Designing a UC Quality E-Learning Framework
Day 1 Agenda

- Introductions
- Orientation/Q&A
- Creating a Shared definition of UC Quality Courses
- Program Overview - Examples
- Lunch
- Learning Outcomes
- Activities in the Learning Environment
- Dinner (on your own)
Project Overview
Workshop Learning Outcomes

By the end of this workshops you will be able to...

• describe the goals and structure of the OIPP
• apply the shared quality guidelines to the design of your course
• create learning objectives for your course and modules
• identify online techniques to support your course design
• define assessment criteria for your course
• explain the OIPP intellectual property regime
• collaborate with your OIPP cohort and available support staff
• design your online course proposal to meet the needs of the academic senate and submission for the full OIPP proposal
Creating a Shared Definition of UC Quality Courses
What is “UC Quality”? 

- The quality standard typical UC courses have to meet is...
  - Course has been approved by campus courses committee
  - Course is taught by faculty approved by dept. chair
  - Student evaluations or complaints are not bad enough to draw attention

- The evaluation of quality for typical courses is pretty minimal - the bar is low
- Quality of instruction is still high because of the quality and integrity of UC faculty.

We’re raising the evaluation standards for the online pilot courses

Friday, March 11, 2011
What is “UC Quality”?

• Quote from a letter of intent (LOI)
  
  “The quality of lectures will be ensured because of the credentials and commitment of the faculty participants, all ‘UC Quality’ top people”

• Quote from Recommendation 5 from the Education & Curriculum work group to UC Commission on the Future:
  
  “The quality of education at the University of California is fundamentally derived from two key components: the background and expertise of the faculty and students involved; and the rich research-based environment inherent in the system of ten top-tier public land-grant research institutions.”
What is “UC Quality”?

* Since UC faculty will teach online courses, why is there concern about quality?
  
  • Good question... but many faculty remain skeptical
  
  • Uncertainty with what types of online courses will be taught and their applicability to the online format
  
  • Unfamiliarity of many/most UC faculty with online instruction techniques and tools
  
  • Belief that face-to-face contact and instructor-student interaction is essential and that online methods are not enough
  
  • Obvious drawbacks for some types of courses (e.g., labs)
  
  • Concern about intellectual property, “job security”
  
  • Concern about workload, costs.....
What is “UC Quality”?

* Guidance for what we mean by UC Quality.....

• Draft undergraduate mission statement developed in 2007 by the Undergraduate Education Planning Group and reviewed by local campus Senates

• Recommendation 5 on UC Quality from the Education & Curriculum work group of the UC Commission on the Future, June 2010

• We also want.....

• Comments, suggestions, ideas from you......

Friday, March 11, 2011
What is “UC Quality”?

* E&C recommendation 5: Courses, majors and programs that define UC quality are ones:

• are developed by UC faculty with quality assurance monitored through the UC Academic Senate course and program review process.
• are delivered under the direction of UC ladder faculty, and include substantial contributions from lecturers, graduate students, and other academic positions filled by individuals who understand and can communicate the unique perspective of the UC research university environment.
• include appropriate and substantive student-instructor and student-student interaction.
• provide a framework by which students achieve objective standards of knowledge and competence appropriate to the field of study or profession.
• empower students with skills in the acquisition, assimilation, and synthesis of knowledge that will allow nimble adaptation to the ever-changing intellectual environment, and foster intellectual independence, creativity, leadership, and entrepreneurship.
• develop interpersonal skills that will contribute to success through collaboration.
• develop sensitivity to the diversity of domestic and international cultures that will enhance students’ capacity to operate within and advance American and global society”.
• provide ample opportunity for closely-mentored relationships with faculty and other University-affiliated personnel that allow students to pursue independent research, creative activity, or service to society related to their field of study.
• foster the abilities to interpret and organize information critically, analytically, effectively and transparently, and to maintain intellectual integrity and high ethical standards and intellectual honesty.
• can contribute indirectly to student awareness of, and involvement in, the perspective unique to the culture of a public research university, with special insight for how that perspective enriches their disciplinary and general education.
• support achievement of the basic University of California missions related to teaching, research and public service.
Basic Assumptions

Basic assumptions of the UC Online Pilot Project?

• Develop methods to improve student learning.
• Develop methods and technologies that can also be used with more traditional courses to make them hybrid courses.
• Demonstrate that learning occurs and how it is occurring.

What do we want students to learn \[\leftrightarrow\] How well did they learn it?

Intended Learning Outcomes \[\leftrightarrow\] Actual Learning Outcomes
What is “UC Quality”?

Basic assumptions of the UC Online Pilot Project?

• All courses taught by UC faculty with usual dept. chair oversight
• Obvious and meaningful instructor presence and involvement in courses
• Emphasis on instructor-student and student-student interaction
• Specific emphasis on evaluation of the quality of student learning
  ✦ Development of specific course-based intended learning outcomes
  ✦ Evaluation of actual learning outcomes at the course level
  ✦ Evaluation of the overall quality of the online project

A student-centered learning environment
Pre-Work: What is “UC Quality”?

What are your thoughts?

• What do you think are the most important aspects of quality in UC instruction?

• What will make online courses at least equal to on-ground courses, and potentially better?

• How can we demonstrate quality?

