select several areas to explore further using the related online resources will obtain a strong foundation in environmental science as it has played out across American history. (TeacherServe, National Humanities Center)</p> <p><a href="#"><u>AP Environmental Science</u></a> an interdisciplinary field involving the study of our world, our culture, and the relationship of humans and the planet. It includes topics such as the Biosphere, Plate Tectonics, Global Warming, Conventional and Alternative Energy, Environmental Ethics, and many more.</p>
<b>Physics of Technology</b>	No free online course yet located
<b>Agriscience</b>	No free online course yet located

### **Social Studies**

<i>Course Title</i>	<i>Resource &amp; Description</i>
<b>American History</b>	<p><a href="#"><u>Digital History</u></a> includes a free hyperlinked online <a href="#"><u>U. S. History textbook</u></a>, <a href="#"><u>learning modules</u></a>, <a href="#"><u>classroom handouts and worksheets</u></a>, <a href="#"><u>active and problem-based learning activities</u></a>, multimedia including <a href="#"><u>online e-lectures</u></a>, <a href="#"><u>virtual exhibits</u></a>, and links to hundreds of primary sources and history reference materials. This site can be used to create either basic or AP U. S. History course content. (University of Houston)</p> <p><a href="#"><u>AP U. S. History</u></a> a complete set of lessons meant to help students for the College Board's Advanced Placement United States History test. It provides a rich set of interactive media and multimedia presentations that explore the history of North America from pre-colonial times, though the forming of the United States, and the two hundred years since.</p> <p>Supplemental Resource: <a href="#"><u>AP U. S. History Course Description and Syllabi</u></a> You must register (it's free) first, then you may download any AP Course Description and sample syllabi</p>
<b>Civics (1/2 unit)</b>	No free online courses yet located
<b>American Government</b>	<a href="#"><u>AP U.S. Government</u></a> explores the principals, philosophies,

	practices, and institutions that comprise the United States system of government. Lessons explore the founding of the United States, the motivation and goals of political documents such as the Bill of Rights and Constitution, as well as historical debates and issues that have had substantial US politics.
<b>Free Enterprise (1/2 unit)</b>	<p><a href="#">My Own Business</a> or <a href="#">Online Business Course: Getting Started</a> an online course on starting your own business. Includes 12 session modules, short audio lectures, and specific assignments.</p> <p>NOTE: Be sure to select the “free course” option. (My Own Business private company, in cooperation with the U. S. Small Business Administration)</p> <p>Supplemental materials: Find many other free online business and entrepreneurship courses, curriculum, materials, and templates at this <a href="#">Small Business Administration</a> website</p>
<b>World History</b>	No free online courses yet located
<b>World Geography</b>	No free online courses yet located
<b>Western Civilization</b>	<p><a href="#">The Western Tradition</a> Video instructional series; 52 half hour programs covering the scope of Western civilization. Uses video-on-demand, playable from the site.</p> <p>NOTE 1: Requires broadband connection.</p> <p>NOTE 2: Site lists an optional textbook; if you choose to use this you will need to purchase or borrow it.</p>

### Health Education

<i>Course Title</i>	<i>Resource &amp; Description</i>
<b>Health</b>	No free online courses yet located

### Physical Education

<i>Course Title</i>	<i>Resource &amp; Description</i>
<b>Physical Education I</b>	<p><a href="#">Bowling</a> This course was originally part of BYU’s independent study program. This is a comprehensive one-semester college-level physical education class, appropriate for older high school students. (Brigham Young University)</p> <p>NOTE: Requires access to a local bowling alley</p>
<b>Physical Education II</b>	<p><a href="#">Intermediate Swimming</a> This course was originally part of BYU’s independent study program. This is a comprehensive one-semester college-level physical education class, appropriate for older high school students. (Brigham Young</p>

	University) NOTE: Requires access to a local swimming pool
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## Computers

<i>Course Title</i>	<i>Resource &amp; Description</i>
<b>Computer Literacy</b>	<p><a href="#"><u>WebTeacher</u></a> Substantial course (more than 80 hours of instruction) covering internet-based computer literacy</p> <p><a href="#"><u>Microsoft Office Training</u></a> Tutorials for all current MS Office products, including Word, Excel, FrontPage, PowerPoint, Access, and other Office products</p>
<b>Programming</b>	<p><a href="#"><u>Web Page Authoring</u></a> Beginning hands-on introduction to using Hypertext Mark-Up Language (<b>HTML</b>) to create web pages which can be uploaded and displayed on the World Wide Web</p> <p><a href="#"><u>IBM Tutorials and Training</u></a> Tutorials in more than a dozen products and technologies, including Java, Linux, XML, HTML including Cascading Style Sheets, and more</p>

