

SDHXCS Enrichment Classes (才艺课)

Subject (科目): Please select one of the categories	__ Art __ Music __ Sports <u>X</u> Math __ Chess		
Course Name (课程名称):	Advanced Math Enrichment Course - PSAT/SAT Math		
Teacher Name (教师姓名)	Lillian Bu Catherine Sun	Phone	L.Bu: (858)208-9678 C.Sun: (858)735-7289
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Teacher's background and brief (教师及其简介):	<p>Lillian Bu is a senior at Del Norte High School and has been accepted to both MIT and Caltech for Applied Math. She is president of Del Norte's math club, and has actively competed in math competitions since middle school. She is a multiple time AIME qualifier and has been invited to be in the San Diego American Regions Math League team and attend MIT's Math Prize for Girls competition for multiple years. She has been an instructor at Mathnasium for the last two years and will be a math camp counselor at Texas State University in the summer. She loves working with kids, and hopes that through this class she will be able to spread her passion for the subject matter to the students and inspire them to appreciate and enjoy math as well.</p> <p>Catherine Sun is currently a senior at Westview high school and planning to study in math field in the college. She has an extended knowledge in the subject, having taken AP Calculus AB as a freshman and finished all high level math classes that the school offers. She recently took linear algebra with an UCSD extension class and was also a math teacher assistant at Westview. She is very experienced when it comes to working with children and education. She is currently a private math tutor and has been a tutor in other areas such as violin, piano, and English. She is currently a swimming instructor at the Rancho family YMCA, with multiple group lessons and private lessons. She is also an experienced coach for Middle School and High School Science Olympiad teams for many years. As a teacher, she hopes to inspire children to become more interested in mathematics and to excel in the subject through more focused training and repeated practice.</p> <p>Holly Jing has a BS degree in Physics and MS and PhD degrees in Biophysics. She has been teaching competitive math programs in elementary schools since 2014. She founded Math Club at Ocean Air Elementary school, where ~100 students from 4th, 5th, and 6th graders met weekly with parent volunteers who shared the teaching responsibilities. Her 6th grade team achieved excellent scores in Noetic, Math Olympiad (MOEMS), and MATHCOUNTS math Contests. In September 2016, she and Ms. Jenny Sun opened after-school math programs at ICL Academy, and their students have achieved outstanding scores on Noetic Fall Contest. Ms. Jing strives to inspire the interests of students through hands-on activities and interactive discussions. She will also be responsible for coordinating with Hua Xia, designing math program, organizing the placement test and open house, supervising teaching staff, and communicating with parents and students regularly.</p>		

	<p>Jenny Sun has a BS degree in Applied Science and MS degree in Theoretical Physics. She was a certified college teacher in China, gained teaching experiences from middle schools and Universities back in China. She has a passion on teaching young kids and inspiring their interests to math from an early age. In 2015, she co-coached Oak Valley Middle School's Math Count team; the team has achieved high rank in Southern California's competition. Currently, she is teaching Math Olympia course for student age from 9 to 11 in ICL with Holly Jing.</p> <p>Ms. Jing and Ms. Sun will guide and assist Lillian Bu and Catherine Sun in the PSAT/SAT Course.</p>
<p>Course brief and Description</p> <p>(课程简述):</p>	<p>We will teach 14 sessions from Feb. 5th to May 14th. The topics of each week are listed below (subject to changes based on progress).</p> <p>Heart of Algebra:</p> <ul style="list-style-type: none"> - Create, solve, or interpret a linear expression or equation in one variable - Linear inequalities - Algebraically solve linear equations (or inequalities) in one variable or two in two variables - Interpret the variables and constants in expressions for linear functions within the context presented - Understand connections between algebraic and graphical representations <p>Problem Solving Data Analysis:</p> <ul style="list-style-type: none"> - ratios, rates, proportional relationships, and scale drawings - percentages - relationship between two variables to investigate key features of the graph - linear growth and exponential growth - scatterplots and graphs - statistics shape, center, and spread <p>Advanced Math:</p> <ul style="list-style-type: none"> - quadratic and exponential functions - polynomial expressions - rational expressions - nonlinear relationship between two variables - interpret statements using function notation <p>For students who have already mastered the above concepts:</p> <ol style="list-style-type: none"> 1. Math Level II Pre-test 2. Functions (Linear and Quadratic) 3. Polynomials (Higher Degree Polynomials and Solving Polynomial Inequalities) 4. Trigonometry 5. Functions (Exponential, Logarithmic, Rational, Piecewise) 6. Geometry (Transformations, Symmetry, Conic Sections) 7. Three-Dimensional Geometry 8. Complex Numbers and Polar Coordinates 9. Matrices 10. Sequences and Series

	11. Vectors 12. Statistics 13. Counting and Probability 14. Review and Final Test			
Course Objectives (课程目标):	Prepare students for the standardized tests that are important aspects of scholarship consideration and college applications			
Pre-requisite/Student Ages (先决要求/学生年龄要求):	8th and 9th graders			
Student Evaluation / Presentation (评分方法 (演出、比赛、展示等)):	The students will have opportunities to participate in the PSAT this fall and take the SAT Math Level II Subject test sometime throughout the year. A placement test is required for accepting and grouping students.			
Maximum Number of Students to be Enrolled (最多招生人数限制) :	Up to 18 students per class			
Course Fee (报名费 / 学费):	Registration & material fee	\$375 per semester	Special course fee	N/A