• What will be convincing to UC faculty skeptics and add to research-based evaluation of online education?
Online Course Development Overview
Our organizational model leverages distributed expertise, but is nimble and decisive.
Our organizational model leverages distributed expertise, but is nimble and decisive.
The Team

- Campus Support teams
  - Pedagogy specialists
  - Instructional designers & technologists
  - Media developers & videographers
  - Librarians
  - Tutors

- Program Resources
  - Instructional design leads
  - Project management & program oversight
  - Common learning environment
  - Program evaluation

You!
Project Process Model

**Day 1**

- Course Approval by Academic Senate
- Course Development
- Interactive components
  - instructor-student
  - student-student
- Learning Topics/ Modules & Learning Analytics
- Course Taught to Students

**Day 2**

- Course redesign and update based on data analysis and feedback
- Remodeling/update of learning environment based on data analysis and feedback
- Evaluation and analysis of data collected on teaching, learning, and effectiveness of tools at end of course
- Real time data collection allows faculty to adapt course to student needs during instruction

**Inputs**

- Academic Senate Courses Committee
- UC Faculty
- Course Designers
- UC Education Evaluation Center
- UC Students
- Common Learning Environment based on open source solutions
Course-level Learning Framework

STUDENT EXPERIENCE
- social
- motivating
- relevant

Intended Outcomes

Actual Outcomes

Topic/Concept ...

Activity

Activity

Activity
Lunch Break

Back at 1pm
Learning Outcomes
Project Process Model

**Inputs**
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**Process**
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Learning Outcomes

* The online environment is envisioned to be structured around learning outcomes & assessment.

* This is consistent with campus efforts related to WASC accreditation

* It provides specific ways by which student success and the quality of online courses can be evaluated

* It takes advantage of the capabilities of the online environment and offers multiple ways to facilitate student learning and provide ongoing feedback to the instructor and student
Course-level Learning Framework

STUDENT EXPERIENCE

rigorous  engaging  flexible
social relevant motivating
Course-level **Intended Outcomes**

*by the end of this course, the student will be able to...*

**INTENDED OUTCOMES**

*by the end of this course, the student will experience...*

- Creating
- Evaluating
- Analyzing
- Applying
- Understanding
- Remembering

Bloom’s Classification of Learning Objectives
Bloom’s Taxonomy - updated

**Remembering**
- Arrange
- Define
- Locate
- Recall
- Recite
- Describe
- Repeat
- Identify
- Select
- Quote
- Label
- Copy
- List
- Name
- State

**Understanding**
- Classify
- Describe
- Identify
- Indicate
- Organize
- Interpret
- Illustrate
- Appraise
- Reorganize
- Translate
- Paraphrase
- Summarize
- Transform
- Discuss
- Explain
- Defend
- Compare
- Report
- Restate
- Review
- Rewrite

**Applying**
- Calculate
- Construct
- Demonstrate
- Estimate
- Illustrate
- Interpret
- Appraise
- Contrast
- Criticize
- Diagnose
- Identify
- Classify

**Analyzing**
- Combine
- Figure
- Find
- Sketch
- Solve
- Predict
- Change
- Survey
- Compare
- Diagram
- Examine
- Test
- Modify

**Evaluating**
- Appraise
- Argue
- Assess
- Defend
- Estimate
- Judge
- Predict
- Qualify
- Rate
- Support
- Critique
- Recommend
- Verify
- Construct
- Develop

**Creating**
- Arrange
- Assemble
- Compose
- Create
- Design
- Devise
- Formulate
- Invent
- Manage
- Modify
- Organize
- Plan
- Prepare
- Produce
- Set Up
- Verify

Andersen’s updating of Bloom’s taxonomy
Course-level Actual Outcomes

ACTUAL OUTCOMES

by the end of this course, the student IS able to...

by the end of this course, the student experienced...

Creating
Evaluating
Analyzing
Applying
Understanding
Remembering
Learning Activities

**STUDENT EXPERIENCE**

- **r**igorous
- **e**ngaging
- **s**ocial
- **f**lexible

**Intended Outcomes**

**Actual Outcomes**

**Topic/Concept 1...**

- Activity
- Activity
- Activity

- Creating
- Evaluating
- Analyzing
- Applying
- Understanding
- Remembering
Topic Level Learning Outcomes

Friday, March 11, 2011
Learning Outcomes

Breakout Session 1 - Learning Outcomes

Intended Outcomes

Actual Outcomes

Topic/Concept 1

Activity

Activity

Activity

STUDENT EXPERIENCE

Course-Level Learning Outcomes

Topic/Module-Level Learning Outcomes
Break-out Activity

* Revisit your learning outcomes created as part of the pre-work
  * Share this with your group
  * What works well? What would you change? Challenges?

