

SDHXCS Enrichment Classes (才艺课)

Subject (科目): Please select one of the categories	Computer Science								
Course Name (课程名称):	Bebra Computational Thinking Competition and Scratch Coding (Bebra 竞赛和 Scratch 编程)								
Teacher Name (教师姓名)	Paul Cao, PhD (曹英俊)	Phone (440) 320 – 2818	email cs4fun.sd@gmail.com						
Teacher's background and brief (教师及其简介):	Dr. Paul Cao is currently a lecturer in the Computer Science & Engineering Department at University of California San Diego (UCSD) who won the best teacher award at UCSD in 2021. Before coming to UCSD, he was an Associate Professor of Computer Science at Ashland University (OH). He received his Ph.D. in Computer Engineering at Duke University. Paul has extensive teaching experience at the undergraduate and K-12 levels. He is in charge of undergraduate courses such as Computer Programming I and II, Computer Organization, and Advanced Data Structure. He is well known nationally on his research on Computer Science education, especially at the K-12 level. Paul Cao 目前是加州大学圣地亚哥分校 (UCSD) 计算机科学与工程系的讲师, 他于 2021 年获得 Jacob 工程学院最佳教师称号。在加入加州大学圣地亚哥分校之前, 他是亚什兰大学的计算机科学副教授。他具有杜克大学计算机工程专业的博士学位。Paul 在本科和 K-12 教育领域拥有丰富的教学经验。他在 UCSD 负责发展本科课程, 如计算机编程 I 和 II, 计算机组织和高级数据结构。他在美国计算机科学教育, 尤其 K-12 教育研究领域享有较高声誉。								
Course brief and Description (课程简述):	This class will first introduce computational thinking to our students to compete in the annual Bebra Computational Thinking Competition (https://www.bebrachallenge.org/) and students are expected to complete in Dec 2025 (online competition with proctoring). In the second half of this class, we will focus on scratch coding (https://scratch.mit.edu/) and students will reinforce their basic computational training through block-based coding. Interesting and creative games and multimedia stories will be developed by our students. 本课首先教授学生计算理念, 并且培训孩子参加年度的 Bebra 竞赛。竞赛预计在 2025 年 12 月进行 (在线比赛, 有监考)。课程下半段注重 Scratch 编程培训, 用 Block 编程语言促进孩子对于计算方法的理解。Scratch 编程会让学生编写有趣的游戏和表达自己创造的故事。								
Course Objectives (课程目标):	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">2D map creation and visualization</td> <td style="width: 50%;">Ice Slider Game</td> </tr> <tr> <td>Pong Game</td> <td>Cookie Clicker Game</td> </tr> <tr> <td>Story Telling with Music</td> <td>Suika Watermelon Game</td> </tr> </table>			2D map creation and visualization	Ice Slider Game	Pong Game	Cookie Clicker Game	Story Telling with Music	Suika Watermelon Game
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Pre-requisite/Student Ages (先决要求/学生年龄要求):	7 years old to 18 years old 7 岁到 18 岁			
Student Evaluation / Presentation (评分方法 (演出、比赛、展示等)):	The evaluations will be based on regular homework assignments and final projects. 根据学生完成与否定期的家庭作业和最终项目给予期末评估。			
Maximum Number of Students to be Enrolled (最多招生人数限制):	Min: 5 Max: 15			
Course Fee (报名费 / 学费):	Registration & material fee	\$600/Year	Course Time & Location	Sundays 11:30 Am – 12:20 Pm Building S5