Education Program for Gifted Youth
Online High School
Stanford University

An Overview of the Academic Program at the EPGY Online High School at Stanford University

Courses available at the OHS

The following two tables list the courses that will be available at the OHS. The first shows the courses at the high-school level while the second shows courses at the university-level. All courses are one-year in length, unless otherwise noted. Course availability is given by academic year.

Department	Course Title	Year Available
Humanities	Expository Writing: Literary Analysis and Argumentation	2006
Humanities	Fundamentals of Expository Writing	2006
Humanities	AP English Language and Composition	2006
Humanities	Grammar and Style of the Sentence (1 semester)	2006
Humanities	OHS Core: Grammar, Rhetoric, Argumentation	2007
Humanities	English Language and Literature	2006
Humanities	Chinese 1-2	2007
Humanities	Chinese 3-4	2007
Humanities	Chinese AP	2007
Humanities	Latin 1-2	2007
Humanities	Latin 3-4	2007
Humanities	Latin AP	2007
Humanities	Introduction to Music Theory (1 semester)	2006
Humanities	Music Theory (AP)	2007
Natural Sciences	Honors Beginning Algebra	2006
Natural Sciences	Honors Intermediate Algebra	2006
Natural Sciences	Honors Geometry	2006
Natural Sciences	Honors Precalculus with Trigonometry	2006
Natural Sciences	AP Calculus AB	2006
Natural Sciences	AP Calculus BC	2006
Natural Sciences	AP Physics B	2006
Natural Sciences	AP Physics C: Mechanics	2006
Natural Sciences	AP Physics C: Electricity and Magnetism	2006
Natural Sciences	AP Chemistry	2007
Natural Sciences	AP Biology	2007
Natural Sciences	Introduction to C Programming	2006
Natural Sciences	Advanced Topics in C Programming	2006
Natural Sciences	Introduction to Java Programming (1 Semester)	2006
Natural Sciences	AP Computer Science	2007
Social Sciences	US History (AP)	2006
Social Sciences	Core: History of Science and Culture	2007
Social Sciences	Core: Democracy, Freedom & Rule of Law	2006
Social Sciences	World History (AP)	2007
Social Sciences	Economics (AP)	2007

University-level courses available at the OHS

In its first year, the OHS will offer seventeen university-level mathematics and physics courses. Students completing these courses will be eligible for transcripts from the Stanford University Continuing Studies Program.

Department	Course Number, Title, and Units	Year Available
Mathematics	M51A Linear Algebra (4 units)	2006
Mathematics	M52A Multivariable Differential Calculus (4 units)	2006
Mathematics	M52B Multivariable Integral Calculus (3 units)	2006
Mathematics	M53A Differential Equations (4 units)	2006
Mathematics	M106 Complex Analysis (3 units)	2006
Mathematics	M109 Modern Algebra (3 units)	2006
Mathematics	M115 Real Analysis (3 units)	2006
Mathematics	M131 Partial Differential Equations (3 units)	2006
Mathematics	M152 Number Theory (3 units)	2006
Mathematics	M157 Mathematical Logic (4 units)	2006
Physics	P055 Light and Heat (4 units)	2006
Physics	P070 Modern Physics (3 units)	2006
Physics	P110 Intermediate Mechanics I (4 units)	2006
Physics	P111 Intermediate Mechanics II (4 units)	2006
Physics	P120 Intermediate Electricity and Magnetism I (4 units)	2006
Physics	P121 Intermediate Electricity and Magnetism II (4 unit)	2006
Physics	P130 Quantum Mechanics (4 units)	2006

Sample Student Courses of Study

The following examples show courses of study that a full-time student enrolled in the OHS might pursue. The first shows advanced work in mathematics and physics, while the second shows advanced work in the humanities.

A sample full-time course of study with advanced work in the Natural Sciences

	Grade 10	Grade 11	Grade 12
Natural Sciences	Precalculus AP Chemistry	AP Calculus AP Physics C Introduction to C	M51A/M52A/M52B P055/P070 Introduction to Java
Social Sciences	AP World History Core: History of Science and Culture	AP US History	Core: Democracy, Freedom & Rule of Law
Humanities	Expository Writing Grammar & Style Chinese I	Core: Grammar, Rhetoric, Argument Chinese II	AP Language & Lit AP Chinese

A sample full-time course of study with advanced work in the Humanities

	Grade 10	Grade 11	Grade 12
Natural Sciences	Geometry AP Physics B	Precalculus AP Chemistry	AP Calculus
Social Sciences	AP World History Core: History of Science and Culture	AP US History	Core: Democracy, Freedom & Rule of Law
Humanities	Expository Writing Grammar & Style Latin I	Core: Grammar, Rhetoric, Argument Latin II AP Music Theory	*Directed Reading in the Humanities* AP Language & Literature AP Latin

The Online High School Core Courses

A central part of the OHS experience will be participation in the OHS core courses. In these year-long courses students will engage in critical reading, intensive writing, and philosophical discussion. The core courses provide a unique opportunity for OHS students to pursue in-depth study of topics that students do not often see until college.