* Report back:
  * Good example of course level learning outcome
  * Good example of module/lesson level learning outcome
Learning Environment
Learning Environment

- A common learning environment will be deployed & developed

- Learning environment choices will be driven by pedagogical goals of our faculty and learning needs of our students

- Continuous improvement based on feedback and learning

- Establish experiences, materials, tools, and support services that span across courses -- help desk, tutoring, ad-hoc study groups, searchable webcasts or e-texts

- Embed learning analytics as a teaching & learning tool

- Include rich and easily usable and re-usable media

- Be interactive & dynamic (not solely online text)
The Common Environment

- Sustainable
- Consistent
- Repeatable
- Accessible
- Yet Flexible...
- Shared innovation
  - Amongst our courses
  - Amongst our campuses
  - Amongst higher ed
- RFP -- Services Partner / General contractor
The Common Environment

- Sustainable
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Online Pilot Project Learning Environment

- Student Services
  - Tutors
  - Study Groups
  - Library
- Case Studies
- Role Play
- Lectures
- Guest Speakers
- Office Hours
- Peer Review
- Publishing
- Google docs
  - Chat/IM
- Wiki
- Blogs
- Content
  - Google docs
  - Chat/IM
  - Wiki
  - Blogs
- Peer Review
- Publishing

Learning Analytics

- Video
- Engage
- Conferencing
- Virtual Labs
- Testing
- Discussion
- Case Studies
- Lectures
- Role Play
- Study Tools

Shared Frameworks

- Multimedia Content Authoring
- Video Capture/Processing/Distribution
- Learning Repository
- Mobile

Core Infrastructure

- Identity Management
  - AUTHN
  - AUTHR
- Enrollments
- Instructors
- Student & Course Data
- Catalog
- Grades
- Articulation Data

Friday, March 11, 2011
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Learning activities - the framework

Intended Outcomes

STUDENT EXPERIENCE

Actual Outcomes

rigorous
engaging
relevant
flexible
social

Activity
Activity
Activity

Creating
Evaluating
Analyzing
Applying
Understanding
Remembering

Topic/Concept 1...
Student Engagement

Students who are engaged in the learning process not only show more evidence of retaining what they learn, they also are building the foundations for successful study in later years. (Krause and Coates, 2008)

What do we mean by “Engagement?”

* high level of academic challenge, active and collaborative learning, student-faculty or student-student interaction, and a supportive campus environment -- or community.

* Student is an active participant and co-creator -- Student or Learner Centered

What do we mean by “Community?”

* Think of the inherent nature of a residential experience

* We want an online campus environment that...

  * invokes the feelings of belonging, inclusion, uniqueness of the larger community and that come naturally from being on the campus itself
## Moving your teaching online

*changing the emphasis from teaching to learning*

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<td><strong>Dynamic Discussion</strong></td>
<td>Small groups, discussion sections</td>
<td>Blogs/Wikis, Google Jockeying, Case-Studies, Skype, Chat, web-conferencing/collaboration tools, de.lic.ious tagging...</td>
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<td><strong>Creating Community in Class</strong></td>
<td>Project work, small group breakouts</td>
<td>Mash-up exercises, peer editing, commenting on blogs, social networking, field trip meet-ups, video introductions, instant messaging, online study groups, annotating, creating and sharing playlists...</td>
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<td><strong>Instructional feedback</strong></td>
<td>quizzes, clickers</td>
<td>Assess activity level in each lesson, practice opportunities, formative assessment and feedback, performance graphs, quizzes, tweet polls...</td>
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<td>Blogs/Wikis, Google Jockeying, Case-Studies, Skype, Chat, web-conferencing/collaboration tools, de.lic.ious tagging...</td>
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<td>Student as co-creator</td>
<td>Student presentations</td>
<td>Video/filming, Skype or video role play, animating, blogging, pod/vodcasting, wiki-ing, mixing, mashing, writing, tweeting...</td>
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<tr>
<td>Instructional feedback</td>
<td>quizzes, clickers</td>
<td>Assess activity level in each lesson, practice opportunities, formative assessment and feedback, performance graphs, quizzes, tweet polls...</td>
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Friday, March 11, 2011
## Engagement Techniques

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### UC Quality Principle

- Include appropriate and substantive student-instructor and student-student interaction

### Online Techniques

- Group work can include collaborative document writing, annotating and embedding media, mobile communication from the field, social networking...
- Online discussions held online, group exploration of media rich case studies...
- Online help provided via email, forums, live chat, shared screens, peer tutors or TAs, additional materials...
## “UC Quality” Online

<table>
<thead>
<tr>
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<tr>
<td>• Develop interpersonal skills that will contribute to success through collaboration</td>
<td>• Leadership of discussions and group work can be rotated among students...</td>
</tr>
<tr>
<td></td>
<td>• Incorporate oral interviews captured via video or audio that can be shared and analyzed by the class or small groups...</td>
</tr>
<tr>
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<td>• Assign student presentations via webinar that can be peer reviewed...</td>
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- Foster the abilities to interpret and organize information critically, analytically, effectively and transparently, and to maintain intellectual integrity and high ethical standards and intellectual honesty;  

- Incorporate interactive exercises that present analytic challenges and test analytic skills. These can be demonstrated in shared online writing tools, media annotation, video presentation, discussion forums or chats and webinars...

- Exercises can be based on actual research datasets and use discipline specific online analysis tools...
Break-out Activity

- Goal: To share lessons learned using engaged learning activities to achieve the intended outcomes of a course.

