COLLEGE OF NATURAL SCIENCES

Graduation Rates and Retention

Current Initiatives:

- Opening of the Learning Emporium in Fall 2011 to provide assistance in the introductory level/lower division courses in biology, chemistry, mathematics and physics, in particular those courses that have been identified as high D/F/W courses.
- Advertisement efforts to get information out about: 1) preparing for and taking the assessment/placement examinations, and 2) registering for the appropriate courses during their first semesters.
- Collaborating with the learning communities to provide the opportunity for students to remain in a cohort in introductory biology and chemistry courses in their second semester.
- Promoting an interdisciplinary sense of community among the undergraduates. New Student Reception, welcome message from the dean, college-wide e-mails to undergraduates, development of the learning emporium at the college-level versus at the individual department level.
- Providing sufficient number of course sections in the bottleneck courses, and ensuring that courses are offered at times that minimize scheduling conflicts for students.
- The Mathematics Department has introduced MATH 197 to provide supplemental instruction in support of student success in the first course in the Calculus Sequence (MATH 241).

Future initiatives:

- Developing opportunities for students to prepare for the rigors of scientific study in the summer prior to their first semester, as well as during their first year of study. Science "Boot Camp" and further development of the Emporium.
- Developing undergraduate research opportunities in the program to foster student/faculty interaction outside of the classroom. UROs have also been shown to contribute positively to retention rates.
- Minimization of all articulation and transfer barriers for students from the community college (and other UH) campuses.
- Development of a comprehensive community based freshman experience inside the College that involves community service and engagement, cohorts of students and shared intellectual experiences between faculty, students and staff.
- Integration of social networking and mobile communications into advising, interactions, coursework, learning communities (structured and planned as well as unstructured and spontaneous).
- Initiation of new "in demand" undergraduate degrees (such as the planned undergraduate astronomy degree) and the introduction of fundamentally interdisciplinary educational experiences into every CNS undergraduate degree program.
- Introduction of a "modular" approach to teaching introductory mathematics. This will deliver "on demand" learning resources and coursework in the introductory mathematical sequences that is required for successful completion of degrees. This should streamline math education and provide a basis by which mathematics can be optimally delivered to the students in relevant and innovative ways.
- Soon to be proposed “Science for Life”, “Community Science” and “Science Everywhere” initiatives.
Native Hawaiian Advancement

Current Initiatives

- Collaborating with the College of Engineering (Kaiaulu STEM Scholars) in identifying native Hawaiian students in the natural sciences for the program. The Emporium also provides dedicated tutoring assistance in chemistry for the Native Hawaiian Engineering learning community.
- Developing referral mechanisms to existing support programs on campus (McNair Student Achievement Program, MARC Program, Kokua a Puni, Ku‘uana Student Services).
- Developing STEM learning communities for Native Hawaiian students to run alongside the Engineering clusters.
- The LIS program has several Native Hawaiian students this year, and is exploring dual degrees with the School of Hawaiian Knowledge. LIS co-hosted a national conference on Indigenous Librarianship in September 2011. They also offered a course in Indigenous Librarianship two summers ago, and will do so again this summer.
- Integrative component and outreach of every undergraduate and graduate degree program to the local and state Hawaiian community.
- Soon to be proposed “Science for Life”, “Community Science” and “Science Everywhere” initiatives.

Excellence in Graduate Education

- The College of Natural Sciences is currently rebuilding the graduate faculty, emphasizing the hiring of outstanding researchers in clusters of related disciplines. The addition of these faculty members will greatly increase the research/dissertation opportunities for graduate students.
- The Botany graduate program plans to implement a professional MS degree (i.e., coursework only) aimed at meeting the objectives of State and Federal agencies in Hawai‘i and thus to increase the size of the program substantially.
- The Chemistry Department is building a Biochemistry research capability that will provide new opportunities for Chemistry and/or Biology graduate students.
- Expand upon strengths that are unique to Hawaii in creating graduate degree programs (such as the proposed MS and PhD in Marine Biology to establish UH as a leader in graduate education in Marine Biology). Other examples include ethnombotany, astronomy, imaging and other new directions.
- Soon to be proposed “Science for Life”, “Community Science” and “Science Everywhere” initiatives.