

## **[DRAFT] IT Strategic Plan: Teaching, Learning**

How IT can support the teaching and learning activities at the heart of UC Berkeley's mission.

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### **CRITICAL ISSUE 1**

Support of research-based learning

#### **DESCRIPTION**

Faculty research agendas increasingly shape teaching agendas, creating opportunities to leverage developments in research to enrich the inquiry-based learning environment (and vice versa).

#### **EXAMPLES/EXISTING CHALLENGES**

1. Large scale databases used in faculty research are not available for undergraduate research-based learning.
2. Instructors and students do not understand how to access many of the resources that are available both on-campus (e.g. library and museum collections) and off-campus (via the Internet, including the "hidden web").
3. Instructors do not always know how to introduce research- or inquiry-based learning effectively into undergraduate instruction.

#### **PRELIMINARY GOAL(S) FOR THIS ISSUE**

1. Make content (data, texts, objects, images etc.) in scientific databases, museums, humanities collections and other campus research environments accessible for use in teaching and learning.
2. Provide more effective training and support to help faculty leverage existing research- and inquiry-based learning tools and extend their use into the classroom.

#### **CURRENT ACTIONS TAKING PLACE TO MEET GOALS**

1. Interactive University and Museum Informatics Project collaboration
2. Mellon Faculty Institute for Undergraduate Research
3. bSpace

#### **PROPOSED FUTURE ACTIONS NEEDED TO MEET GOALS**

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### **CRITICAL ISSUE 2**

Support of active/ interactive learning

#### **DESCRIPTION**

To promote more effective learning, teaching is increasingly emphasizing how to find, evaluate and apply information rather than simply memorize facts.

## **EXAMPLES/EXISTING CHALLENGES**

1. Instructors do not always know how to create effective project-based learning and assessment alternatives to traditional lectures and standardized exams and tests.
2. Classrooms are not typically flexible enough to accommodate both lecture and non-lecture pedagogical styles—sometimes within the same course.

## **PRELIMINARY GOAL(S) FOR THIS ISSUE**

1. Promote pedagogical methods that support and assess the effectiveness of active/interactive learning.
2. Research and design new-style classrooms to accommodate active learning techniques for large enrollment courses.

## **CURRENT ACTIONS TAKING PLACE TO MEET GOALS**

1. bSpace
2. Progress on upgrading technology classrooms
3. ETS-Capital Projects partnership to regularize design of classrooms/auditoriums for new/renovated building projects.

## **PROPOSED FUTURE ACTIONS NEEDED TO MEET GOALS**

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## **CRITICAL ISSUE 3**

Collaborative learning environments

### **DESCRIPTION**

New learning tools and learning spaces are needed to bring together people with common interests and to foster collaboration between students, between instructors, as well as among students, instructors and other learning partners.

### **EXAMPLES/EXISTING CHALLENGES**

1. The current classroom physical and technological infrastructure is poorly equipped to support collaborative learning.
2. Instructors do not have the tools to foster collaborative learning outside of class.
3. Instructors who are collaborating on interdepartmental, interdisciplinary, team-taught courses do not have adequate tools to manage these courses.
4. The campus lacks a collaborative learning environment; however, student expectations are shaped by sophisticated social networking environments (e.g. friendster) to which they are accustomed.

### **PRELIMINARY GOAL(S) FOR THIS ISSUE**

1. Guarantee that all instructors teach in a classroom environment that provides appropriate learning technologies and supports a diverse range of teaching strategies.
2. Create an enterprise-level collaborative learning environment that supports multi-level collaborations among students, instructors, and other academic partners.
3. Track, assess, integrate, and support emerging collaborative and sharing technologies (including social software tools) to enhance the collaborative learning environment.

### **CURRENT ACTIONS TAKING PLACE TO MEET GOALS**

1. bSpace
2. Progress on upgrading of technology classrooms
3. ETS-Capital Projects partnership to regularize design of classrooms/auditoriums for new/renovated building projects.

### **PROPOSED FUTURE ACTIONS NEEDED TO MEET GOALS**

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#### **CRITICAL ISSUE 4**

Information access and usability

#### **DESCRIPTION**

The campus needs a technology infrastructure that can support the full range of new teaching and learning approaches, including ubiquitous computer and integrated content access.

#### **EXAMPLES/EXISTING CHALLENGES**

1. Instructors are not able to access easily research resources (texts, objects, images, etc.) for use in their undergraduate teaching.
2. Instructor use of course websites, webcast, and other instructional technology tools is not always keeping pace with student demand.
3. Some library and other search tools are not as user-friendly as they could be.

### **PRELIMINARY GOAL(S) FOR THIS ISSUE**

1. Guarantee ubiquitous access to computers and the Internet.
2. “Knit together” the resources from digital libraries, museums, etc. with the learning environment and desktops.
3. Develop better designed, easy-to-use interfaces and provide training for using them effectively.
4. Integrate video/visuals into the collaborative learning environment.

## **CURRENT ACTIONS TAKING PLACE TO MEET GOALS**

1. bSpace
2. Webcast/Webvideo expansion/upgrade

## **PROPOSED FUTURE ACTIONS NEEDED TO MEET GOALS**

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### **CRITICAL ISSUE 5**

Copyright and intellectual property management

#### **DESCRIPTION**

The digital teaching and learning environment raises new, complex questions concerning copyright and intellectual property; a user friendly management infrastructure is needed to protect our own rights and respect others' rights.

#### **EXAMPLES/EXISTING CHALLENGES**

1. Instructors and university administrators may violate copyright laws when posting and distributing course materials, syllabi, and other materials.
2. Faculty see more instances of student plagiarism due to online access of material.
3. Faculty are increasingly looking for ways to publish and access their materials free of publishers' restrictions.

#### **PRELIMINARY GOAL(S) FOR THIS ISSUE**

1. Raise awareness of significant legal and ethical issues concerning sharing of intellectual property and other digital content amongst students, faculty and staff.
2. Research and plan an easy-to-use digital rights management infrastructure to legally share copywritten material.
3. Provide education and integrated access to alternative publishing methods.

## **CURRENT ACTIONS TAKING PLACE TO MEET GOALS**

1. Provision of legal music-sharing services and education campaign about entertainment infringement targeted to students in residential housing.

## **PROPOSED FUTURE ACTIONS NEEDED TO MEET GOALS**

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### **CRITICAL ISSUE 6**

A campus organizational structure for effective teaching and learning

#### **DESCRIPTION**

Campus-wide leadership, a coherent governance structure, and sufficient ongoing funding to fully support priorities are needed to support effective teaching and learning.

### **EXAMPLES/EXISTING CHALLENGES**

1. We lack a comprehensive and clearly linked planning and budget process for prioritizing and funding teaching and learning needs.
2. Responsibility for upgrading classrooms and supporting bSpace is split among several units, with the result that such initiatives are not as high a priority as they should be.
3. Teaching innovations tend to be driven by individual entrepreneurs, and there are few mechanisms to encourage sustainability and portability so innovation can be scaled.
4. Instructor training and support either are not available, or it is difficult for instructors to identify and locate the services they need.

### **PRELIMINARY GOAL(S) FOR THIS ISSUE**

1. Create a transparent process to review and prioritize proposed and on-going projects that integrate teaching, learning, and technology.
2. Create a clear process for raising teaching as a budget priority, and for deciding when to fund priority projects permanently vs. temporarily.
3. Create a process for obtaining extramural support for teaching, learning and technology projects.

### **CURRENT ACTIONS TAKING PLACE TO MEET GOALS**

### **PROPOSED FUTURE ACTIONS NEEDED TO MEET GOALS**