- Discuss the strategies proposed for teaching content meeting UC Quality

- Share past experiences using technology to further teaching and learning goals

- Report back summary of conclusions and observations
Assessment of Student Learning
Course Design: Learning Assessment

Inputs

- Academic Senate Courses Committee
- UC Faculty
- Course Designers
- UC Education Evaluation Center
- UC Students
- Common Learning Environment based on open source solutions

Process

- Course Approval by Academic Senate
- Course Development
- Interactive components: instructor-student, student-student
- Learning Topics/Modules & Learning Analytics
- Course Taught to Students
- Real time data collection allows faculty to adapt course to student needs during instruction
- Evaluation and analysis of data collected on teaching, learning, and effectiveness of tools at end of course
- Course redesign and update based on data analysis and feedback
- Remodeling/update of learning environment based on data analysis and feedback
Course Design: Learning Assessment

- Learning outcomes and related assessment of learning are growing into a major topic as a part of mandates to be accountable for the quality of a degree.

There are lots of resources available on the web that can further your background and knowledge about online education.
Assessment of Student Learning

Project Evaluation

Course Level

Topic/Module Level

Intended Outcomes

Actual Outcomes

STUDENT EXPERIENCE

social relevant motivating

Friday, March 11, 2011
Assessment of Student Learning

Why do assessment in online courses?

• **You need to.....**
  - WASC accreditation requires it.
  - We intend it to be *fundamental* to the pilot project....
    .....it seems like the best way to convince the Senate and faculty skeptics that online courses can be done at “UC Quality”
    .....but......you can help us - talk to your colleagues about it
    - show them what you do and how it works - *educate them*

• **You want to.....**
  - Inherent desire to be effective as a teacher and improve courses
  - It has the potential to enrich your course and your students’ experience.
Assessment of Student Learning

Assessment

Formative - for learning
Feedback from learning activities is actually used to adapt the teaching to meet the learner’s needs
- Real-Time - ongoing during course
- Non-threatening results
- Direct & immediate feedback
- Available to students and instructor
- Structured information
- Provides basis to improve instruction

Summative - of learning
Did the learners learn what they were supposed to learn?
- Measure of test-taker’s knowledge/skill
- Exams, papers, reports
- Quantitative for grading
- Usually fixed time & content
LEARNING OBJECTIVE: Identify the sampling method used in a study and discuss its implications and potential limitations.

LEARNING OBJECTIVE: Critically evaluate the reliability and validity of results published in mainstream media.

As mentioned in the introduction to this section, we will begin with the first stage of data production—sampling. Our discussion will be framed around the following examples:

EXAMPLE: #1

Suppose you want to determine the musical preferences of all students at your university, based on a sample of students. Here are some examples of the many possible ways to pursue this problem.

Post a music-lovers’ survey on a university Internet bulletin board, asking students to vote for their favorite type of music.

This is an example of a volunteer sample, where individuals have selected themselves to be included. Such a sample is almost guaranteed to be biased. In general, volunteer samples tend to be comprised of individuals who have a particularly strong opinion about an issue, and are looking for an opportunity to voice it. Whether the variable’s values obtained from such a sample are over- or under-stated, and to what extent, cannot be determined. As a result, data obtained from a voluntary response sample is quite useless when you think about the “Big Picture,” since the sampled individuals only provide information about themselves, and we cannot generalize to any larger group at all.

NOTE: Comment: It should be mentioned that in some cases volunteer samples are the only ethical way to obtain a sample. In medical studies, for example, in which new treatments are tested, subjects must choose to participate by signing a consent form that highlights the potential risks and benefits. As we will discuss in the next module, a volunteer sample is not so problematic in a study conducted for the purpose of comparing several treatments.
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Topic/Module Level Assessment

The learning - random sampling methods

Example

Suppose you would like to study the job satisfaction of hospital nurses in a certain city based on a sample. Besides taking a simple random sample, here are two additional ways to obtain such a sample.

1. Suppose that the city has 10 hospitals. Choose one of the 10 hospitals at random and interview all the nurses in that hospital regarding their job satisfaction. This is an example of cluster sampling, in which the hospitals are the clusters.

2. Choose a random sample of 50 nurses from each of the 10 hospitals and interview these $50 \times 10 = 500$ regarding their job satisfaction. This is an example of stratified sampling, in which each hospital is a stratum.

Did I Get This?

What sampling technique is being used in this scenario?

Several pieces of fruit from each tree in an orchard are selected.

- cluster sampling
- simple random sampling
- stratified sampling
- systematic sampling

Previous
Topic/Module Level Assessment

The learning - random sampling methods

EXAMPLE

Suppose you would like to study the job satisfaction of hospital nurses in a certain city based on a sample. Besides taking a simple random sample, here are two additional ways to obtain such a sample.

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Formative Assessment
- not just recalling a fact
- students have to apply the concepts they just were given
EXAMPLE

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- cluster sampling
- simple random sampling
- stratified sampling
- systematic sampling

Good job! The population was divided into groups (trees), then some fruit from each group was selected. Since we do not know if all of the trees contain the same kind of fruit, one way to ensure that we will have a representative sample of fruit is to select some from each tree. Note: Suppose the trees are lemon, lime, orange, and tangerine. One technique would be first to stratify the orchard by type of trees (according to the kind of fruit it has), then select some of each type of tree. This would be a multistage sample, using strata first, and then clusters second.
Assessment of the Experience

- Online pilot project and course success will also depend on the experience being enjoyable and beneficial for both students and instructors.

