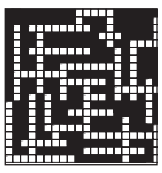


Pharming? Phishing? Cookie? Test your computer security knowledge with the *IT Times* crossword puzzle. *Page 4*

How are instructors using "Personal Response Systems" to get students to participate in class? *See below*

Are your neighbors filching your home wireless Internet connection? *Page 3*

IT TIMES

Information Technology News for the UC Davis Community

Spring 2006

Clicking to Learn

Interactive Learning Technology Improves Class Participation, Attendance

Undergraduates Lynsie Seely and Jessica Alonso use "clickers" to respond to a question in Physics 7A.

"You think it's B? I'm pretty sure it's C."

"No way. It's totally B."

"Really? Why?"

"Put down your clicker and I'll show you."

A crowd of nearly 150 students sits in a campus lecture hall at 7:50 A.M. on a Thursday, but despite the early hour, the classroom is packed and nearly all the students are wide awake and clutching brightly colored devices that resemble remote controls. After a few minutes of discussion, the two undergraduate students, Jessica and Lynsie, come to an agreement, point their devices at a small box near the upper corner of the hall, and thirty seconds later, they smile and give each other a quiet high-five when they learn they were correct.

Similar scenarios occur frequently in each of the Physics 7A lectures. Following up on a successful campus pilot program, the Physics Department decided to implement an interactive learning process called "Personal Response Systems" or "clickers." Thanks to the successful implementation of this technology, all introductory physics classes are now using a historically passive device—the remote control—to improve active participation between instructors and students, enhance collaboration between classmates, boost attendance, and revitalize the traditional learning experience.

A Real Conversation with 200 Students

As with many introductory science classes, the Physics 7 series is taught in large lecture halls that hold hundreds of students at one time. With so many students, it is a challenge to ensure that the majority of the class understands what is being discussed. Use of the Personal Response System helps bridge this gap, as even the quietest, shyest students tend to use their clickers. "The use of clickers has given me the chance to participate more frequently than I would in a regular classroom," says Abhi Kalavapudi, an undergraduate majoring in Neurobiology, Physiology and Behavior.

This direct, instantaneous feedback from everyone in class proves useful to instructors. "It gives me the only way I have found to carry on something like a real conversation with 200 students," says David Webb, a lecturer in the Physics Department.

Students seem to appreciate the immediate follow-up when dealing with particularly difficult concepts. "I like the way the professor talks through the incorrect answers and explains why they aren't right when there are too many people who didn't agree on the

Continued on page 2

Banner Student Information System Will Get Fresh Upgrade in September

When Lana Dancy begins her Banner training course in Hoagland 130 for a small group of testers from the Office of the University Registrar, two projectors beam light onto the wall behind her. It is a Thursday in March and for most of the attendees this will be their first glimpse of Banner 7 software. As designated testers, it is their job to provide feedback to help fine-tune the system before its launch over Labor Day weekend, September 2-4, 2006.

When the group begins the log-in process, it is immediately clear the new software is different from the current version. Rather than accessing Banner via Citrix (a software interface), the group instead opens Internet Explorer and navigates to a Web page. A plug-in launches a page that asks each user for their UC Davis log-in identification, Kerberos password, and the password provided by their hard token—a special security device that generates a one-time password. The testers are then taken into a test version of Banner 7.

The projectors at the front of the room now display the current and new Banner versions. Banner 6, on the left, suddenly looks dated—vaguely resembling a Windows 95 interface—whereas Banner 7 looks up-to-date, with a larger viewing area, navigation tabs that resemble something you might find on Amazon.com, and a menu that looks similar to Microsoft Word. Holding the mouse over one of the icons at the top of the page reveals a pop-up bubble that describes the icon's function. Dancy directs the group to open one of the forms; the testers dive in and explore Banner 7's new features.

What Is Banner?

