SOEST
Earth Ocean Atmosphere Climate
Planets Ecosystems Energy
Science & Technology
Education, Research & Development
Remote sensing, in situ observations, lab-based analyses, instrumentation development, visualization, modeling & forecasting of the Environment
SOEST foci constitute two of the five UH strategic priority research & innovation hubs:

- **Ocean & Climate Sciences**,  
  (incl. microbiome, conservation biology & ecosystem processes)

- **Astronomy**

- **Health & Wellness**

- **Digital Economy & Civil Infrastructure Security**,  
  (incl. disaster preparedness)

- **Sustainable Ecosystems & Energy**,  
  (incl. water, food & urban environs)
SOEST strengths are foundational to the new, multidisciplinary UH Manoa research & education initiatives:

- Microbiome
- Sustainability & Resilience
- Data Sciences
In many ways, SOEST is what UH Manoa aspires to be

- integrated teaching, research, service & extension
- very high international rankings & reputation
- high ROI ($ Extramural/State ~ 3)
- students trained on state-of-the-art facilities, mentored by Faculty who are leaders in their profession, experiential learning in the field, lab & classroom
- partnerships with, &/or extension support of, businesses & community (HNEI, Sea Grant, Space Grant)
- tech transfer: spin off technology & start-up companies
UH International rankings:

\text{NTU}_15 \text{Geosciences 13}

\text{Nature Index}_{16} \text{ Earth Env. Sci. 12-17}

US News & World Report variance between
University and Geosciences Global Rankings

Caltech
U Colorado
Columbia
Harvard
U Washington
UC Berkeley
MIT
Princeton
UC San Diego
U Maryland
UC Los Angeles
Penn State U
U Wisconsin
UC Irvine
Stanford
UHM
U Arizona

2018 Promotion & Tenure
positive recommendations

HIGP:    Milton Garces R5
         Anupam Misra R5
         James Potemra S5

HIMB:    Kuulei Rodgers R4
         Mark Heckman S3
         Daniel Schar S3

HNEI:    Leon Roose T (S5)

PBRC:    Angel Yanagihara R4

SeaGr:   Tara Owens A4
         Kelly Tagarino A3
New SOEST TT Faculty

Christina Karamperidou
ATMO, Aug. 16

Matt Medeiros
PBRC, Aug. 16

Mark Glick
HNEI, Dec. 16

Alison Nugent
ATMO, Jan. 17

Nicole Lautze
HIGP/WRRC, May 17

Kiana Frank
PBRC, Sept. 17
SOEST Faculty Recognition

• Jennifer Griswold 2017
  Chancellor’s Meritorious Teaching Award

• Barbara Bruno 2017
  Faculty Diversity Enhancement Award

• Luke Flynn 2017
  UH nominee for State employee of the year

• Tom Shea 2017
SOEST Faculty Recognition

- Axel Timmerman 2017
  EGU Milankovic Medal

- Fei-Fei Jin 2016
  AGU Fellow

- Craig Smith 2016
  Senckenberg Nature Research Prize

- Bin Chen 2016
  NSF Early CAREER Award
SOEST presentations & tours for the VCRs External Advisory Cmte
Review of ORUs were exemplary

very positive feedback re
innate excellence,
local & global relevance,
integration of research & education
In many ways, SOEST is what UH Manoa aspires to be

- integrated teaching, research, service & extension

- very high international rankings & reputation

  - high ROI ($ Extramural/State ~ 3)

- students trained on state-of-the-art facilities, mentored by Faculty who are leaders in their profession, experiential learning in the field, lab & classroom

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A Vision for the U. Hawai‘i

Hawai‘i is a special place where diverse people and communities live, work, learn and play together in a sustainable manner. Hawai‘i’s economy is vibrant and globally competitive, characterized by engaging living-wage jobs. Inspired by its host culture, Hawai‘i treasures and protects its amazing environment as it promotes a high quality of life for all its people.

The University of Hawai‘i system is the single most important contributor to the future of Hawai‘i. The people of Hawai‘i appreciate the excellence throughout UH, understand its value to the state and show their pride in their university system. UH campuses are recognized for their excellence and value and are destinations of choice within Hawai‘i and beyond. The UH System is the premier integrated higher education system in the country.
UH Mānoa: Hawaiʻi’s student-centered global research university