- Surveys
  - Time allocation logs
  - Perception/Satisfaction

- Interviews
  - Effective use of time
  - Specific online challenges
  - Comparison with traditional teaching modes

- Online Use Data
  - Time on course activities
  - Amount/quality of student engagement
Assessment Framework

Online Pilot Project

- Student Success/Quality
- Experience
- Workload
- Cost
Break-out Activity

* We want to get at some of the challenges assessment will bring you. See your instructional designer.
Project Evaluation
Evaluation Outline

• Introduction
• Evaluation Structure
• Evaluation Goals
• Research Questions
• Data Collection/Evaluation Footprint
Evaluation Structure

• The evaluation will function on multiple levels
  ○ Process
  ○ Outcome
  ○ Research

• Units of analysis
  ○ Program Level
  ○ Curriculum Level
  ○ Course Level
  ○ Individual Student/Faculty/TA Level
# Example Evaluation Questions (Process)

- Are the resources provided to faculty during the design process adequate to support the outcomes intended by the UC Online Project? *(Program Level)*

- To what degree are the online courses adequately supported by the learning platform? *(Course Level)*

- To what degree are students participating with the online system? *(Individual Level)*
Evaluation Goals (Outcomes)

- **Program Goals**
  - Create outcome metrics for online program
    - Number of courses developed
    - Sufficient support for course development
    - Number of students served
    - Proof of online system

- **Curriculum Goals**
  - Examine “UC Quality” metrics across organizational units

- **Course Goals**
  - Describe course usage of available online capabilities
    - Multimedia principles for learning
    - Universal design principles for learning

- **Individual Goals**
  - Measure student outcomes both affective and academic particularly those less emphasized in traditional courses
  - Measure faculty / TA time allocation (between and within the administration and education categories) and learning.
Research Goals

• Generate findings that will inform the broader research community about the impact of online learning efforts
  ○ **RQ 1:** In what ways will faculty use the capabilities of online courses to enhance the learning experiences of students, and how do these approaches affect the nature of learning interactions (student-content, student-student, faculty-content, student-faculty, etc.)?
  ○ **RQ 2:** How do online approaches to education perform relative to more traditional approaches with the same function across multiple educational outcomes (i.e., content, problem solving) and domains (i.e., cognitive and affective)?
  ○ **RQ 3:** Do the principles for universal design for learning increase outcomes for all students and/or decrease the variation in student outcomes, by allowing for multiple modes to deliver, acquire, and demonstrate content and learning?
Research Question 1

In what ways will faculty use the capabilities of online courses to enhance the learning experiences of students, and how do these approaches affect the nature of learning interactions (student-content, student-student, faculty-content, student-faculty, etc.)?

- We will create logic models for the functioning of each of the courses with respect to the intended content, pedagogical, and affective outcomes of the course.
- Logic model will allow the evaluation to test the strength of the match between use of the online tools and the specific learning outcomes those tools were designed to meet.
Research Question 2

- How do online approaches to education perform relative to more traditional approaches with the same function across multiple educational outcomes (i.e., content, problem solving) and domains (i.e., cognitive and affective)?
  - We seek to estimate the causal impact of specific online approaches across multiple outcomes and learning domains using random assignment design elements
  - Several courses may offer the opportunity for assigning students to differing treatments OR will allow for assignment during summer
Research Question 3

Do the principles for universal design for learning (UDL) increase outcomes for all students and/or decrease the variation in student outcomes, by allowing for multiple modes to deliver, acquire, and demonstrate content and learning?

- We seek to develop a new area of research in online education in a novel way
- UDL should decrease variation in outcomes, thus as UDL of course increases, expect lower variation in performance, attitudes, satisfaction
Data Collection Levels/Modes

- **Student Data**
  - Survey
  - Focus group
  - Interaction/observation
  - Coursework/online forum

- **Faculty/TA Data**
  - Surveys
  - Interviews
  - Time-logs

- **Curriculum/Technology Data**
  - Logic model creation
  - Course observation
<table>
<thead>
<tr>
<th>Measure</th>
<th>Primary Investigator’s Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Survey</td>
<td>• Encourage students through e-mail.</td>
</tr>
<tr>
<td>Student Interviews and/or Focus Groups</td>
<td>• Encourage students through e-mail. • Incentives for participation.</td>
</tr>
<tr>
<td>Interaction Observation</td>
<td>• Work with evaluators to determine observable interaction elements of the course</td>
</tr>
<tr>
<td>Background Information</td>
<td>• N/A*</td>
</tr>
<tr>
<td>Course Data</td>
<td>• N/A*</td>
</tr>
<tr>
<td>Time Log</td>
<td>• N/A*</td>
</tr>
<tr>
<td>Exit Survey</td>
<td>• N/A*</td>
</tr>
<tr>
<td>Causal Estimation</td>
<td>• Optional**</td>
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*Data collected by system/platform

