

University of Washington

HALBERT & NANCY ROBINSON
CENTER FOR YOUNG SCHOLARS

SUMMER STRETCH 2010

PREVIEW

June 28 - July 30, 2010



Time to make summer plans! If you are enrolled in 7th, 8th, 9th, or 10th grade during the 2009-2010 academic year, Summer Stretch may be an option for you. It is a 5-week **commuter** program with classes on the University of Washington's Seattle campus.

The program offers an opportunity for vigorous academic challenge in the company of other capable students. Courses are fast-paced and roughly at the 9th and 10th grade levels, although fast-paced math courses range from first-year Algebra through Precalculus. Students take only one course. Students in 10th grade require special permission to enroll in classes other than Chemistry or Math.

Please note that this is not an "enrichment" program. **Students are expected to attend all classes.** The amount of homework is **substantial**, and can amount to several hours per night. Fast-paced math and chemistry courses are at high school level and are the equivalent of one academic year, while the other courses generally cover up to a semester of academic work at high school level.

VERY IMPORTANT: Some high schools award credit for these courses; yours may or may not. If you desire credit and/or appropriate placement, you **must** check with your school **prior** to applying to this program.

Some students use these courses to advance toward an earlier graduation; others give themselves a boost toward taking advanced placement courses, or, alternatively, more room in their high school programs for electives and activities they would otherwise been unable to participate in.

Qualification is by test scores on the Scholastic Aptitude Test (SAT I) or the American College Test (ACT). Students must qualify by achieving at least the 50th percentile on the test required for the class they want to take (MATH, or VERBAL/READING; some science classes require both MATH and VERBAL/READING). Students wishing to take a Fast-Paced Math class must also submit a teacher's recommendation, downloadable from our website.

Scores from tests taken during 8th, 9th, or 10th grade are expected to be higher and will be evaluated on an individual basis.

Registration is on a space available basis and will begin on February 16, 2010. Registration for a specific course continues until that course is full, at which time students may be placed on a wait list for that course. Registration will be completely on-line this year. Information about registration will be posted on our website by mid-January.

Summer Stretch's 5-week program will begin Monday, **June 28**. Classes will meet 9:00-2:20 pm MTTh . There is a final half-day on Friday, July 30.

Need-based financial aid is available (scholarships and/or time payments). If applying for aid, a financial aid application must be submitted by May 1; financial aid award notices will be sent out by May 15.

Tuition is expected to be \$875. Some courses have an additional tech/activity fee. A nonrefundable deposit of \$75 will be required with all applications, with the deposit amount applied against the tuition balance. Full payment is required by May 25. Except in cases of documented emergencies, tuition is refundable only until May 25th.

COURSE DESCRIPTIONS

Our website will list courses to be offered in 2010 as of mid-January 2010. Following is a sampling of courses that have been offered in previous years:

Argument & Debate: This course explores the nature of arguments, the methods of debate, and the strategies of persuasion. In preparation for formal and casual debates, you will investigate controversial questions and sharpen your skills as a persuasive speaker. Bring a critical mind and a friendly attitude.

Qualifications: VERBAL/READING

Chemistry: A reading-lecture-laboratory course covering the basic high school chemistry curriculum, providing an understanding of why materials in our world behave as they do.

Qualifications: MATH and VERBAL/READING; 8th grade standing or higher; completion of first year Algebra or equivalent.

American Literature: This course will explore literature that incorporates the themes of identity and individuality, both very common characteristics of American literature. Through reading, discussing, and writing about fiction novels, memoir, short stories, and poetry we will develop ideas about how a writer explores these themes. Students will learn to write analytically and to read with insight. Texts will include *This Boy's Life* by Tobias Wolf, *The Bean Trees* by Barbara Kingsolver, and *The Great Gatsby* by F. Scott Fitzgerald.

Qualifications: VERBAL/READING

Introductory Essay Writing: The essay is a form of writing that is incredibly adaptive, morphing into a variety of forms to suit the writer's needs. It can be a creative forum, an opportunity to express an opinion, convince the reader, or explain a passion. Using sample essays from Joan Didion, George Orwell, and other illustrious essayists, as well as the study of grammatical conventions and usage, writing groups and independent writing exercises, we will explore a variety of rhetorical modes. The student will leave the class with a strong and varied portfolio of essays.

Qualifications: VERBAL/READING

Mathematics (Fast-Paced): Classes offer one year of work in an appropriate course: 1st year Algebra, Geometry, 2nd year Algebra with Trigonometry, or Precalculus.

Placement in fast-paced math courses depends on the student's math background and school district requirements. **These classes are not recommended if your school cannot offer appropriate placement for Fall 2010.**

PLEASE NOTE THAT THE MATH CLASSES ARE NOT LECTURE-BASED. In order to best complete one academic year over the five-week time period, the class structure differs from the primarily lecture-based system to which most students are accustomed. Instead, a large part of each day will be spent doing small group work, individual study and test taking. The instructor is primarily there as a resource and facilitator, and the student works independently for the most part. Self-motivation and strong independent learning and study habits are essential for success in this highly accelerated and individually paced program.

Qualifications: MATH

Physics: Rockets and Robots: This is an introductory course in physics with several hands-on activities with robots and pneumatic rockets. The students will explore topics such as velocity, acceleration, Newton's laws, projectile motion, momentum, work and power. They will use what they learn about basic Newtonian mechanics and apply it to robotics.

Students will work in groups to build three small to medium-sized robots, which will be used in in-class competitions. The class will also include a short introduction to autonomous robot control using a small robot which utilizes PBasic language.

Although hands-on experience is integral to this class, the academic content is rigorous and requires significant amounts of work both in and out of class.

Qualifications: MATH and VERBAL/READING

Turtles All the Way Down: The Paradox of Infinity & Other Great Mathematical Problems: Profound mathematical ideas are often embedded in deceptively simple questions. In this course we'll see how natural questions like how can you make a square with double the area of another square?...how can you measure the circumference of a circle?...how does light reflect off a curved mirror?...are more numbers rational or irrational?...lead to some of humanity's deepest ideas. The central theme of this course will be the problem of infinity. Much of the course will touch on subjects that students usually don't see until college or graduate school, such as algebraic geometry, algebraic and transcendent numbers and cardinalities of infinity, as well as Archimedean-style geometric/calculus constructions, modular arithmetic and various problems in combinatorics and graph theory, if time allows. In the end, nothing will be off limits: we'll go where our questions lead us. The course will be rigorous, but accessible to anyone with some exposure to algebra. Bring your curiosity!

Qualifications: MATH

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