

http://ams.confex.com/ams/Annual2005/techprogram/paper_84377.htm

[14th Symp on Education](#)

P1.18

Completely online weather courses

Gong-Yuh Lin, California State University , Northridge, Northridge, California

In California State University, Northridge, the online teaching program began in Fall 1999 with about 8 GE courses. In order to encourage faculty members to be engaged in GE online courses, the university IT team offered webct workshops every semester. About 600 faculty members have attended the workshops during the past four years. Each workshop covers the topics of creating homepage, image database, content module, quiz, bulletinboard, and chatroom, using webct software. The software programs such as photoshop, power point, and dreamweaver were also offered to enhance the instructor's ability to manipulate various kinds of files and to create a webpage. The university provided an incentive program awarding faculty members who teach a GE online course the first time with \$2,000. Some college deans considered online teaching as a significant criterion in favor of merit salary increase. Some department chairs offered 3-unit release time to online teaching participants. The purpose of the university's online teaching policy is to accelerate the rate of graduation for undergraduate students. The geography department at CSUN has published a flyer listing seven online classes scheduled for Fall 2004. Four of them are weather-related classes offered by the author. There are two atmosphere classes (Geography 311), one weather class (Geography 103), and one boundary-layer climatology class (Geography 412). Weather course fulfills lower-division GE requirement. Atmosphere course fulfills upper-division GE requirement. The course of boundary-layer climatology meets the major's requirement. The author began to teach a completely online Geography 311 course in Fall 2003 using webct program to create a homepage that includes all materials used for the on-ground classes taught in the past. Meanwhile, the department obtained the AMS online weather studies license. In Spring 2004, The author began to teach a partially online Geography 103 class. The lecture was delivered in the classroom while the examinations were conducted online. Online Weather Studies and Study Guide authored by Dr. Moran were adopted as course textbooks. Students were requested to complete some of exercises in the Study Guide as classroom and home works. Photoshop software was used to edit weather maps and stuve diagram obtained from the website of AMS online weather studies. Arrows were placed on the maps or stuve diagram pointing to the features of interest. A short explanation of the features was placed at the end of the arrow. For example, an arrow is used to point to the air pressure code on the upper-right corner of the station and followed by the explanation of air pressure it represents. The workshop of AMS online weather studies conducted on May 16-21 provided an excellent opportunity to enhance the author's knowledge of using various products from NWS for online course presentations. In contrast to the contemporary weather textbooks, the author's online weather and atmosphere courses

contain image databases that use real weather maps and stuve diagram so that students would not feel out of the touch with the reality. The NCEP products, satellite photos, and radar imageries presented by the leaders of the NWS during the workshop provided invaluable sources of online teaching materials. The subjects on numerical weather prediction as well as satellite and radar interpretations learned from the workshop were incorporated into my online courses in the content module, image database, and quiz. Other than updating the contents in both GE weather and atmosphere courses using materials obtained from the AMS online weather studies workshop, I have completed the construction of an online boundary-layer climatology course since May. In this summer, I offered a completely online atmosphere course which attracted 60 students, an enrollment far exceeded the required 24 students. The enrollment of the online course increased significantly as compared to the on-ground course I taught before. All GE courses that the author offered reached full enrollment within a few days of the opening of registration. I have received many emails requesting to be on the waiting list following the close of the class. All GE online courses for this fall semester reached full enrollments and were closed. My air pollution online class received 30 students as compared to less than 10 students in the on-ground class. The overall student performance in the online class is about the same as the on-ground class, judging from the grade distribution curve of the entire class. For a completely online course, the communication between students and instructor are achieved by email, bulletinboard, and chatroom. The communication by phone and office visit are discouraged because it defeats the purpose of completely online. It is very confused and chaotic to conduct a chatroom discussion with more than 10 students. Some students feel shy of posting messages on the bulletinboard. They rather communicate with the instructor by emails. A few students in the online class always had troubles with computers when taking the examinations or even tried to beat the webct security. The online instructor must be expected that many virus-infected emails sent to him frequently. Online teaching preparation is a painstaking experience. It is very time consuming to create, upload, and download files to the homepage website. However, one would learn many internet tools by completing the construction of an online course. Unlike the on-ground class where students may hesitate to ask questions in front of classmates, the students in the online class are more likely to pose questions by emails. The instructor can use the information from the email questions to improve the course content. In online quiz, score is released once a student completes the examination. The instructor can save much time and labor as compared to the classroom scantron examination.

[Poster Session 1, Education and Outreach Initiatives](#)
Sunday, 9 January 2005, 5:00 PM-5:00 PM

[Previous paper](#) [Next paper](#)

[Browse or search entire meeting](#)

[AMS Home Page](#)