**Work with evaluators to plan for causal design elements, random assignment, and a comparison group.
# Faculty/TA Data

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<tr>
<td>Faculty/TA Surveys</td>
<td>• Complete surveys sent by evaluators</td>
</tr>
<tr>
<td>Faculty/TA Interviews</td>
<td>• Participate in Two or Three, 1-hour interviews with evaluators</td>
</tr>
<tr>
<td>Time Logs</td>
<td>• Record the amount of time spent on course every month</td>
</tr>
<tr>
<td>Platform Time Use</td>
<td>• N/A*</td>
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*Data collected by system/platform*
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<td>Logic Model</td>
<td>• Work with evaluators to create a logic model for your course</td>
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<tr>
<td>Course Observation</td>
<td>• Work with evaluators to observe (remotely or in person) an aspect of your course that can be included in a process description</td>
</tr>
<tr>
<td>Curriculum and Technology Documentation</td>
<td>• Work with evaluators to document the curriculum and Technology of your course</td>
</tr>
<tr>
<td>Multimedia Learning Analysis</td>
<td>• Allow evaluators to analyze for multimedia learning</td>
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Example Student Learning Constructs
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<td><strong>Affective-Psychological Dimension</strong></td>
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<tr>
<td>Self-efficacy Toward Subject Matter</td>
<td>Performance accomplishments, vicarious learning experiences, encouragement (Bandura, 1977)</td>
<td>Computer-based feedback based on low-stakes formative assessments; Virtual case studies; Participatory simulations</td>
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<td><strong>Affective-Behavioral Dimension</strong></td>
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<td>Academic Engagement &amp; Social Skills</td>
<td>Undergraduate socialization model (Weidman, 1989)</td>
<td>Blogs, chat, conferences, forums, online multi-media group projects</td>
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<tr>
<td>Academic Persistence</td>
<td>Performance accomplishments (Bandura, 1977); Student departure theory (Tinto, 1993)</td>
<td>Professional online projects, social network tools</td>
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<tr>
<td><strong>Cognitive-Psychological Dimension</strong></td>
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<tr>
<td>Acquisition/Demonstration of Content Knowledge</td>
<td>Scaffolding towards acquisition of new knowledge (Vygotsky, 1978); Cognitive structural theory (Plaget, 1964).</td>
<td>Incorporating previous lessons, background modules to improve prerequisite skills, real-time assessment of progress</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>Faculty-student orientation, Studying, Homework, Interdisciplinary classes, (Astin, 1993); Diverse peer interaction for cognitive dissonance (Festinger, 1957)</td>
<td>Wiki creation, Virtual office hours, computer-mediated instruction and homework, e-portfolios, social networking, discussions, controversial simulations</td>
</tr>
<tr>
<td>Attitudes and Beliefs</td>
<td>Peers, Faculty, Time studying, College-activity, Activity outside of school, Majors (Astin, 1993); Experiential Learning Theory (Kolb, 1984)</td>
<td>Blogs, chat, conferences, forums, public surveys,</td>
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<td>Career Development</td>
<td>Academic involvement (Astin, 1993), Problem based learning (Barrows &amp; Tamblyn, 1980)</td>
<td>Blogs, chat, conferences, forums, virtual office hours, computer-mediated writing, wikis portfolios.</td>
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Evaluation Footprint

• Our goal is to limit the intrusion of the evaluation in the course
  ○ Much of the evaluation data will be collected through the learning platform
  ○ Logic models will be created by us through discussions with PIs, then shared with PIs for confirmation and modification

• We will need cooperation from PIs, TAs, and students during development and class.

• Anyone who would like to explore the added value of a particular widget or approach is welcome to discuss it with us.
Senate Course Approval
Course Design: Learning Assessment

Inputs
- Academic Senate Courses Committee
- UC Faculty
- Course Designers
- UC Education Evaluation Center
- UC Students
- Common Learning Environment based on open source solutions

Process
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Remodeling/update of learning environment based on data analysis and feedback
Title III. Courses

Chapter 1. Definition of Courses

739.
A curricular offering is a University course of instruction only if it is approved by an agency of the Academic Senate for presentation by an officer of instruction in accordance with Regulation 750(A), and is under the jurisdiction of an academic agency approved by The Regents.

Chapter 3. Persons in Charge of Courses

750.
A. Only regularly appointed officers of instruction holding appropriate instructional titles may have substantial responsibility for the content and conduct of courses which are approved by the Academic Senate.
Chapter 4. Credit in Courses


760.
The value of a course in units shall be reckoned at the rate of one unit for three hours' work per week per term on the part of a student, or the equivalent.

Article 2. Examinations

772.
A. Final examinations are required in all undergraduate courses, except as provided elsewhere in this Regulation. Whenever practicable each such examination shall be written and must be completed by all participants within a previously announced time limit. Examinations in non-laboratory courses may not exceed three hours' duration.
Carnegie Rule

- The Carnegie Rule advises that students will typically work 2 hrs outside of class for every 1 hr spent in the classroom (in contact with their instructor).

What is the equivalent of a 1 hour lecture, or 3 hours of work, for online courses with various interactive activities?

It's a little **fuzzy**, and campuses may require justification that the workload is appropriate for online courses.
Carnegie Rule Online?

UC Berkeley

Criteria for Review

Face-to-face time vs. Web time

- COCI established a threshold at which departments must justify substitutions of face-to-face contact with the instructor with web-based or technologically mediated work. Any course in which face-to-face contact with an instructor represents less than one-third of the total hours of required work per week must justify the substitutions by answering a list of questions, and the course should be designated as having a web-based instructional format.

