

Hawai'i Island Robotics Academy (HIRA)



Equipping the next generation of engineers and technical work force through hands on, minds on learning. Engineering and technology are everywhere. They give shape to our world. Engineers have a hand in designing, creating, or modifying nearly everything we touch, wear, eat, see, and hear in our daily lives. Their innovations fuel economic growth, fortify national security systems, improve healthcare, and safeguard the environment. An engineering and technology education starts with a creative child's first lesson in science or math. With U.S. science and math learning in decline and technology increasingly driving global change, the job of delivering this education is harder, but more important, than ever. A new generation of engineers is needed, a generation that reflects the vast potential and rich diversity of the new American workforce, a generation that will keep America's science and technology enterprise hitting on all cylinders, and a generation that will chart new paths of learning and discovery in the ongoing American endeavor of improving conditions of life for the country and the world. Engineering in the K-12 Classroom, An Analysis of Current Practices & Guidelines for the Future, The American Society for Engineering Education (November 2004).



A program developed and sponsored by the award winning Waiakea High School's Engineering Academy and Robotics Club
<http://www.waiakearobotics.com/>

Why robots and robotics?

- *Increases the technological literacy of students and adults by making abstract concepts concrete.*
- *Strong motivator for mathematics and science learning, leading to careers in science, technology and engineering with ultimate impact on national security, the economy, and leadership in development of future technologies.*
- *Excellent platform for problem/project based learning.*
- *Catalyst for integrating knowledge from all disciplines, including mathematics, science, social studies, English language arts, art, etc.*
- *Sports like games and challenges with culminating tournament sports for the brain....keeps students engaged after school and on weekends (keeping them drug free).*
- *Develops team work, communication skills, critical thinking skills.*
- *The current and other programs provide a variety of opportunities in robotics for elementary and secondary and availability of funds.*
- *Potential for international participation, with Hawaii as the hub of robotics tournaments, exhibitions, and professional conferences on robotics.*

The Hawai'i Island Robotics Academy (HIRA) is a 5 day, 4 hour per day experience in which students design, build and test various technology applications including robots and other devices. Students in session 2013A will be introduced to programming and robots as tools in solving problems and challenges using the **LEGO® Mindstorms NXT Robotics Invention System™** which uses a computer programming language for(grades 3-4 and VEX robotics for grades 5-6.) Another module in 2013A will also allow our students to be the first in Hawaii to try robotic kits from Artec Educational which students will explore (this includes a simple line tracking robot, Eco lantern and walking robot)and then take home for further investigation. For the afternoon class, Session 2013B, we'll also be exploring the simple line tracking robot, Eco lantern and walking robot plus a push button programmable robot, a program controlled tracer robot and a simple solar car. Students in 2013B will be able to take these kits home at the completion of the program.

Session 2013A, HIRA: July 9-13, 2013 (Tue-Sat), 8:00 a.m.-12:00 p.m.

(HIRA Eligibility): Students in Grades 3, 4, 5, 6 (as of January 1, 2013)

Session 2013B, HIRA, Advanced: July 9-13, 2013 (Tue-Sat), 1:00 p.m.-5:00 p.m.

HIRA Advanced Eligibility: Students in Grades 6, 7, 8 (as of January 1, 2013)

Location: Waiakea High School, Hilo, HI (Building H, room 106)

Instructors: Dale Olive, Eric Hagiwara, and Tom Murphy, Waiakea High School Engineering Academy

Tuition: **\$175.00** for HIRA and **\$200** for HIRA, Advanced



Enrollment Information Enrollment presently being accepted. Limited space. A penalty fee will be assessed for returned checks. Reservations are confirmed on a first come, first served basis until all spaces are filled; subsequent enrollees will be placed on a waiting list. **No substitutions are allowed.** No new confirmations will be made within 2 weeks of the session start date. Upon receipt of the Enrollment Form and tuition check (payable to WHS Robotics), applicants will be sent a confirmation along with information applicable to the program. **Mail check and enrollment form to: Sheri Kojima, Hawai'i Island Robotics Academy, Waiakea High School, 155 West Kawili Street, Hilo, HI 96720.** For further information, please contact Dale Olive@notes.k12.hi.us or call (808) 974-4888 extension 274 after school hours.

Refund Policy: A cancellation fee of \$75.00 will be assessed for all registration cancellations if **written** notice is received three or more weeks before the first day of the session (if less than three weeks, the full tuition will be forfeited). There will be no partial or full refunds due to partial or full non-participation by the student due to illness or injury, voluntary withdrawal, or for any changes in program activities caused by circumstances beyond the control of the Waiakea High School Robotics Club, the Waiakea Kea High School Business Academy, and Waiakea High School. A penalty fee will be assessed for returned checks. Reservations are confirmed on a first come, first served basis until all spaces are filled; subsequent enrollees will be placed on a waiting list. **No substitutions are allowed.** No new confirmations will be made within 2 weeks of the session start date. Upon receipt of the Enrollment Form and tuition check, applicants will be sent a confirmation along with additional forms and information applicable to the program.



