



UNIVERSITY OF HAWAII SYSTEM

Legislative Testimony

Testimony Presented Before the House Committees on Higher Education and Human Services & Housing

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State Capitol, Conference Room 309

by
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Presented by
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SB2480, SD2, HD1 – RELATING TO TECHNOLOGY WORKFORCE AND DEVELOPMENT

Chair Jerry L. Chang, Vice Chair Joe Bertram, III and Members of the Committee on Higher Education;

Chair Maile S. L. Shimabukuro, Vice Chair Karl Rhoads, and Members of the Committee on Human Services and Housing:

I appreciate the opportunity to provide testimony in support of SB2480, SD2, HD1 and commend the commitment of the Legislature to provide the opportunities and resources required to advance STEM education and experiences through various successful programs.

We are keenly aware of the variety of programs and the number of organizations involved in advancing Science, Technology, Engineering and Mathematics (STEM). Robotics, RET, Project EAST, HiEST Academies, STEM teacher development, creative media program and numerous other initiatives provide for a variety of engaging STEM experiences.

The passing of ACT 111 resulted in statewide implementation of the Administration's Innovation in Education Initiative – Fostering Innovation and Relevance through Science and Technology – Pre-Academy Program. The robotics competitions will provide hundreds of students and teachers with hands on experience as problem solving members of a robotics team and bring them in contact with peers from across the state and nation.

The Research Experiences for Teachers – Middle School Program is a cross-disciplinary educational partnership driven by the needs and requirements of teachers, and by technological advancements in engineering, specifically in advanced wireless

communications. It is a unique model which will bring innovation and excitement into the middle schools classrooms.

We want to take this opportunity to recognize our faculty, Dr. Magdy Iskander who together with his graduate and undergraduate students took a small pilot National Science Foundation RET program and transformed it into a model which is gaining national interest. RET has already made a difference in five public middle schools and engaged 15 teachers and just over 900 students with state-of-the-art wireless communication tools and lab content. The number of schools is expected to more than double by the end of the academic year. We think it's quite remarkable to have internationally renowned faculty working together with middle school teachers to bring the exciting field of advanced communication, electro-magnetic spectrum, signal strength processing, and antenna design to the middle school level. These technologies and content areas are the guts behind the "toys" our pre-teen and teenagers grow up with. The subject supports the content standards and is made relevant by means of its exciting applications.

We are encouraged by the State's commitment to STEM learning and look forward to extending the pipeline through the postsecondary level.

Entering the next century Hawai'i faces a serious shortage of engineers required to support our high technology, construction, and infrastructure related State and City agencies. The shortage of engineers and technical talent is a national crisis and one which is being addressed by major government and industry stakeholders. Locally, the high demand for engineering graduates at the College's twice-yearly career fairs is a key indicator that the shortage is real and current.

In closing, I'd like to take a moment to also remind you that our top priority this year is addressing the urgent repair and maintenance of our facilities. If Mānoa is to continue to blossom and support program such as this, we must have support to repair and maintain our facilities. We must enhance our efforts to become a destination of choice for student, faculty, and staff, the citizens of Hawai'i and beyond. We look forward to a productive partnership.

Thank you for the opportunity to testify. We appreciate your interest and support for Hawai'i's premier institution of higher learning.