- This standard is based on Senate Regulation 760, which states that the value of a course in units shall be reckoned at the rate of one unit for three hours’ work per week per term. This means that, essentially, for a three-unit course in which students and instructor do not meet in person for three hours per week (one-third of the total work hours required), and technologically mediated (web-based) activities substitute for this meeting time, special justification would be required.
Supplemental Questions for Online Course Approval Requests

Berkeley Division of the Academic Senate
Committee on Courses of Instruction

The following 15 questions are to be answered by the instructor proposing the course, to be submitted along with the course approval form and syllabus. In this context, COCI considers an “online course” to be one in which a significant portion of contact hours (e.g., lectures, discussion sections) will be delivered by web-based instruction rather than face-to-face instruction; please refer to Section 2.5 of the COCI Handbook and/or contact COCI Senate Analysts for more detailed information on the threshold of online content that requires submission of answers to these additional questions.

Instructor Name: ________________________________

Department and Course Number: ________________________________

Proposed Term to be Offered: ________________________________

Overview questions:

1. What modes of instruction will be used, particularly those specific to technologically-mediated instruction (e.g., webcast lectures, moderated discussion lists, synchronous or asynchronous web-based discussion sections, email, chat rooms)?

2. What specific pedagogical advantages and disadvantages will the technologically-mediated format offer?

3. How will this way of delivering the course change modes of learning (e.g., auditory or tactile) and affect learning experiences? If this course has a corresponding face-to-face version, please compare the two and explain the differences.

4. Is specific technical or pedagogical expertise (on the part of the student or instructor) necessary for this course? If so, what? If using GSIs, are there needs or plans for specialized training to enable them to work successfully in an online environment to elicit/follow/stimulate discussion?

5. What specific technical support does the department have available for instructors and students? What plans are there for malfunction, disruption, or unavailability of technical support?

6. How many students are expected to take this course? If there is a face-to-face equivalent on campus, please indicate the semester(s) taught and typical enrollment(s) and whether the face-to-face version will continue to be taught after development of an online version.

7. Is there a specific problem or set of problems that online delivery is intended to address (e.g., increasing access, relieving impacted courses, reducing costs)? If so, please explain.

8. Will this course satisfy major/degree requirements? If so, are there face-to-face courses that meet the same requirements? Will both the face-to-face and online options be treated the same when determining if students have met these requirements? If not, please explain.

9. Have you considered how this course will relate to other courses, both online and face-to-face, that your department may offer, or that may be offered by other departments? For example, will this course serve as a prerequisite for other courses? Please explain.

Course Mechanics and Logistics Questions:

10. What is the nature of instructor involvement in the proposed alternative mode of instruction? What are the means by which the instructor will foster learning, and how will the instructor be available for consultation?

11. In the case of distance learning courses offered collaboratively between campuses, what are the specific responsibilities of instructors on this campus? How will coordination be maintained between campuses, and who will be responsible on this campus for consultation with students?

12. How will student progress be monitored? Describe graded activities mediated through technology and how materials will be handled to verify student identities and to ensure that students only receive credit for their own work.

13. What are the plans for evaluating student learning outcomes, both at the end of the term and as students move through subsequent courses in a sequence of courses or curricula?

14. How will course material that is archival in nature (e.g., recorded webcasts, voiceover slides) be updated for future offerings? Can it be easily moved to other platforms or adopted by other instructors?

15. COCI will be reviewing approved online courses after 4 years, consistent with the recommendations in the Berkeley Division's Final Report of the Online Graduate Degree Working Group (which can be found at http://academic-senate.berkeley.edu/sites/default/files/recommendations-reports/final_report_online_graduate_degrees_working_group.pdf) and COCI’s current practice of seeking input from the instructors of new online courses on their teaching experiences — a practice which has been in place since COCI’s first provisional approval of online courses in 2003. If you believe your proposed course would benefit from review before the 4-year mark, what is the alternative time-scale for review that you would prefer and the reasoning behind it?

Version 11/12/2010. This version supersedes any older versions.
Online Courses - UC Davis

Online Course:

**WVL** (for on-line activities that replace standard lectures) and **WED** (for on-line activities that replace standard discussions). The Committee expects that instructors will use one or both of these codes for all courses in which **one or more hours/week** of lecture/laboratory/discussion in one or more class sections are replaced by on-line formats.

“...we ask that instructors select WED or WVL and then describe the activities more fully under Course Format. This description must include:

- **the nature of the activity** and an estimate of the time required by a typical student to complete the activity.

- **Instructor contact hours.** Describe how the instructor interacts with students

- **How the course unit value conforms to regulation 760** (1 unit equals 30 hours of student work.)

- **Grading.** The Committee requires that **midterm and final examinations** (generally required in all undergraduate courses) be proctored to ensure that the person taking the examination is the student receiving credit.”
Local Campus Course Approval

• Find out what your campus requires for Senate approval of online courses.

Friday, March 11, 2011
Intercampus Articulation

- Senate Regulation 544a

  - A UC student's home campus **must permit a student** in good standing to **enroll** simultaneously in courses offered by the home campus and in course(s) **offered by another UC campus**. Similarly, a UC student's home campus must also permit a student in good standing to enroll in summer courses offered by another UC campus. However, non-home campuses are not obliged to accept enrollment by students from other UC campuses. Each campus may set an upper limit on the total number of non-home campus enrollment units or courses its own student may apply toward graduation requirements.

