

'Iolani STEM camp focuses on the development of 21st Century learning skills in the Sullivan Center for Innovation and Leadership, a 40,000 square foot STEM education facility. The academic courses provide tremendous opportunities for students to utilize the cutting edge resources available throughout campus. Exposure to drones, laser cutting, computer programming and more ensure there is something of interest for all inquisitive young minds.

### **STEM Camp Course Overview**

#### **Drone Design, Building, & Racing**

This course is geared towards the highly technical student with an interest in mechanics and theory of aviation. During the two-week camp, students will develop an understanding of aviation, engineering and drone theory, become familiar with design, assembly and mechanics of various types of First Person View (FPV) drones, learn about drone racing safety practices, and practice basic drone flight maneuvers including hovering, takeoffs, and landings. Each day students will be developing their skills through simulator practice, indoor flight training with learner drones, assembly of racing drones and flight time with their own FPV racing drones on a professional race course. The course will culminate in a drone racing event on the final day of the class. Students will take home complete sets of both the FPV learner drone as well as the FPV racing drone they assemble during the course.

#### **Introduction to Laser Cutting**

Bridging art and technology, this course is an introduction to digital design specifically for laser-cutting. Students will work extensively with 2D software programs to design and create various laser-cut projects using a variety of materials in the fabrication lab. The class will begin by exploring graphic design and build their way up to visualizing how 2D pieces can come together to create 3D objects. Students will practice design thinking and develop the skills necessary to see an idea through from design to fabrication.

#### **Game Academy 3D**

Do you like to play video games, build 3D models and program your own world? In this course, students research and create a 3D game in their self-made virtual world while being introduced to the Autodesk Maya program. Students use their creativity and develop skills in core academics, brainstorming, computer programming, project management, and teamwork - lifelong skills that apply to a wide range of careers in digital media and beyond.