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# SENATE RESOLUTION

ENCOURAGING THE UNIVERSITY OF HAWAII COLLEGE OF ENGINEERING TO  
CONSIDER THE FEASIBILITY OF ESTABLISHING AN UNDERGRADUATE  
CERTIFICATE OF ROBOTICS AND EXPLORATION PROGRAM.

1           WHEREAS, the Legislature adopted Concurrent Resolution  
2 No. 131, S.D. 1 (2004) to develop, support, promote, expand, and  
3 sustain existing robotics education in Hawaii's schools to  
4 encourage students to study science and mathematics; and  
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6           WHEREAS, robotics is the practicable application of  
7 theories learned from books, calculators, and term papers that  
8 enables students to see learned concepts in action; and  
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10          WHEREAS, robotics introduces science and mathematics to  
11 children with a wide range of ability levels, including those in  
12 underserved and underrepresented communities; and  
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14          WHEREAS, the Robotics Organizing Committee, is a dedicated  
15 volunteer organization that develops, coordinates, and supports  
16 robotics education in schools across the State, with the current  
17 membership from six robotics programs; including Dr. Song K.  
18 Choi (VEX Robotics), Sara Tamayose and Aaron Dengler (FIRST Lego  
19 League), Art Kimura (Botball), Alexander Ho (FIRST Robotics),  
20 Mark Rongstad and Cindy Fong (Underwater ROV), and Eric Hagiwara  
21 and Dale Olive (Micro Robotics); and  
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23          WHEREAS, the Robotics Organizing Committee is assisted by  
24 state government and local businesses and enjoys widespread  
25 community support from teachers, parents, mentors, and other  
26 volunteers who generously devote their time and expertise; and  
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28          WHEREAS, enthusiasm for robotics education has grown and is  
29 embraced by students across the State in all grade levels, and  
30 its popularity is demonstrated by the increased availability of  
31 programs in Hawaii's primary, middle, and high schools, which  
32 grew from ninety-five teams in January 2008 to over three  
33 hundred just a year later; and  
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1           WHEREAS, robotics education stimulates interest in science  
2 and math that is needed in our country to motivate students to  
3 pursue careers in science, technology, and engineering; and  
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5           WHEREAS, the energy and excitement that comes from hands-on  
6 learning experience with robotics transforms theories into  
7 working models and generates a thirst for knowledge in science  
8 and math to motivate students to pursue highly-skilled and high-  
9 paying jobs in robotics, electronics, engineering, and other  
10 careers; and  
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12           WHEREAS, as students work toward these careers through  
13 robotics education, they will also develop critical thinking,  
14 team work, and problem-solving skills to allow them to compete  
15 globally; and  
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17           WHEREAS, the Hawaii Botball regional tournament is the  
18 largest in the United States, with forty-two participating teams  
19 consisting of over four hundred students, teachers, and mentors;  
20 and  
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22           WHEREAS, younger students in the FIRST LEGO League build  
23 and program robots and prepare presentations on their design and  
24 construction, with the objectives typically centered around  
25 global challenges; and  
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27           WHEREAS, Hawaii has hosted national, Pan-Pacific, and  
28 international events that provide young students with action-  
29 packed tournaments and competition from the mainland and other  
30 countries; and  
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32           WHEREAS, local high school students have earned the  
33 privilege of competing in national and international robotics  
34 championships, having successfully created and built  
35 innovatively designed robots that have caught the imagination of  
36 other students; and  
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38           WHEREAS, Hawaii students participating in robotics have  
39 received fully paid NASA internships at NASA Robotics Academies  
40 and are eligible to apply for college scholarships sponsored by  
41 corporations and other entities; and  
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43           WHEREAS, the robotics aptitude and academic abilities of  
44 Hawaii's students have impressed prominent scientific

1 professionals, for example, in a 2008 tournament, in Nagoya,  
2 Japan, Hawaii high school students placed second against  
3 university students and were invited by the President of the  
4 California Institute of Technology to participate in an  
5 intensive summer mathematics and science program at the  
6 university; and  
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8 WHEREAS, competition is thrilling, and students with little  
9 previous interest in robotics are now realizing that a career in  
10 science, technology, engineering, or mathematics is not only  
11 possible, but satisfying as well; and  
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13 WHEREAS, the wave of enthusiasm surrounding robotics is  
14 encouraging and great news for the United States, especially  
15 with the tremendous need for engineers in this country; and  
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17 WHEREAS, developing young peoples' capacity for innovation  
18 through robotics education trains them to adapt to the changing  
19 times and ensures a bright future for the State; now, therefore,  
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21 BE IT RESOLVED by the Senate of the Twenty-fifth  
22 Legislature of the State of Hawaii, Regular Session of 2009,  
23 that the Legislature encourages the College of Engineering of  
24 the University of Hawaii to consider the feasibility of  
25 establishing an undergraduate certificate program for robotics  
26 and exploration, so that Hawaii's young people may continue  
27 their education and training in this field; and  
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29 BE IT FURTHER RESOLVED that the College of Engineering work  
30 with the Vice Chancellor for Academic Affairs at the University  
31 of Hawaii at Manoa regarding issues related to compliance with  
32 the University's academic standards and accreditation policies;  
33 and  
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35 BE IT FURTHER RESOLVED that the University of Hawaii is  
36 requested to submit an initial report on the feasibility of  
37 establishing the robotics and exploration certificate program to  
38 the Legislature no later than twenty days prior to the convening  
39 of the Regular Session of 2010, and a final report no later than  
40 twenty days prior to the convening of the Regular Session of  
41 2011; and  
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43 BE IT FURTHER RESOLVED that certified copies of this  
44 Resolution be transmitted to the President of the University of

- 1 Hawaii, the Chairperson of the Board of Regents of the
- 2 University of Hawaii, the Chancellor and Vice Chancellor for
- 3 Academic Affairs of the University of Hawaii at Manoa, and the
- 4 Dean of the University of Hawaii College of Engineering.