  - Students can **enroll** at other campuses and are guaranteed **elective credit**. A home campus does not have to let a non-home student to enroll.
Intercampus Articulation

- Senate Regulation 544b
  - In order to **ensure that the units will count** toward any requirements, including unit requirements, students in residence at their home campus **must inform the home campus in writing before enrolling** in a course offered by another UC campus. This may be accomplished by electronic or conventional means, according to the home campus’s procedures.

- Not known how rigorously this is implemented by each campus.
Intercampus Articulation

• Senate Regulation 544c

• If the student wishes a course taken on a non-home UC campus to satisfy a breadth, major, or other specific requirement (other than unit credit), he or she is responsible for determining that an existing formal agreement establishes that the course will satisfy the requirement OR for securing approval, in advance of registering, from the relevant academic unit on the home campus. If these requirements are not met, the home campus may refuse to allow the course to satisfy specific requirements (other than unit requirements).

• The responsibility is on the student, and it is cumbersome.

• This is a faculty, a Senate issue. What can be done to facilitate the process that ultimately requires approval by a department faculty (major requirements) or a campus Senate committee (GE credit)
Intercampus Articulation

* Senate Regulation 544c

- If the student wishes a course taken on a non-home UC campus to satisfy a breadth, major, or other specific requirement (other than unit requirements), he or she is responsible for determining that an existing formal agreement establishes that the course will satisfy the requirement OR for securing approval in advance of registering from the relevant academic unit on the home campus. If these requirements are not met, the home campus may refuse to allow the course to satisfy specific requirements (other than unit requirements).

This issue will be exacerbated by the growing number of inter-campus online courses.

- The responsibility is on the student, and it is cumbersome.
- This is a faculty, a Senate issue. What can be done to facilitate the process that ultimately requires approval by a department faculty (major requirements) or a campus Senate committee (GE credit).
Intercampus Registration

- Campus registration and student information systems do not talk to each other well.
- It is time consuming and clumsy for a student to enroll at another campus.
- It can be difficult for students to know that there is an online course offered that they can take at another campus
  - e.g., Arabic Without Walls
Intercampus Registration

- **SR 544d**
  - UC courses approved by either UCEP or CCGA as system-wide courses shall be listed in Divisional catalogues.

- Arabic without walls has been approved by UCEP (systemwide Ed Policy) as a systemwide course.

- There is no administrative process by which systemwide courses are being listed in all campus catalogs.

- This issue will grow as more students want to take inter-campus online courses.

- The UC Provost is aware of the growing issues, and the Senate is aware of the problems - time will tell how these issues get addressed.
Funding Options & Intellectual Property
Principles

- Faculty retains copyright and all that entails
- Open access wherever possible
- Protections from inappropriate use (monetization, mash-ups)
- Enabling use of in-copyright materials in courses
- Support cross-campus use
- Creates opportunities to sustain online instruction without unduly burdening already scarce funding
- Aligns with existing policies
Sustainability options

• Hampster-wheel (foundations, gifts)
• Campus “co-investment”
• Content-generated revenues
• Revenues generated through technology
• Licensing content to third party institutions
• “Service”-generated revenues
  – UC students
  – Non-UC students
## Rights regimes

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<th>Regime</th>
<th>Protect faculty</th>
<th>Open</th>
<th>Cross-campus</th>
<th>Use 3rd party stuff</th>
<th>Ham-wheel</th>
<th>Rev on content</th>
<th>Rev on service</th>
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Faculty retain copyright in all regimes

Friday, March 11, 2011
Next Steps
Lessons learned

• You are the heart and soul of this project
• The enormous difference in approach, interest, and need that is represented in the room, is essential to this project’s success. We need you to be as entrepreneurial and as different as you are. If we cannot support that, then we have failed
• We need you to have and pursue different goals through your involvement in online education
• The common learning environment is a solution to a problem you (faculty) do not have, but it is a problem that we (and you) need to solve
• We are trying to achieve a lot on a lot of fronts, technological, pedagogical, etc. We cannot and we do not expect each of you to make progress on all fronts at the same rate and pace
• The best is the enemy of the good.
• Perpetual beta
• We will need to make compromises and choices along the way
Detailed development plans

• With high level information (aims, objectives, syllabus)

• And detail about learning objectives, activities, and assessments that is adequately granular and sufficiently detailed to inform...

• an implementation plan with timelines, milestones, and cost estimates
More than adequate for senate review and approval

- Presented to and discussed by the project team at a well developed but still draft stage
- Resulting in a plan project incorporated into an MoU and releasing funding for implementation
So where to from here

• To initiate detailed design
  – Develop design template
  – Sequence implementation (with support of project staff)
  – Schedule presentations
  – Initiate Divisional Senate Review (you have to do that)
• Continue information sharing.

You have heard from us – we want to hear from you and for you to hear from each other...
But how?

A conference?
• where you present
  – What works / what doesn’t (for those of you with experience)
  – Where you are going and why (with your courses)
• Where we provide more detail than we have today
• Who, when

Routine check-ins (on phone, desktop-based video)?
• exploring thematic topics (sustainability)
• faculty presentations as above
• project information as it is nailed down
What else?
Workshop Wrap-up