From: Dr. Michael P. Crosby [mpcrosby@hawaii.edu]

**Sent:** Thursday, April 02, 2009 9:22 PM

To: HRE Testimony; Sen. Jill Tokuda; Sen. Norman Sakamoto; Sen. Roz Baker; Sen. Russell Kokubun; Sen.

Dwight Takamine; Sen. Brian Taniguchi; Sen. Sam Slom

Cc: Rose Tseng; 'Gerald De Mello'; William W M Steiner

Subject: comments scr153 sr105

Attachments: 030209 scr153 uh hilo revise.doc

Aloha Chair Tokuda, Vice Chair Sakamoto and Members of the Senate Committee on Higher Education,

Mahalo nui for allowing me the opportunity earlier today to provide, on behalf of myself and Dean William Steiner, a few comments and suggested revisions regarding SCR 153 and SR 105. As per your request at today's hearing, I am providing you with a written version of our verbal comments and suggested revision as follows (and attached):

We support these resolutions with the assumption that they will help the University of Hawaii at Hilo achieve its vision for establishing an applied-oriented undergraduate B.S. degree program in engineering with foci on not only teaching, but also on providing "hands-on" undergraduate research and training opportunities while stimulating S&T economic development for Hawaii in the fields of sustainable energy, food security, robotics and data manipulation. The rich history of Native Hawaiian engineering accomplishments from construction of ocean-going vessels, to astronomically aligned heaus in both marine and terrestrial locations, to complex fish-pond aquaculture construction extending from land into the ocean, would all serve as significant components of the envisioned UH Hilo degree program and help to link the utility of engineering in today's society to the cultural foundations of the diverse population of Hawaii.

For your consideration to possibly strengthen the impact of SCR 153 and SR 105 towards achieving such a vision, and in consideration of Chapter 226 of the Hawaii Revised Statues which sets forth guidelines for the future long-range development of the State, we respectfully offer several modifications to the resolutions that are highlighted within the attached "track changes" enabled WORD document.

Thank you again for your consideration of our comments and suggestions. Michael

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## SENATE CONCURRENT RESOLUTION

REQUESTING THE UNIVERSITY OF HAWAII SYSTEM, IN CONSULTATION WITH THE COUNCIL OF CHIEF ACADEMIC OFFICERS, UNIVERSITY OF HAWAII SYSTEM VICE PRESIDENT FOR RESEARCH, UNIVERSITY OF HAWAII AT HILO VICE CHANCELLOR FOR RESEARCH, AND UNIVERSITY OF HAWAII AT MANOA VICE CHANCELLOR FOR RESEARCH, TO DEVELOP A COMPREHENSIVE APPROACH TO THE TEACHING AND TRAINING OF ENGINEERING AT UNIVERSITY CAMPUSES STATEWIDE.

WHEREAS, the State's economic development goal of encouraging an innovation-based economy relies on workforce proficiencies in science, technology, engineering, and mathematics and requires that students have broad opportunities to learn the advanced skills necessary to succeed in a more complex society; and

WHEREAS, currently the University of Hawaii System offers a number of engineering programs statewide, ranging from applied technical education programs at the Community Colleges to Bachelor, Master, and Doctoral Degree programs at the University level; and

WHEREAS, further development of engineering programs is a matter of statewide concern and would provide wide-ranging academic and economic opportunities for the State; and

WHEREAS, additional engineering programs would address state needs for a skilled workforce with both experience and training in high priority areas for science and technology economic development in the State; and

WHEREAS, it is essential for the future long-range development of the State to develop, promote and support science, technology, engineering and mathematics (STEM) research, educational and training programs on Neighbor Islands that seek to attract and develop new, potentially growth science and technology-oriented industries,

WHEREAS, additional engineering curriculum offerings would allow the University of Hawaii System to excel in applied and basic science, technology, engineering, and mathematics research fields that provide the hands-on experiences essential for its

graduates to be competitive in the global discovery and innovation enterprise; now, therefore,

IT RESOLVED by the Senate of the Twenty-fifth Legislature of the State of Hawaii, Regular Session of 2009, the House of Representatives concurring, that

the University of Hawaii System, in consultation with the Council of Chief Academic Officers, University of Hawaii System Vice President for Research, University of Hawaii at Hilo Vice Chancellor for Research, and University of Hawaii at Manoa Vice Chancellor for Research, is requested to develop a comprehensive approach to the teaching and training of engineering at University campuses statewide; and

BE IT FURTHER RESOLVED that in developing a comprehensive approach to the teaching and training of engineering statewide, the University of Hawaii System is requested to include, but not be limited to the following considerations:

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- (1) An assessment of engineering academic and workforce needs in the
- (2) Ensuring the provision of adequate and accessible engineering education and facilities that are designed to meet the science and technology-oriented economic development opportunities and needs of Neighbor Island communities;
- (2) The cost of program implementation on a statewide, campus-bycampus basis, including the current budgetary environment, initial implementation, and a review of continuing operational costs;
- (3) Potential articulation and transfer among campuses;
- (4) Academic considerations, such as accreditation and faculty availability, and how the effort fits with existing or planned programs at other campuses;
- (5) An evaluation of the current proposals by the University of Hawaii at Hilo to establish an applied-oriented undergraduate B.S degree engineering program that focuses on sustainable energy, food security, robotics and data manipulation while weaving throughout this program concepts of indigenous engineering from Native Hawaiian and broader Pacific Islander cultures, and Maui Community College to establish an engineering technology program; and

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Deleted: at Maui Community College

(6) A proposed implementation schedule; and

BE IT FURTHER RESOLVED that the University of Hawaii System is request to submit its findings and recommendations, including any budgetary requests and proposed legislation, to the Legislature no later than twenty days prior to the convening of the Regular Session of 2010; and

BE IT FURTHER RESOLVED that certified copies of this Concurrent

## S.C.R. NO. 153 revised UH Hilo 030209

Resolution be transmitted to the <u>Chairperson of the Board of Regents</u>, President of the University of Hawaii System, Council of Chief Academic Officers, <u>University of Hawaii System Vice President for Research</u>, <u>University of Hawaii at Hilo Vice Chancellor for Research</u>, and <u>University of Hawaii at Manoa Vice Chancellor for Research</u>.

**Deleted:** and Chairperson of the Board of Regents