Mission:
The University of Hawai‘i System includes 10 campuses and educational, training and research centers across the Hawaiian Islands. As the public system of higher education in Hawai‘i, UH offers unique and diverse opportunities. Economic development UH is the State’s leading engine for economic growth and diversification, stimulating the local economy with jobs, research and skilled workers. Opportunity UH academic offerings range from certificate and vocational through doctoral programs.

University Website: http://hawaii.edu

Campus Profile:

Total Enrollment (Fall 2015)* 48,430
% Women 57%
% Native Hawaiian 24%
Degrees Awarded (2015-16) 11,680
Certificates 1,072
Associate 4,113
Bachelor’s 4,841
Masters 1,126
Doctorate 206
Professional/Other 322

STEM Profile:

Total STEM Enrollment (Fall 2015) 8,392
% Women 42%
% Native Hawaiian 16%
STEM Degrees Awarded (2015-16) 1,671
Certificates 149
Associate 325
Bachelor’s 919
Masters 190
Doctorate 84
Other 4

+ 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

Office of STEM Education:
UH system-wide leadership in support of STEM activities, and to increase student enrollment and academic success that leads to employment in STEM fields.

The new UH System Office of STEM Education (OSE) serves all 10 campuses. The office reports to the Office of UP for Academic Planning and Policy and supports the UH Hawai‘i Graduation Initiative (HGI) and Hawai‘i Innovation Initiative (HII) Strategic Directives. Project and initiatives include:

- **STEM Pathways**
  - Design and develop clear, comprehensive, articulated and purposeful academic pathways to promote STEM success from K-12 to higher education to workforce
- **Hawai‘i STEM Network**
  - The Network actively seeks to blend UH research with education and outreach initiatives throughout Hawai‘i and enables researchers to include strong Broader Impact statements and activities in their research proposals
- **SEARCH – STEM Education Assets and Resources Clearinghouse**
  - Inventory of projects, personnel, and assets related to STEM education.
- **Diversity and Inclusion**
  - Broaden participation to prepare a diverse, globally-engaged STEM workforce through coordinated UH grants and initiatives
- **Workforce Development**
  - Engaging business and industry and using labor market information to drive education and training to build Hawai‘i’s STEM talent pipeline

Welcome to the STEM Pre-Academy!
The STEM Pre-Academy fosters inspiration and relevance in Science, Technology, Engineering and Mathematics primarily through initiatives, such as teacher workshops, technical focus sessions, and collaborative interaction between middle school teachers and subject matter experts. This teacher-driven multidisciplinary program helps middle school public educators develop and implement research and technology based student curriculum including lessons, activities and projects.

The STEM Pre-Academy is a state-funded program, focused on public middle school teachers in Hawaii. [http://stempreacademy.hawaii.edu](http://stempreacademy.hawaii.edu)

College Access Challenge Grant Program – Hawaii:
The goal of the College Access Challenge Grant (CACG) is to encourage and help more low-income students in Hawaii to prepare and succeed in post-secondary education. Working closely with the Hawaii Department of Education, UH and community partners, CACG activities focus on developing students’ content knowledge, key cognitive strategies and college knowledge through academic enrichment programs, financial aid and college applications workshops, STEM activities, project-based learning opportunities and the college access web portal.

Strategic Synergies: Developing Grade 6 to Sophomore Success Pipelines for Students Underrepresented in STEM:
Faculty and researchers from EPSCoR, Campus Compact, and SENCER programs will form jurisdictional teams and attend the three-day SENCER Summer Institute (SSI) followed by the one day EPSCoR workshop.

To learn more about these STEM education projects, please contact Dr. Tiffany Tsang (tmttsang@hawaii.edu), 808-587-4085
- **IKE Program:**
  Engineering Consortium was greatly enhanced through an NSF grant to UH called Indigenous Knowledge in Engineering (IKE).

- **Hawaii’s Pre-Engineering Education Collaboration (PEEC):**
  Kapiolani CC is proposing development of a "Pre-engineering Education Collaborative" that will support 125 Native Hawaiian students completing baccalaureates at UHM College of Engineering. This is an NSF grant within Tribal Colleges and Universities Program (TCUP).

- **IDeA Network of Biomedical Research Excellence (INBRE):**
  The Hawaii IDeA Network of Biomedical Research Excellence (INBRE) aims to enhance the caliber of scientific faculty and students in Hawaii by providing a pipeline of qualified community college students interested in biomedical careers to four-year institutions.

- **PArtnerships for Geoscience Education (PAGE):**

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**Exclusion of STEM disciplines:**

**Digital Media Discipline**

While Digital Media is listed under the DHS STEM Designated Degree list, the Office of STEM Education has determined not to include it as a STEM discipline at this time. Most Digital Media faculty require a non-STEM, fine arts degree and the Digital Media curricula does not require core STEM courses such as calculus or chemistry. With the development of the Information and Communication Technology (ICT) STEM pathway for the entire UH System, Digital Media may be included within that pathway. Thus, STEM enrollments and degrees reported have Digital Media numbers removed from UH Mānoa, Hawaiʻi Community College, and Leeward Community College.

