# **Upper School Offerings**

## 2019-2020

## Of Special Note

#### The Center for Community Engagement ►

Established in 2013, the Center for Community Engagement provides students with opportunities to explore civic engagement on a personal level with internships and summer opportunities. The goal of the center is to help students form authentic partnerships with organizations that promote social change and encourage leadership training in fields such as global education, government, medicine and STEM research (science, technology, engineering and math).

#### Computer Science ►

The goal of our four-year computer science program is to introduce students to computational thinking and software development through problem and projectbased learning. After completing Computer Science prerequisites, students can take year-long courses in data structures and other advanced topics such as networking, data science, or cybersecurity. Each year, students complete two design projects that are independently prototyped and designed. Students regularly continue their education through a summer internship or a senior project based around software development.

#### Other STEM Opportunities ►

In addition to our electives in engineering and robotics, we field an award-winning Upper School VEX Robotics Team that competes in regional and national tournaments. The Computer Science Club also actively competes in local and international competitions such as the American Computer Science League and the United States Computing Olympiad. In recent years, we expanded our Technology Internship Program with students gaining practical experience in jobs both on and off campus. Students are encouraged to participate in science fair competitions, and engineering students design and construct original projects at our annual "Engineering Expo."

#### Debate 🕨

The School's debate program is entering its fourth decade and provides extensive opportunities for students interested in both policy and public speaking competition. Students may elect to compete locally or travel nationally as part of the advanced team which competes in tournaments throughout the year.

### Our Academic Program

Typically students take five academic subjects each semester, and most take an elective as well. Our AP courses are designed for juniors and seniors. On average, Head-Royce students graduate having taken three AP classes.

Some departments design their own advanced courses in lieu of the AP curriculum. For instance, all of our semester-long senior English and History electives resemble college seminars in content, style, and expectations, and require a significant amount of reading and analytical writing. We consider the following courses as rigorous as AP equivalents: all senior English and History courses, Neurobiology, Molecular Genetics, Economics, Multivariable Calculus, Advanced Computer Science: Data Structures, French Cinema and Literature, and Latin V.

The Head-Royce math curriculum is differentiated and rigorous, and fully prepares our students for college-level math. All of our calculus classes provide an outstanding foundation for college calculus, statistics, and science.

### **Curricular Highlights and Capstone Experiences**

- **The I-Search:** In the 9th grade all students complete the I-Search, an extensive research project in which they investigate a contemporary topic through personal interviews and library internet research. In addition to submitting a 7-10 page paper, students prepare a five-minute presentation (modeled on TED talks) summarizing their project. Recent I-Search paper titles include *The Unfortunate Reality: The Physical, Emotional, and Financial Effects of Neuroblastoma, For the Last Time, What Are You? Mixed-Race Children and Identity, and Reel Revolution: Democratization of Filmmaking Tools.*
- Junior Honors Humanities Curriculum: Together, English 11 and History 11 explore the canonical literature and history of the West. Authors covered include Plato, Sappho, Montaigne, Rousseau, Chaucer, and Shakespeare, among many others. Students analyze primary sources and explore themes through seminar-style discussions and frequent analytical writing.
- **Senior Year Curriculum:** Given our robust senior electives in all departments, seniors can craft an academically rigorous fourth-year curriculum that allows them to make deep connections to topics that inspire them. When scheduling allows, a number of seniors choose to double up in language, math, science, or history.
- **Senior Projects:** In May, all seniors participate in structured internships of their choosing. Through these projects, students explore an area of personal, academic, or professional interest. Students complete 80 hours of internship work and reflect on their experiences in a presentation to the school community. Recent graduates have held internships at local businesses, laboratories, social service and arts organizations, and with corporations. Other students have pursued projects in medical research, finance, film production, architecture, engineering, online journalism, directing, teaching, and creative writing.
- **Study Abroad:** To promote a global perspective in our students, we have a network of partnerships throughout the world. We participate in School Year Abroad, which sponsors programs in China, France, Italy, and Spain. Students may also participate in other study abroad programs; most recently our students have studied in China, Cyprus, Denmark, England, Germany, Iceland, Italy, Japan, and Spain.

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Subject Requirements	Required Courses Grades 9-11		Upper Division Courses		
<b>English</b> Four years required	English 9 English 10 English 11 (H)		Senior Electives American Fiction and Poetry*+ Dramatic Literature: Family Drama*+ The Good Life: Field of Dreams*+		Japanese Literature*+ Lift Every Voice*+ Literature and Film* Memoir*+ Poetry*+ Shakespeare*+ Wit Lit: the Art of Satire*+ Women's Literature*+
<b>History</b> Three years required	History 9 U.S. History (H) History 11 (H)		AP Art History Economics+ Oakland Through Many Lenses*+ Comparative Politics*+ Environmental History*+		Ethics*+ The Bay Area*+ Islam*+ Women in Modern America*+ Democracy in Action*+
<b>Science</b> Three years required	Conceptual Physics Chemistry (H) Biology AP Biology		Advanced Chemistry: Qualitative Analysis* AP Environmental Science AP Physics C Astronomy*		Molecular Genetics*+ Neurobiology*+ Principles of Engineering Principles of Organic Chemistry* Robotics* Science Issues*
<b>Mathematics</b> Three years required	Geometry Geometry (H) Algebra 2 Algebra 2 (H) Precalculus Precalculus (H)		Calculus AP Statistics		AP Calculus AB AP Calculus BC Multivariable Calculus
World Languages					
<b>World Languages</b> Three years required; Students must complete Level 3 of one language	Chinese 2 Chinese 3 Chinese 4 (H) AP Chinese 5 (H) AP Chinese French Cir Literatur		ge nema and	Latin 1 Latin 2 Latin 3 Latin 4 (H) Latin 5 (H)+ AP Latin Seminar	Spanish 1 Spanish 2 Spanish 3 Spanish 4 (H) Spanish 5 (H) Advanced Spanish Seminar (H) AP Spanish Language
Arts Electives					
<b>Visual and</b> <b>Performing Arts</b> One year of Advanced Art required	Introductory Courses 2D Art 3D Art Introduction to Dance Drama 1 Photography Tech Theater Theater Production		Advanced Courses Advanced 2D Art Advanced Studio Art AP Studio Art Chorus Colla Voce Drama 2 Graphic Design		AP Music Theory Advanced Dance Jazz Band Advanced Jazz Band Photography 2 Photography 3 Filmmaking Filmmaking: Advanced Projects
Other Electives					
Computer Science	Intro. to Computer Science and Engineering Algorithms and the Internet Mobile and Object-oriented Design		Advanced Computer Science: Data Structures+		Advanced Topics in Computer Science+
Humanities Electives	Expository Writing Speech and Debate 1 Speech and Debate 2				
Global Online Academy	Head-Royce is a founding member of Global Online Academy (GOA), a consortium of leading independent schools from around the world whose mission is to translate into online classrooms the intellectually rigorous programs and excellent teaching that are hallmarks of its member schools.				

\*Semester-long senior elective. 2) \*Designates courses considered as AP equivalents, including all senior English and History courses.
We offer a total of 13 AP courses. AP courses are offered in math, science, foreign language, and the arts.