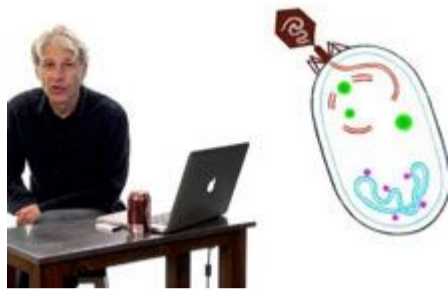


FACULTY + STAFF

## Lights, camera, instruction!




Nicole Freeling/UC Office of the President | July 29, 2013

**"Hollywood Bob" Goldberg explains in his online course how genetic engineering is carried out. His lectures, shot in a production studio and enlivened by archival images as well as animation, came about through a collaboration with UCLA's School of Theater, Film and Television.**

For the last 40 years, UCLA professor Robert Goldberg has been affectionately referred to as "Hollywood Bob," for his creative use of movie clips and other popular media to make the concepts of genetic engineering more accessible to his students.

But recently the instructor has taken that interest to a whole new level — turning the course itself into a slick online offering with production values and computer graphics that owe as much to the silver screen as to Silicon Valley.


Named by Newsweek as "a professor who can change your life forever," Goldberg is a sought-after teacher whose courses can be difficult to find space in. This summer, students — including those visiting family on far continents or completing internships back in their hometowns — were able to enroll in a virtual version of his genetics engineering and society course through [UCLA Summer Sessions Online](#) .

Now in its second year, the program pairs the multimedia resources of UCLA's renowned School of Theater, Film and Television with faculty interested in using online technology to teach their subjects in new ways. Lectures are shot in production studios from multiple camera angles. They are enlivened with animation and archival images. The result has been classes that bear closer resemblance to an episode of NOVA or a Ken Burns production than the videotaped lectures and static materials often associated with online learning.

"Every scientific concept has animation that [was] added and embedded in the lecture in ways that are meant to be fun," said Goldberg. "If I pound the desk or move my hands during the video, the animation will move along with me." The course also offers elements that are more difficult in a lecture hall, such as guest appearances by the head of the LAPD crime lab and an agricultural specialist, both of whom talk about the role of genetics in their fields.

### **Part of a larger UC effort**

UCLA's collaboration with its film school is just one of the online efforts underway across the University of California, aimed at enriching the way students learn while making it easier for them to get classes they need.

UC currently offers more than 200 undergraduate classes for credit on various campuses, and the university recently [launched a systemwide effort](#)  to create dozens of new offerings over the next several years.

It also will build a platform that allows UC students to take online classes at a campus other than their own.

Goldberg was skeptical when he was first approached about teaching an online course.

"I likened it to the difference between taking a beautiful hike in the mountains and walking on a treadmill," he said. He was persuaded by UCLA professor Brian Copenhaver, whose introductory course in philosophy was the first to be offered through the program.

To show what online learning, done well, can achieve, Copenhaver has enlisted faculty from disciplines like humanities and the life sciences — areas usually considered a challenging fit for the medium.

"More than just solving their logistical needs, this gives students something beautiful and well-crafted," said Copenhaver. "It produces a completely different experience of instruction both for the person doing the teaching and the person being taught."

### **Adding a touch of Hollywood flair**

"An online course is a choreographed event," said Raoul O'Connell, who leads the program's multimedia work. "Since you don't have the in-person experience, we make up for it really aggressively by using videoconferencing, custom-built interactive tools and all kinds of media. We'll take a PowerPoint and turn it into a video with dozens of images that illustrate the concept." The program builds tools for students to engage in real-time, often lively discussions with the instructor and each other.

In addition to providing production resources, the film school coaches instructors in projecting an engaging screen presence, something that requires different skills — more body language, tighter scripting of the classes — than capturing attention from a lectern.

"It's very different looking into a camera than looking into the faces of students," said Goldberg. "You have to learn to let the medium melt away."

Such high-quality production doesn't come cheap. Courses produced in conjunction with Theater, Film and Television cost between \$70,000 and \$100,000 to develop.

Summer Sessions Online is just one of the ways that UCLA is developing online learning, as part of its larger efforts to figure out what works best.

"UCLA is examining the impact and student learning experience across a full range of online models and modules that vary widely in cost," said Patricia Turner, UCLA dean and vice provost for undergraduate education. "UCLA is committed to testing a variety of approaches in order to ensure that the significant investment in online education results in well-educated students."

UCLA is now cautiously looking beyond summer session to the possibility of offering courses developed through the program during the regular academic year. Goldberg is considering offering a digital version of the introductory molecular biology class that is a requirement for all life sciences and pre-med students, and is taken by 600 students a semester.

For Hollywood Bob, the allure is not only in expanding access to a popular course. It's in finding new ways to further his age-old ambition. "My goal is really to make the subject come alive." With the right technology and creative flair, he said, "you can create something that's very powerful for students."

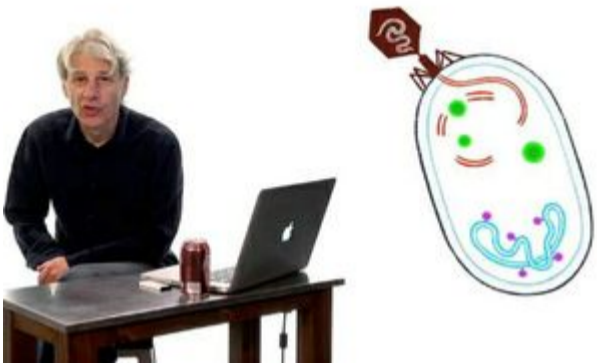
 Bob Goldberg teaching his online course-priv

**In professor Robert Goldberg's online course, every scientific concept is illustrated with an animation that makes learning fun. The animation moves in response to his own movements.**

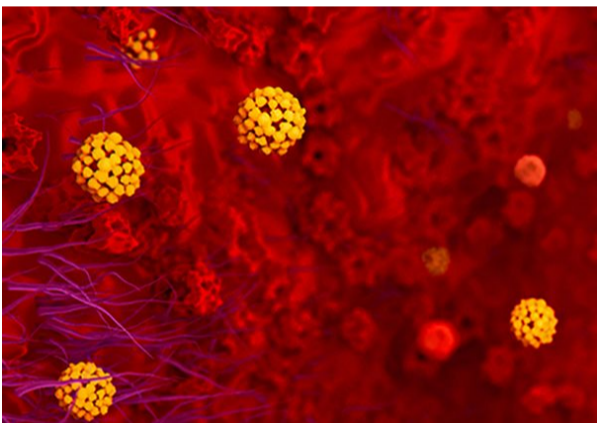
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