



THE ENGINEERING CONSORTIUM AT THE UNIVERSITY OF HAWAII

Participating Programs and Degrees

- ▶ UH Mānoa College of Engineering: BS in Civil Engineering, Computer Engineering, Electrical Engineering, Mechanical Engineering; Pre-Engineering, Native Hawaiian Science and Engineering Retention Program
- ▶ UH Mānoa College of Natural Sciences: BS in Information and Computer Science, Mathematics, Physics and Chemistry
- ▶ UH Mānoa College of Tropical Agriculture and Human Resources: BS in Biological Engineering.
- ▶ UH Hilo: BA in Chemistry, Physics, and Math, BS in Computer Sciences, Pre-engineering program, BS in Engineering Science (proposed)
- ▶ UH West O'ahu: Pre-engineering courses
- ▶ Hawai'i Community College: AS in Natural Science (proposed)
- ▶ Honolulu Community College: AS in Construction Management
- ▶ Kapi'olani Community College: AS in Natural Science with a concentration in engineering
- ▶ Kaua'i Community College: AS in Natural Science (proposed)
- ▶ Leeward Community College: AS in Natural Science with a concentration in engineering
- ▶ UH Maui College: AS in Natural Science, AS in Electronic and Computer Engineering Technology, BAS in Engineering Technology
- ▶ Windward Community College: AS in Natural Science (proposed)

Consortium Director

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Consortium Coordinator

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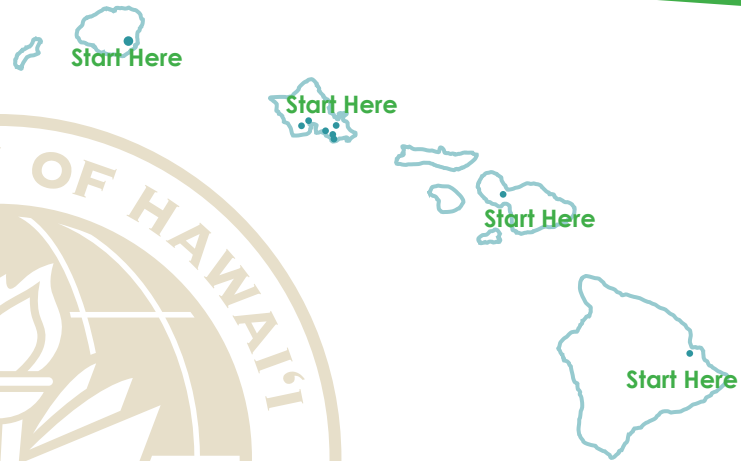
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The primary goal of the **Engineering Consortium** is to assist and promote the recruitment, retention and graduation of engineering students across the UH system, regardless of their starting point in the UH system.

Meeting a Hawai'i Need:

Engineering and related fields in the physical sciences play a major role in the economic diversification of the Hawai'i economy. The Engineering Consortium is formed from representatives of all UH campuses and is focused on meeting the work force needs of Hawai'i in engineering and related fields, and the physical sciences. It collaborates with UH campuses and industry in Hawai'i to create and expand pathways to careers in engineering and related disciplines in Hawai'i.

Consortium Activities:

- ▶ Promote the graduation of physical science based majors in Science, Technology, Engineering and Mathematics (STEM) disciplines across the UH system.
- ▶ Offer required pre-engineering courses across the UH System to ensure that students from all UH campuses have access to these essential courses.
- ▶ Provide a forum for discussion on the best practices to share and deliver course content across the UH System.
- ▶ Ensure seamless articulation among participating programs.
- ▶ Ensure thorough discussion of planned curriculum changes across the consortium participants.
- ▶ Assist retention efforts for students touched by the Consortium.
- ▶ Assist prospective transfer students to make the transition to a UH baccalaureate campus.
- ▶ Develop and maintain program data and statistics.
- ▶ Jointly pursue funding opportunities.
- ▶ Assist and promote related campus K-12 STEM outreach efforts.

The 'IKE Program

In 2010 campuses participating in the Engineering Consortium received a \$5M NSF grant to UH titled Indigenous Knowledge in Engineering ('IKE). Headed by Kapi'olani Community College, the grant supports a pre-engineering education collaborative that will assist Native Hawaiian (NH) students in completing baccalaureate degrees at the UHM College of Engineering. Its primary goals are to create:

- ▶ A Quality Pre-Engineering Core Curriculum that prepares NH students for success in progressively higher-level courses, in which calculus is effectively integrated and that are available online every semester.
- ▶ A Community of Practice in Engineering that connects NH students, mentors, and undergraduate researchers with nurturing advising, structured cohort experiences, a quality curriculum, faculty/researchers and community partners through funded positions for students, increased engagement with engineering issues and industries and communication strategies.