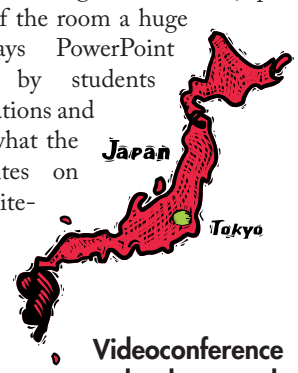
Banner is the main software interface for controlling and organizing vast amounts of student data, everything from admission information to course enrollment, final grades, and financial aid. In use since 1993, UC Davis launched Banner 6 in 2000. The current upgrade to Banner 7 is needed in

Continued on page 3

STUDYING ABROAD BY STAYING PUT

At Japan's Hosei University, Professor Tashikazu Takao writes the words "Synoptic Gospels" on a digital whiteboard. The board can detect his pen movements and then digitally transmit the data in real-time to a screen in UC Davis' Olsen Hall. "This is real secret agent stuff," explains Bill Sykes, a technician from Classroom Technology Services. Impressive as the technology is, this isn't a James Bond movie, but rather, "Humanities 250: Christianity in Japan during the Asian-Pacific War and the Post-War Period," taught live to UC Davis students by a professor in Tokyo, Japan.

As class begins, the UC Davis students scan each of the four large monitors that hang around the classroom. Two display the UC Davis classroom and the other two focus on the professor sitting at his desk in Japan. In the front of the room a huge screen displays PowerPoint presentations by students from both locations and also displays what the professor writes on his digital whiteboard.



Videoconference technology made it possible for UC Davis students to take a course taught at Hosei University in Tokyo, Japan.

"Can someone define the word *canon*?" asks professor Takao. The camera angle immediately switches to a live shot of the Japanese college students, who are uniformed and seated in rows. In stark contrast to the informal feeling of the UC Davis classroom, the Japanese classroom is a bright white auditorium glowing with halogen lights.

Bill Sykes quietly moves in and out of the room throughout the class, changing camera angles, monitoring connections, and even setting up additional hardware for an upcoming videoconference that will be transmitted to China. When everything is stable, he heads down to the basement where

Continued on page 3

Singing the Praises of Education

For years, many UC Davis faculty members have recorded their lectures onto trusted, albeit now outmoded audiocassettes and made them available for students to check out. New technology and emerging corporate partnership options are presenting new opportunities for how lectures-on-demand, via the Internet, might benefit education.

At the beginning of this year, iTunes U, a partnership between Apple and a handful of universities around the country, began distributing lectures and other academic recordings online exclusively through Apple's iTunes. Around the same time, the pilot program began acquiring national attention, Bob Ono, UC Davis' IT Security Coordinator, made an inquiry to Apple regarding iTunes U and the possibility of UC Davis creating its own program.

The iTunes U Program

In the simplest of terms, the iTunes U interface is much like Apple's popular iTunes Music Store, but without the 99-cent fee for downloads. The iTunes U software organizes a university's audio, text, and multimedia files and makes them available to faculty and students at no charge. Using the free iTunes U software, students can download content to their PCs or Macintoshes. They can then listen or view the content from their computers, or transfer that content to an iPod. Everything from slides and PowerPoint presentations to recorded lectures, and videos of featured guest speakers can be made available online through iTunes U.