2013 Hawai'i Island Robotics Academy Enrollment Form



Please print. Incomplete applications cannot be processed and will be returned.

Student's Last Name _____ First _____ Grade (as of Jan 1, 2013) 3 4 5 6 7 8

Check Session(s) attending: _____

Selection	Session	Program	Dates	Tuition	Grade Level
	(2013A)	(HIRA)	(July 9-13 (Tue-Sat), 8:00a-12:00p)	(\$175)	(3-6)
	2013B	HIRA Advanced	July 9-13 (Tue-Sat), 1:00p-5:00 p	\$200	6-8

Mailing Address _____ Gender *Male Female*

City _____ State _____ Zip Code _____

Home Phone Number () _____ Age 8 9 10 11 12 13 14

Parent's Email Address _____ School Currently Attending _____

Father's Name _____ Business Phone () _____

Mother's Name _____ Business Phone () _____

Student T Shirt Size	Adult	X Large	Large	Medium	Small
CIRCLE ONE	Child	Large	Medium		

MUST COMPLETE THE FOLLOWING: In case of emergency (and parents are not available), please contact:

Name	Relationship	Phone
Family Doctor	Phone	
Medical Insurance plan	Membership number	
Name of Person(s) Picking Up Student	Phone(s)	
Please Provide Medical/Health Concerns:		

ACCIDENT, MEDICAL, AND MEDIA RELEASE

We, _____ (names of parents or guardians), parents of _____ (name of student), who is attending the *Hawai'i Island Robotics Academy* session, release all officers/directors/staff members/students and teachers of *Hawai'i Island Robotics Academy*, the *Waiakea High School Engineering Academy and Robotics Club*, the *Waiakea High School Business Academy*, *Waiakea High School*, and all other sponsoring agencies and/or organizations and volunteers of any claim for damages, liability, injury, expense, or loss on account of any negligence or other wrong doing that may occur while our child is attending *Hawai'i Island Robotics Academy*. We also agree to indemnify and hold harmless those persons of the above stated organizations on any claim arising out the *Hawai'i Island Robotics Academy* activities under this agreement. In case of accident or need for medical attention, we give permission to the *Hawai'i Island Robotics Academy* staff members to take our child, _____ (name), to a doctor, dentist and/or emergency medical facility. It is understood that the cost for treatment will be borne by the parent or guardian.

We also hereby give permission to the *Hawai'i Island Robotics Academy*, *Waiakea High School*, to film, tape, or otherwise record our child's name, voice, and/or person. We understand that these recordings of our child may include news releases to include photographs about *Hawai'i Island Robotics Academy* and other media releases to publicize *Hawai'i Island Robotics Academy*, and open-circuit (broadcast), closed-circuit, and/or cable television transmission within or outside of the State of Hawai'i in perpetuity. We also understand that there will be no financial or other remuneration for recording our child, either for initial or subsequent transmission or playback. The *Hawai'i Island Robotics Academy* and *Waiakea High School*, may also use our child's name, likeness, and/or bibliographical identification for publicizing and promoting the use of these recordings.

Further, we have read and understand the refund policy and enrollment policy stated in the *Hawai'i Island Robotics Academy* materials.

NOTE: BOTH PARENTS or LEGAL GUARDIANS LISTED ON FORM MUST SIGN.

FATHER'S OR LEGAL GUARDIAN'S SIGNATURE (Required) DATE

MOTHER'S OR LEGAL GUARDIAN'S SIGNATURE (Required) DATE

Optional parental waiver if you do not wish to sign out students daily:

The *Hawai'i Island Robotics Academy* ends at 12:00 pm daily for HIRA or at 5:00 pm for HIRA Advanced. A parent or another authorized adult must sign out the child daily at room H106 (*Waiakea High School*). If you do not wish to sign out the student daily, please sign the waiver below.

I authorize the *Hawai'i Island Robotics Academy* staff to release my child, _____, at program conclusion (12:00 pm or 5:00 pm, Tuesday through Saturday, at *Waiakea High School* (Building H, room 106) without being signed out by a parent or other authorized adult.

 PARENT'S NAME SIGNATURE DATE

Payment: Tuition must be paid in full and mailed with a completed enrollment form. Make personal check, money order, or cashier's check payable to the Waiakea High School Robotics Club.

Received on	Check no.	Check Date	Total Enclosed
-------------	-----------	------------	----------------