

**dFacilities
NEEDS ASSESSMENT APPLICATION**

Facilities: Programs should list no more than three facility or renovation items. Identify the area in need of physical renovation, maintenance and/or repair. Requests for additional space should also be listed here. *Requests listed in this category will be forwarded to the Facilities Committee to evaluate through their own processes.* Provide a thorough rationale, **using data to support your request**, in order to help the Facilities Committee with their evaluation. List the approximate cost of your request.

Name of Person Submitting Request:	Mark Ikeda
Program or Service Area:	Biology
Division:	Science
Date of Last Program Efficacy:	Spring 2009
What rating was given?	Expansion
Strategic Initiatives Addressed:	Campus Climate and Culture, Student Success

1. Renovation Request

<p>Reconfiguration of air handling units servicing teaching lab spaces in the second floor of HLS</p> <p>The inadequacy of the ventilation in meeting requirements for ventilation of lab spaces where volatile chemicals are used in the processes of dissection and microbiological labs has been unaddressed since our initial occupation of these spaces during the spring semester of 2005.</p> <p>Reduction of some volatile chemicals has been achieved through judicious purchasing of preserved materials with reduced volatiles, however, because of the nature of lab work, it is impossible to adequately manage potential hazardous exposure without a substantial reconfiguration of the air handling units in HLS 213, 218, 222, 230 involving increasing the mixing of room air with fresh air.</p> <p>The remedial fix has been to increase the rate of air exchanges per unit time to compensate for the inadequate room air/fresh air exchanges. This has resulted in running the air handling units at high rates which has degraded the acoustical environment of these teaching spaces. Such acoustical degradation in teaching environments has been correlated with selective impairment of cognitive functions in many studies (for example see Evans, Gary W., Staffan Hygge, and Monika Bullinger, "Chronic Noise and Psychological Stress," Psychological Sciences, Volume 6, November 1995).</p> <p>Together these rooms service classes with total caps in excess of 630 students</p> <p>This item was prioritized by the Biology Department in the 2010 needs assessment as number 1. This item was identified by the College as a priority one item in a proposed outlay of Measure M funds.</p>
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Approximate Cost: The estimated costs as indicated in the Measure M proposal was on the order of hundreds of thousands of dollars.

2. Renovation Request

Lighting, window treatment, and ventilation in lecture spaces

The first floor lecture spaces (HLS 134 and 135), which are primarily used by the Biology Department, have poorly lit spaces for teaching purposes. The added lighting that was meant to enhance the white board visibility was configured in a position that directs the majority of the light into the students' line of sight.

The southwestern facing windows of HLS 134 transmit sunlight in late afternoon directly onto the projection screen, rendering these screens useless for teaching.

The ventilation and temperature control of these rooms has been problematic (particularly in summer) recently.

These rooms together support classes with total caps in excess of 900 students in biology classes from 0800 to 18:50, Monday through Thurs.

Approximate Cost: estimating \$6,000 +?

3. Renovation Request

Replace Microbiology fume hoods with Biosafety Cabinets

As a cost savings measure the microbiology lab (HLS 218) was designed with fume hoods instead of biosafety cabinets, the idea being that some exhaust ventilation is better than none. Unfortunately the exhaust ventilation required to safely deal with microbial contaminants in the air cannot be remediated by using a fume hood. The discipline of microbiology is inextricably connected with the study of microbes and learning techniques to safely handle them during their study. The teaching aims of the current microbiology courses are severely impacted by the inadequacy of the exhaust ventilation equipment.

In addition to the current courses, the acquisition of biosafety cabinets is required for the growth of the biotechnology program beyond its current scope. The techniques associated with cell culturing and other related biotechnology techniques mandate the possession of student accessible biosafety cabinets.

See-

www.cdc.gov/biosafety/publications/bmbl5/bmbl5_appendixa.pdf

Approximate Cost: estimated \$50,000

Needs Assessment Applications due to Committee by midnight on 9/28/12. Late requests not accepted.