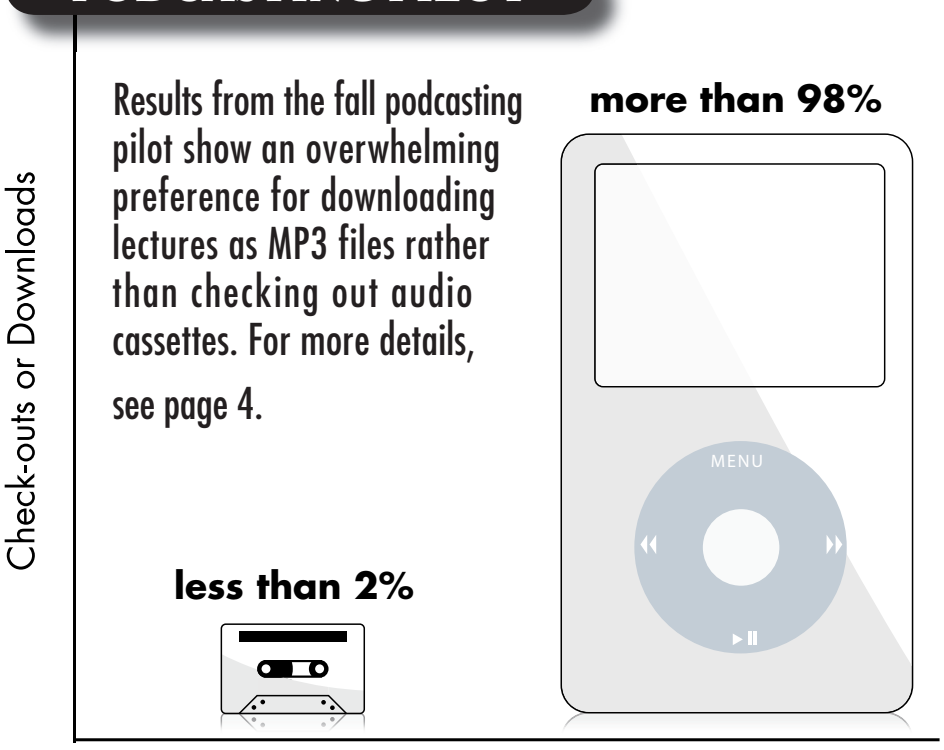
UC Davis Workgroup

A group of university members met recently to start addressing the pros and cons of iTunes U and ask questions that focus on UC Davis-specific needs. How would UC Davis benefit from a partnership with Apple? How will faculty react to iTunes U? How would students and

Continued on page 4

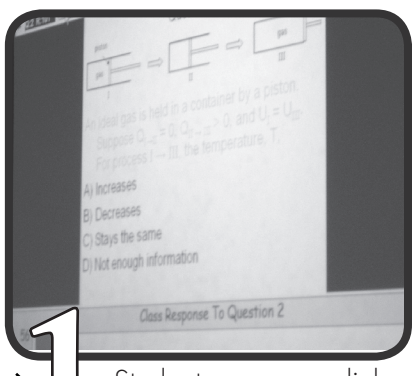
PODCASTING PILOT

Results from the fall podcasting pilot show an overwhelming preference for downloading lectures as MP3 files rather than checking out audio cassettes. For more details, see page 4.

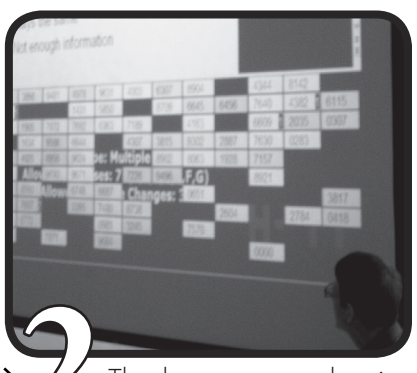


Technology Engages Students

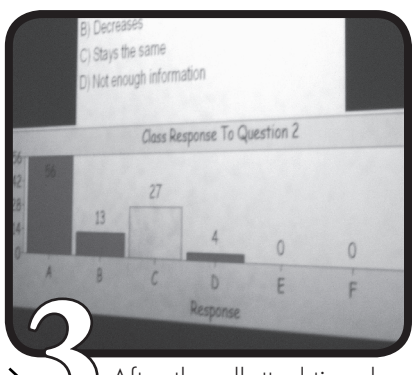
HOW CLICKERS *work*



1 Student uses clicker to answer a question on screen (the last four digits of the student's identifier appear at the bottom of the screen as confirmation the student's response was recorded).



2 The lower screen begins to fill with response confirmations as time winds down.



3 After the allotted time has expired, the tabulated student responses are shown as a bar graph. The correct response here was chosen by a small percentage of the class, so the instructor immediately knows that more discussion is needed on this topic.

Personal Response Systems are designed to encourage every student to participate in class by way of a remote control or "clicker." At different points throughout the lecture, the instructor presents students with a multiple-choice question; the students then decide their response, point their clickers at one of the small infrared boxes installed in the classroom, and click the button that corresponds to their answer. A software program compiles the answers and a graph detailing student responses is projected onto the screen for the entire class to see. The correct response is also highlighted, so the students know if they are on the right track. The instructor is immediately aware of any concepts or topics that may need further discussion or clarification. Each student enrolled in a class using the response system purchases a clicker at the bookstore (prices range from $25 to $30). Students then register their clickers with the professor so their student identification numbers will be recognized and recorded when they answer questions. Individual responses are not displayed to the class, but are recorded for the instructor's use (for example, to track attendance). Learn more at cts.ucdavis.edu/prs/index.htm.