Democracy, Freedom, and the Rule of Law. Students critically examine the importance of democratic institutions and the rule of law. Readings for the course will include writings by David Hume, John Locke, Thomas Hobbes, Edmund Burke, John Stuart Mill, John Dewey, and F. A. Hayek. The course will also provide students with an overview of the structure of the United States Government.

History of Science and Culture. Students study the natures, causes, and social consequences of scientific and technological developments, and how these forces have shaped modern society. Concurrent with this investigation, this course asks students the question "What is Culture?" and examines how the answers to this question have changed over time. This course also provides students with an overview of the resources available to them on the internet and a discussion of how to use these resources critically.

Grammar, Rhetoric, and Argument. This reading and writing intensive course is designed to develop the discursive and argumentative talents of the students. Students will read original source material which they will critically examine. They will understand how to be careful in their use of language, the role of rhetoric in writing, and how to argue persuasively.

The OHS Summer Programs

While OHS students will have the option of attending the general courses offered by the EPGY Summer Institutes as well as attending summer programs offered by other institutions, the OHS will also have special residential programs at Stanford during the summer exclusively for OHS students. We anticipate that participation in these residential summer programs will play an important role in the education of OHS students, particularly for those who are full-time students in the OHS. Such programs will provide OHS students with the opportunity for face-to-face interaction with other students, as well as opportunity for lab work in science courses.

Although participation in the summer program at Stanford will be encouraged, it will not be required, as attendance at the summer programs may not fit into the schedules of some students. In addition to the residential summer programs, the OHS will also offer intensive online courses during the summer.

Some Distinguishing Features of OHS Courses

That the OHS courses are online is only one distinguishing characteristic of the OHS courses. There are many others that make the OHS ideally suited for its target population of gifted students:

> *Enhanced mathematical content.* Where appropriate, courses in the natural sciences and the mathematical social sciences will have enhanced mathematical content. This will allow students to study material in greater depth and in a manner more closely approximating how these subjects are studied in the university.
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> *Emphasis on writing, discussion, and argumentation.* In seminar-style courses there will be an emphasis on fostering in the students the ability to read critically and write forcefully and persuasively. These themes, which are developed in depth in the OHS core courses, will be incorporated throughout the curriculum.
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> *College-style class schedule.* While the typical high school student spends close to thirty hours per week in instructor-led classes, the average first-year college student spends between fifteen and twenty hours in class and a good deal more time outside of class studying in preparation. The seminar style classes offered at the OHS will be closer in spirit to college courses.
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> *Self-paced, directed study courses.* Many gifted students are frustrated by having their progress limited by the abilities of the other students in the class. We will accommodate such students in courses that do not involve regular student-student interaction by allowing them to proceed through the curriculum at an accelerated pace under faculty direction.

Extra Curricular Academic Activities

Students in the OHS will be able to participate in a number of extra academic activities designed to facilitate the informal pursuit of academic interests. Examples of activities that might be offered are a mathematics circle, a physics Olympiad team, a debate team, and a literary journal. Students will be encouraged to pursue their areas of interest, and instructors will be encouraged to facilitate this process.

Courses from Outside Institutions

An important feature of the OHS will be its willingness to allow students to incorporate outside work into their course of study. This will include both coursework done at other institutions as well as directed study opportunities such as internships. The OHS academic advisory staff will keep track of external programs and appropriate course opportunities offered by other institutions. We will be proactive in recommending such

programs to students and will help students decide between different programs. We will also maintain detailed information on these programs and their offerings for the purpose of determining the applicability of these offerings to the OHS diploma.

Joint Enrollment

The OHS expects that many students who may be interested in the courses offered by the OHS may also wish to remain active at their local schools. To facilitate such arrangements, the OHS will be establishing a joint-enrollment program. The most common types of joint-enrollment will be for students who wish to take half of their courses at their local school and the other half from the OHS.

Advanced Placement Courses

While many of the OHS courses will prepare students to take Advanced Placement Examinations, the ultimate goal of the OHS courses will not be to prepare students to take these exams, but to prepare them for future study in college. So while the OHS may list courses as being "AP Courses," we will do so primarily for ease of reference. The actual course content will be at a greater depth than that of typical AP courses, and where appropriate will include enhanced mathematical content or an intensive focus on writing, discussion, and argumentation.