Overview
As the only ABET-accredited engineering college in the State of Hawai‘i, the College of Engineering at the University of Hawai‘i at Mānoa holds a primary objective to provide students in Hawai‘i and beyond excellent academic and research opportunities. The College has approximately 1,200 undergraduate students, 150 graduate students, and 54 faculty. Since opening its doors over 100 years ago, the UH Mānoa College of Engineering has graduated over 10,000 engineers.

Vision
The College of Engineering at the University of Hawai‘i at Mānoa is an indispensible facet of sustainable living in Hawai‘i and the Asia-Pacific region. It is recognized as leading the development of infrastructure improvements to meet the increasingly complex needs of our society.

College Website:
http://www.eng.hawaii.edu

STEM Degree Programs:
Civil & Environmental Engr. (BS, MS, PhD)
Computer Engineering (BS) – joint with Natural Science
Electrical Engineering (BS, MS, PhD)
Mechanical Engineering (BS, MS, PhD)

STEM Education Funding since FY2012:
$3,847,961+

STEM Profile:

Total STEM Enrollment (Fall 2016)*
1,492
% Women
22%
% Native Hawaiian
14%

STEM Degrees Awarded (2015-16)
Bachelor’s
243
Masters
40
Doctorate
14

* Calculated based on STEM education grants in ORS reports. Multi-campus grants are listed under PI’s institution
* Enrollment counts excludes students not home-based at this campus
Selected STEM Education Projects and Activities

Creating Engaged STEM Pathways for Hawai‘i’s Underrepresented Students from High School to College Degree Completion (HESTEMP)

This project will initiate and develop STEM-centered activities in order to create and establish engaged and sustainable educational pathways for Hawai‘i’s underrepresented and underserved students from their high school to pursuing and achieving their advanced degrees in STEM fields. The proposed project is given the acronym HESTEMP (Hawai‘i’s Engaged STEM Pathways).

Vertically Integrated Projects (VIP) Program Consortium

The UHM College of Engineering is a member of the VIP Consortium, which consists of 14 Universities across the country, led by Georgia Institute of Technology funded through the Helmsley Foundation. The VIP model aims to transform undergraduate STEM Education by leveraging faculty research interests with real-world engineering design experiences in the curriculum. VIP Program consists of research teams that are vertically integrated and include a faculty mentor, graduate student researchers, and undergraduates from sophomores to seniors. The teams are large (10-20 undergraduates), the projects are long-term, academic credit is earned, and based on an externally funded research topic. Hawai‘i VIP research themes include: Robotics, Space & Astronomy, Rapid Prototyping and Makery, and Sustainability.

Engineering Outreach

The College has been heavily involved in outreach to the Hawai‘i K-12 schools with at least three major events per year held at the College, and many visits to schools and career fairs around the state. The College has a full time staff member devoted to Science, Technology, Engineering and Mathematics (STEM) outreach. The State of Hawai‘i passed enabling legislation in the form of ACT 111 that allows it to fund STEM outreach and the College subsequently received ~$6M from the state to pursue STEM outreach from 2008–2011, including research experiences of teachers and robotics programs.

Broadening Participation of Native Hawaiians for Engineering Faculty Careers

This project, funded by the NSF Division of Engineering Education and Centers, develops an integrated educational model that will investigate the matriculation of (Native Hawaiian) engineering students to seek academic careers.

To learn more about these STEM Education projects, please contact: Dr. Song Choi (schoi@hawaii.edu); (808) 956-6597