Clickers in the Lecture Hall

An Interview with Physics Instructor Randy Nelson

What teaching goals did you have in mind when utilizing the clickers and interactive quizzes in your classes?

My intent was to make this much more interactive and participatory than a standard lecture. An important prerequisite to this was that the text material be read prior to class. So I used the clickers early each day to see what level of understanding had been achieved just by reading. I also used them to keep people awake and (hopefully) interested. I designed the clicker questions to force discussion and group interaction. I would estimate that attendance was significantly higher because of the clickers.

How do you utilize the feedback/answers provided by the students' use of the clickers?

I used the results of the first few questions to see how much introductory material could be glossed over if it appeared the students already had a good grasp of it. Later questions showed whether further discussion or elaboration of that particular topic was necessary. It was a waste of all our time to continue with a topic that greater than 80 percent of the students understood.

In what ways do you feel the implementation of the interactive quizzes was successful?

Attendance, interaction, and alertness were much improved because of the clickers. The immediate feedback was invaluable.

Describe some of the challenges you've experienced with using the clickers/quizzes.

The single biggest challenge was that some clickers did not seem to work during the lecture. Because this represented five percent of the final grade, I couldn't ignore this issue. The only work-around was to have students sign in manually. The amount of time spent with the clicker data was quite high—dozens of hours over the quarter. Most students (probably over 75 percent) failed to follow the detailed and precise instructions to register their clickers, forcing me to input their data manually.

Any recommendations to other instructors who are considering the use of this type of interactive learning?

Do it! But have a plan for dealing with forgotten/malfunctioning clickers and have a registration system that automates the process.

Any additional comments?

I hope the students found using the clickers to be worthwhile and maybe even a bit fun.

CLICKING TO LEARN

Continued from page 1

correct answer," says Jessica Alonso, who is pursuing a double major in Psychology and Neurobiology, Physiology and Behavior.

System Encourages Attendance

Again proving that the best way to learn a subject is by teaching it to someone else, the Physics 7 students seem to understand key concepts more thoroughly because they need to explain their reasoning to their fellow classmates. They are often encouraged by the instructor to collaborate before responding. "When my neighbor and I disagree on the answer, we each have to figure out an explanation to defend the answer we've chosen, which forces a little more thinking on the subject at hand," shares Alonso.

Students and Instructors Stay Engaged

The interactive nature of the clicker questions, which are typically sprinkled throughout the lecture, keeps students and the instructor actively involved in the learning experience. Since the clicker responses are automatically catalogued, instructors can easily track who is coming to class and how often they are participating. Students are well aware of this fact, and so empty seats at lecture are a rarity. "The use of clickers has improved my attendance," reveals Kalavapudi. "I think that the more interactive classrooms get, the more students can come out learning, rather than the conventional methods 10 to 20 years ago. On the whole, clickers as an interactive tool can help stimulate even the non-motivated students in the classroom."

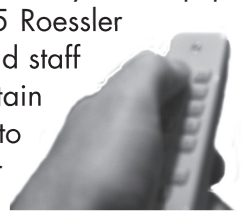
Since the clicker responses are automatically catalogued, instructors can easily track who is coming to class and how often they are participating.

Webb points out that instructors will initially have to invest some time preparing for lectures. "Writing good questions takes time and experience," explains Webb, "and planning the lecture takes some extra thought." Students also don't like having to buy the remotes, which are used only for a few classes. However, the Physics Department has worked with the vendor and the UC Davis Bookstore to provide mail-in rebates that cover a majority of the cost.

Mindful of these challenges, instructors like Webb plan to continue using the Personal Response System. "A professor in the Physics Department once said, 'A lecture can be a magical event where words that are written in the professor's notes appear in the student's notes without passing through the brains of either,' " says Webb. "This is what I hope to avoid with the clickers. Let's get everyone's brain into gear."