**UH Office of Public Health Studies**

Within the Office of Public Health Studies, the PhD in Epidemiology is the only discipline considered STEM based on the DHS STEM list. At this time, we were unable to identify STEM education programs or activities that support students beyond their traditional academic and research pursuits. Future editions may include activities and programs sponsored by the Office of Public Health Studies or directly enhance Epidemiology PhD students.
Other STEM-related department and disciplines:

**College of Social Sciences**

**Program for Civic Engagement (PCE)/ACCESS:**
In addition to working with faculty on including STEM, sustainability, and civic engagement components in their syllabi where applicable, PCE runs a number of service-learning programs with STEM foci. We contribute leadership, faculty know-how, college student labor and creativity, federal work-study employees, and other resources to our community partners, who in turn help give our students an experiential understanding of multiple issues. The PCE is a close partner with the System Sustainability Office and supporting curriculum development and sustainability designation efforts. It is also supporting transfer students with a combined interest in social, natural, and indigenous sciences. The programs below are used as a pedagogical tool by faculty from multiple CSS disciplines, who in this way also have a STEM component in their courses.

**The Pālolo Pipeline Program (PPP):**
The Pālolo Pipeline Program is an umbrella service-learning program supporting community development and education for underserved residents of public housing areas in urban Honolulu. It includes afterschool programs, P-12 educational entities, tenants associations, housing administration units, and many other partners. PPP has had a focus on supporting the STEM disciplines at our numerous partner institutions since 2004 and it continues to be a locus of new creative interdisciplinary programs.

**C-STEM (Cultural-Science, Technology, Engineering and Math: Professional Development for the DOE’s Kupuna Program):**
This award from NOAA for an 18-mo period of workshop, field trip, and in-class mentoring-based training to share new materials and science background for the Department of Education’s Hawaiian Studies Kupuna Program in Waikiki-area Title 1 public schools.

**Other STEM-related department and disciplines:**

**Cancer Center**

**R25T CURE Supplement:**
This minority supplement will support a postdoctoral fellow in Nutritional & Behavioral Cancer Prevention in a Multiethnic Population led by faculty at the Cancer Research Center of Hawaii and collaborators elsewhere at the University and health care organizations in Honolulu.

**University of Hawaii Cancer Center CCSG CURE Supplement:**
The purpose of the P30 CURE Supplement is to engage the scientific curiosity and promote the potential cancer research careers of promising young high school and undergraduate students.

**University of Guam/Cancer Research Center of Hawaii Partnership:**
The overarching goal of our University of Guam (UOG) and the University of Hawaii Cancer Center (UHCC) Comprehensive Partnership to Achieve Health Equity is to establish our Partnership as the national and international leader in advancing cancer health equity in Pacific Islanders.

**Cancer Research Center of Hawaii Traineeship:**
The Meiji CRCH Traineeship is provided through contributions to the UH Foundation by the Meiji Life Insurance Company and trains high school students in the areas of research and education.
Science Education for New Civic Engagements and Responsibilities (SENCER):
From August 2012, CSS has been the leading force in a statewide collaboration with the SENCER initiative under the National Center for Science and Civic Engagement (NCSCE). SENCER has been continuously funded by – and is an unofficial think tank for – the National Science Foundation. We help faculty establish and maintain collaborative network and interdisciplinary and inter-institutional civic-engagement programs, as well as “sencerizing” their courses (create curricula teaching to current, complex, capacious issues such as climate change).

EPSCoR ‘Ike Wai: Securing Hawaii’s Water Future
The National Science Foundation has awarded $20 million to UH to do a five-year, groundbreaking study of water sustainability issues through a collaboration called ‘Ike Wai, which symbolizes knowledge (‘ike) of water (wai) that informs values, policies, and practices for managing this resource. The project spans geophysics, microbiology, cyberinfrastructure, data modeling, indigenous knowledge and economic forecasting. UH, state and federal agencies and community groups will partner to address critical gaps in the understanding of Hawaii’s water supply that limit decision making, planning, and crisis responses.

School of Nursing and Dental Hygiene
For more than 75 years, the University of Hawaii School of Nursing and Dental Hygiene (SONDH) has prepared future health professionals and leaders for successful careers in the fields of nursing and dental hygiene.

At the time of publication, it was determined that Nursing and Dental Hygiene majors are not considered part of the strict definition of STEM as defined by the DHS STEM Designated Degree list. Thus, the School of Nursing and Dental Hygiene is listed as STEM-related.