## Electives

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### Electives - Foreign Language

<i>Course Title</i>	<i>Resource &amp; Description</i>
<b>Various Languages</b>	<p><a href="#"><u>BBC Languages</u></a> Offers full exploratory and beginner level language instruction in French, Spanish, Italian, German, Mandarin Chinese, Portuguese &amp; Greek. Tools include video instruction, mp3 phrase downloads, and more. Each language offers a "Gauge your level" section, to determine starting place.</p>
<b>French I &amp; II</b>	<p><a href="#"><u>Francais Interactif</u></a> is a complete college-level first year French course (corresponding to French I and French II of high school level French; one semester of college coursework usually equals one year of high school coursework). This course includes all the basics of language study -- vocabulary, grammar, listening, speaking, culture, and practice. The site is complete with sound files, grammar exercises, cultural</p>

	information, videos, and even internet explorations. Grammar explanations and practice link to a clever sister site, <a href="#">Tex's French Grammar</a> , which provides detailed grammar explanations for the entire French grammar plus sound files and interactive exercises for grammar practice. For high school French I, use chapters 1 through 6; for French II, use chapters 7 through 13. (University of Texas - Austin)
<b>German I</b>	<a href="#">Beginners German</a> provides a full German I course online, including extensive instruction in German grammar. 20 chapters of which 12 are currently online, practice exercises, online grammar lectures and reference section. Includes sound files. (University of Exeter, United Kingdom)
<b>Icelandic I</b>	<a href="#">Icelandic Online: Modern Icelandic Language and Culture</a> Includes all instructional materials and sound files. (University of Iceland)
<b>Italian I</b>	<a href="#">Oggi e Domani</a> A complete, online Italian I course with interactive instructional components, sound files, quizzes, and tests. (University of New York at Brooklyn)
<b>Ancient Greek I</b>	<a href="#">Ancient Greek with <i>Thrasymachus</i></a> This extensive, complete curriculum guide includes detailed lesson plans for the teacher, materials for the student, and student exercises. The curriculum guide accompanies the textbook, <i>Thrasymachus</i> , by C. W. E. Peckett and A. R. Munday, and was written by a professor of classics at Duquesne University and a high school teacher of Greek and Latin at St. Paul's School (a private independent school). You will need to download a Greek font for your computer (directions are included). (Alison Barker) NOTE: It is helpful to have the textbook <i>Thrasymachus</i> , published by C. W. E. Peckett and A. R. Munday, Bristol Classical Press, 1990. However, it is possible to use the curriculum guide as is if you do not have access to the book.
<b>Modern Greek</b>	<a href="#">Modern Greek 101 &amp; 102 (Elementary)</a> <a href="#">Modern Greek 201, 202, &amp; 203 (Intermediate)</a> <a href="#">Modern Greek 301 &amp; 302 (Advanced)</a> Beginning, Intermediate, and Advanced Modern Greek, with online instructional materials, quizzes, and sound files. You need to register to use this site, but registration is free. (Kypros-Net in collaboration with CyBC, Government of Cyprus)

### Electives - Social Sciences

<i>Course Title</i>	<i>Resource &amp; Description</i>
<b>History of Religion in</b>	<a href="#">Divining America: Religion and the National Culture</a>

<b>America</b>	Includes essays by leading scholars tracing religious issues and influences across American history. Extensive links to supplemental resources and primary source documents accompany each essay. Used together they provide a course of study in the history and influence of religion on American history and culture. (TeacherServe, National Humanities Center)
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### **Electives - Science**

<i>Course Title</i>	<i>Resource &amp; Description</i>
<b>Astronomy</b>	<a href="#"><u>From Stargazers to Starships</u></a> A complete course, physics and algebra-based. (U. S. Government, NASA)

### **Electives - Fine Arts**

<i>Course Title</i>	<i>Resource &amp; Description</i>
<b>Music Theory</b>	<a href="#"><u>Introduction to Music Theory</u></a> A basic music theory course; includes instruction, assignments, and sound files. (Connexions)
<b>Music Appreciation</b>	<a href="#"><u>Sound Reasoning</u></a> is a music appreciation course with built-in “listening galleries” and an interactive online workbook. (Anthony Brandt, Connexions)

**For more free online curriculum unit collections and individual units, visit [Hoagies' Gifted Education: Internet Investigations](#)**