LEARN MORE ABOUT PERSONAL RESPONSE SYSTEMS

Classroom Technology Services, in conjunction with the Office of the University Registrar, has installed Personal Response System equipment in several classrooms. Systems are installed in 55 Roessler Hall, 66 Roessler Hall, and 106 Olson Hall. Faculty and staff interested in using a Personal Response System can obtain more information—including best practices and links to examples of Personal Response System use at other campuses—at **cts.ucdavis.edu/prs**



TechNews

technews.ucdavis.edu

The IT Times is a companion to TechNews, a Web site providing up-to-date information and educational technology news for the UC Davis campus community. Visit technews.ucdavis.edu to read the latest stories, and click on "Subscribe" to have the headlines delivered straight to your in-box.

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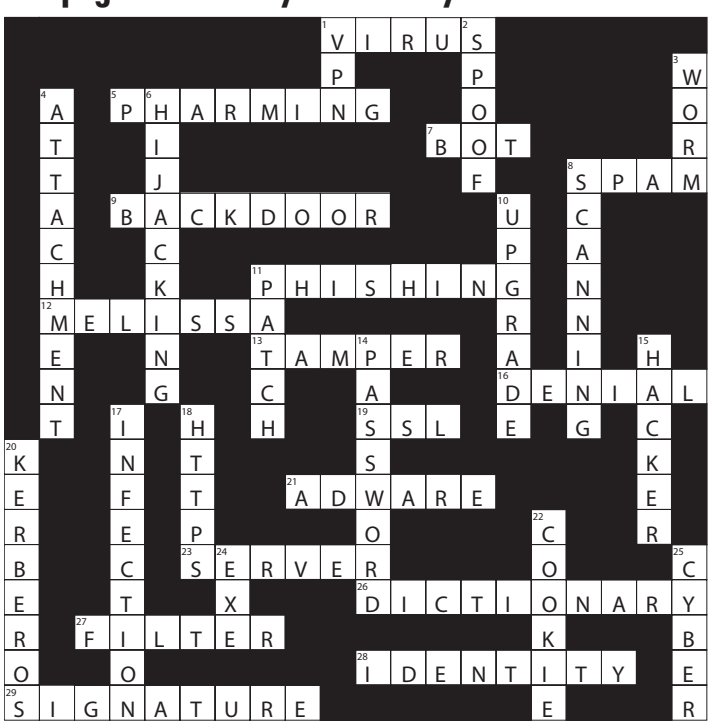
Please send story ideas and comments to the IT Times editor

ietpubs@ucdavis.edu

solved crossword

See page 4 for the Cyber Security Crossword Puzzle



For all your cyber security needs, visit the Computer and Networking Web site. security.ucdavis.edu

Wireless at Home

Securing Your Personal Network

Home wireless users are responsible for their own network security and should take extra care protecting their wireless networks against everything from neighbors pirating their Internet connection to full-scale identity theft.

So, you have finally gone wireless and embraced computer mobility at home. Unfortunately, you have also exposed yourself to a myriad of network piggy backers, hackers, and personal-identity predators. Because home wireless users are responsible for their own network security, you should take extra care in protecting your wireless network against everything from neighbors pirating your Internet connection to full-scale identity theft.

Router-side Security

Routers operate much like the archaic telephone operators of a technologically simpler time: they decide where data will be sent and find the most direct path from one network to another. They also manage the flow of online traffic and function as a bridge that allows information passage to and from your computer.

It is important to ensure your personal information is inaccessible to others and your computer is protected. Here are some suggestions to help safeguard your home computer and wireless network.