UH Mānoa is the cornerstone of Hawaiʻi’s system of higher education. It is an internationally recognized and globally competitive research university with programs of excellence that emphasize Hawaiʻi’s many strengths and advantages of location, population and geography. UH Mānoa’s research and scholarly activity attract substantial extramural funding to the state, foster the development of new businesses and generate high paying jobs. The research enterprise is itself a significant employer and brings unique insights to major local and global challenges and opportunities. UH Mānoa attracts internationally competitive research-intensive faculty who attract the best students. The research and scholarship mission should continue to grow in areas of excellence and emphasis, including areas of scholarly leadership and strategic importance to Hawaiʻi. - Int.Acad.Fac.Plan’ 17
### Mānoa Headcount Enrollment Trend

<table>
<thead>
<tr>
<th>Fall Enrollment</th>
<th>Headcount</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>20,429</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>20,426</td>
<td>0.0%</td>
</tr>
<tr>
<td>2013</td>
<td>20,006</td>
<td>-2.1%</td>
</tr>
<tr>
<td>2014</td>
<td>19,507</td>
<td>-2.5%</td>
</tr>
<tr>
<td>2015</td>
<td>18,865</td>
<td>-3.3%</td>
</tr>
<tr>
<td>2016</td>
<td>18,056</td>
<td>-4.3%</td>
</tr>
</tbody>
</table>

Return to 20,000 students by 2020:

Sustain increasing local freshmen enrollment & increase non-resident mainland students, international students and transfers.

### Prior Yr. Bachelor Degrees Awarded

<p>| | | | |</p>
<table>
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<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>2011</td>
<td>2012</td>
<td>2013</td>
</tr>
<tr>
<td>Bachelor Degrees Awarded</td>
<td>2,988</td>
<td>2,989</td>
<td>3,266</td>
</tr>
</tbody>
</table>
Innovative Classroom Instruction: peer collaboration & active learning

GradesFirst web-based student performance monitoring

Calculus recitation sessions & OEST100 skill-cohort-building

New courses: FGA (OCN105); fall FGB (ATM106) & FGC (GG130)
fall’18 FQR GG102 Global Change

New courses by ORU faculty (microbio, sustainability, space tech)

New online sections of GG101: 2 fall sections filled on 1st day

Maile Mentoring & KCC Summer Bridge Programs for NH & underrep.

Summer Programs: PBRC & GG REUs; TCUP-PAGES exp. for minorities

Continuing enhancement of GES (e.g., new X-disciplinary tracks)
New 4/17: monthly high-school recruitment afternoons
40-60 students rotate thru 5 engaged learning activities

First ever “3+2” MS graduates at UHM:
at Commencement this Saturday

Existing agreements with
NUIST, Zhejiang, Zhejiang Ocean, Wuhan Geosciences

Establishing new agreements with
Sun Yat-Sen U., Chengdu U. Information Technology
**Budget Allocation Methodology – FY 18**

**Phase 1**

- **FUNDING POOL / MISSION SUPPORT**
  - General Funds: 100%
  - Net U/grad Tuition: 80%
  - Net Graduate Tuition: 30%

- **TUITION RETURN POOL**
  - General Funds: 0%
  - Net U/grad Tuition: 20%
  - Net Graduate Tuition: 70%

- **School, College, ORU or Admin Support Unit**

- **COURSE/PROGRAM FEES TUITION DIFFERENTIALS**
  - 100% to Schools and Colleges

- **RTRF OUTREACH/SUMMER TUITION**
  - 100% by formula
UHM Organizational Refresh Objectives: Increasing Collaboration, Interdisciplinarity and Agility

- Grand challenges require team approaches
- Need even more engagement across units
  Requires will; Incentives help
- New interdisciplinary institutes to pull together current faculty whose tenure resides elsewhere
- New degree programs that attract & engage today’s students and meet today’s needs
More from David at Faculty Forum:

• **Engage** our campus community in new ways to move in new directions
  • Deeply **integrate** research and undergraduate education
  • Inspire **interdisciplinary collaborative** scholarship and teaching
• **Commit** together to improve student recruitment, retention & success
• **Accept** that change is necessary
  • We can no longer be all things to all people
  • Not everyone will ever agree with every change, but continuing inaction may be worse for our students, UH Mānoa and Hawaiʻi
SOEST Strengths:
Location, People & Facilities
Diversity & Specialization
Scale & Integration/Collaboration
UH & UHM mission centrality

Challenges:
Infrastructure
Appropriated Budget Dependence on Tuition
Scale & Integration/Collaboration
Community Communications
SOEST providing science, technology and education to advance understanding of the ocean, Earth and planets ...

... and

- solve energy and resource issues
- forecast our changing climate
- build and launch small satellites
- provide beach safety and vog alerts
- employ and train a high-tech workforce
- track sea level rise and coastal erosion
- preserve fisheries and coral reefs
- determine impacts of ocean acidification