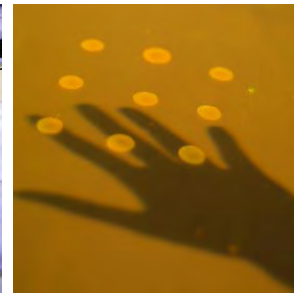
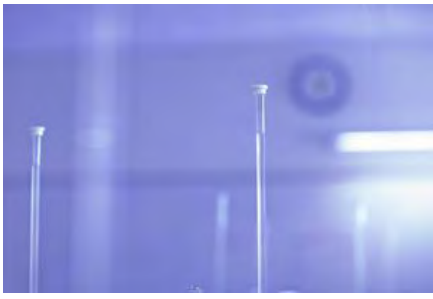


FUTURE FACULTY AND ASSESSMENT AT UC MERCED



Christopher Kello, Interim Dean of Graduate Studies

Project Funded by CGS, Sloan, Teagle

A collaboration between

- Graduate Division
- Center for Research on Teaching Excellence
- Office of Institutional Assessment
- Merritt Writing Program



Institutional Context

About 6,000 students with 375 graduate, 85% Ph.D.

More than 60% of undergraduates are 1st generation

Assessment is fairly well integrated at UC Merced

- All programs and courses have learning outcomes, and the latter feed into the former
- Every graduate program must go through WASC accreditation

Project Design

Semester-long, intensive certificate program

*Undergraduate Outcomes Assessment:
Pedagogy and Program Planning*

Future faculty teaching assistants
paired with their course instructors



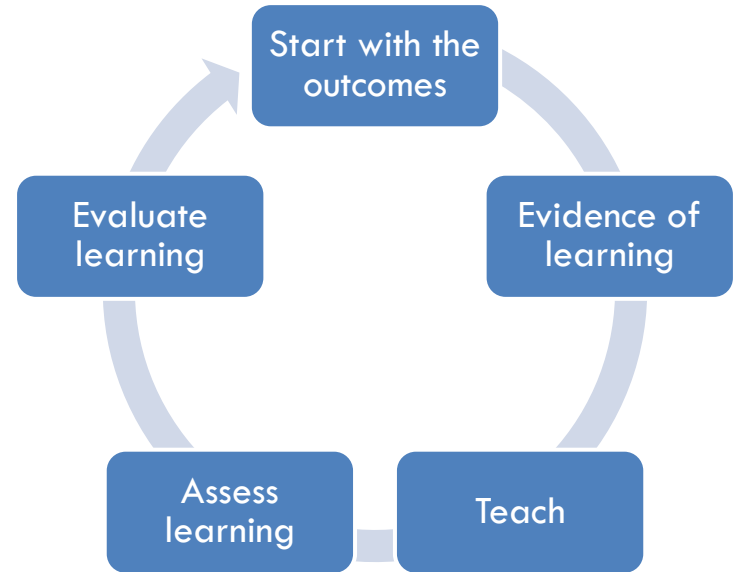
Project Cohorts



Project Model

Engage in backward design to plan outcomes-oriented instruction

We conjecture that this model is particularly valuable for *first generation students*.



Key Certificate Activities

1) **Pre-semester:** Draft the lesson plan for first day of class & needs assessment

2) **Semester**

Wk 1: Needs Assessment

Mid-course evaluation

Signature assignment

Semester

- Weekly teaching plans and related reflections
- Weekly meetings - discuss teaching and student learning in your classroom

3) **Final products:**

- a. Lesson plans and related materials (what you did in your classroom this semester)
- b. Final reflective teaching and learning essay for public posting (what you learned)

Two Cohorts So Far

Spring 2013

- All STEM (Biology, Chemistry, Physics)

Fall 2013

- Sciences, Humanities and Social Sciences



Future Faculty Demographics

9 total: 6 women, 3 men

Disciplinary Affiliation

- 3 Quantitative & Systems Biology
- 1 Physics
- 1 Chemistry & Chemical Biology
- 1 Environmental Systems
- 1 Social Science - Cognitive Science
- 2 Humanities – World Cultures



Future Faculty Demographics

- **Degree Advancement**
 - 5 x ABD (expect to finish within year of participating)
 - 3 x two-three years into degree program (not yet advanced to candidacy)
 - 1 x first year graduate student
- **Graduate Student Instructor Experience**
 - 2 in second TAship at UCM
 - 7 highly experienced with multiple semesters of teaching at UCM

Undergraduate Courses

Field	Course	Course Type	Course Enrollment & Format	Future Faculty Instructional Role	# Future Faculty
STEM	Chem 8: Organic Chemistry	Gateway	Large lecture & lab	Lab instructor	1
STEM	Physics 160: Modern Physics	Required in major	Small lecture & lab	Lab instructor	1
STEM	Bio 1: Contemporary Biology	Gateway Service course GE	Large lecture & discussion &/or lab	Discussion instructor	2
STEM	Bio 2: Introduction to Molecular Biology	Gateway	Large lecture with discussion and/or lab	Discussion instructor	1
STEM	Earth Systems Science 100: Environmental Chemistry	Elective in major	Medium size lecture & lab	Lab instructor	1
Social Sciences	Cog Sci 1: Introduction to Cognitive Science	Gateway GE	Large lecture & discussion	Discussion instructor	1
Humanities	Spanish 3: Introduction	Gateway GE	Small lecture	Instructor of record	1
Humanities	Spanish 4: Intermediate	Gateway	Small lecture	Instructor of record	1

200+ students = large lecture; 50-80= medium; <30 = small

Certificate Project Anecdote

Phys 160: Modern Physics

- Needs assessment revealed a lack in scientific writing training
- Student and instructor modified lab exercises and assessment to focus on lab report writing



Certificate Project Anecdote

Chem 8: Organic Chemistry

- Mid-semester survey revealed a disconnect between learning in labs and in lectures
- Exams were modified to integrate assessment of labs and lectures



Project Findings

- 100% (9/9) future faculty developed and implemented all elements of semester long project, including final essay
- More experienced graduate students and instructors struggled more with backward design and outcomes-based lesson planning



Project Findings

- 100% (9/9) of graduate participants report project has impacted their approach to instruction
- 66% (6/9) of graduate participants reported that the project has influenced their own *graduate research activities*



Next Steps

- Continue to offer and develop the learning community model
- Broaden impact on campus community, further develop online modes of dissemination