- Check the reference manual that came with your wireless router to see what security features are available and how to activate them.
- Secure your network with a complex password by choosing a variety of numbers, letters, symbols, and non-dictionary words. Longer passwords will also increase your security level.
- Do not allow your router to broadcast your network's Service Set Identifier (SSID). Your SSID is the network code that specifies your own personal wireless connection. The router's default setting may allow any computer within range of your network to view your SSID, which gives other people the ability to log on to your network without your knowledge. Preventing open access to your wireless network will discourage rogue surfers by forcing users to enter the codename.
- Implement a Media Access Control (MAC) address filter. Every wireless-capable computer has a unique MAC address that allows you access to your network. Most routers come with a MAC address filter that restricts access to just the addresses of your choice, enforcing a very secure method of filtration.
- Encrypt the data transferred across your network. Not all routers are encryption savvy, so check for this feature and make sure to activate it.
- If possible, limit the network transmission distance of your wireless router to your apartment or home.
- Visit the manufacturer's online support page for security information. Most router manufacturers offer tips on security configurations for their products, plus information about activating advanced security features. Some manufacturers also offer email support via their Web sites. The online support pages may also identify any security patches that need to be applied to your wireless router.

Protecting your computer

- Use a software firewall. Firewalls included in your operating system (i.e., Windows XP or OS X), sufficiently protect your computer. If your computer does not have a software firewall, try installing ZoneAlarm by Zone Labs or Norton Personal Firewall by Symantec.
- Be sure to turn off your wireless connection when not in use. Many laptops remain connected to the closest, open wireless network by default.
- Keep your computer's operating system and applications secure by applying vendor security patches and regularly updating your anti-virus programs.

Only you should decide who is allowed access to your computer. Take the time to guard your information and keep your home network secure. The extra barriers you create and precautions you take to build a protected environment for your personal home network and computer will help keep your network connection clear, your personal identity hidden, and your information safe.

Preparing for the Banner 7 Upgrade

The Banner Student Information System will be upgraded to Banner 7 over Labor Day weekend, September 2-4, 2006. To help prepare, Banner users are encouraged to check their workstations and to sign up for training.

Workstations

Banner users are asked to make sure their workstation can access the new system. Web browsers that work with Banner 7 are: Microsoft Internet Explorer 6, Mozilla Firefox 1.0 (Windows) and Safari 1.2 (Macintosh). The new software also has a larger interface, 1024 by 768 pixels, which may not work on 15-inch or some 17-inch monitors. Prior to the implementation, Banner users will be emailed information about how they can install the required plug-in, JInitator. For information about browser requirements and how to check your monitor, visit the Banner 7 Web site. sis.ucdavis.edu/future.htm

Training

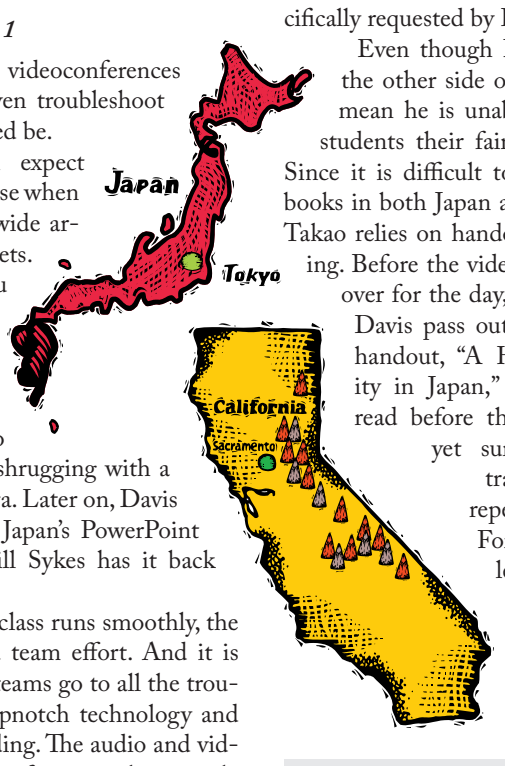
Training for Banner users starts in late August and early September and will feature two separate courses: an overview class and a hands-on workshop. Classes are open to all Banner users and sign-ups begin in May through Staff Development and Professional Services (sdps.ucdavis.edu). For new Banner users, the last introductory class for the current system, Banner 6, will be held on July 27. The first introductory class for Banner 7 will be held on September 12. For more information about Banner 7 training, contact Lana Dancy, Banner Student Information System Trainer (lrdancy@ucdavis.edu) or visit bannertraining.ucdavis.edu

JAPAN

Continued from page 1

he can monitor all videoconferences taking place, and even troubleshoot them remotely if need be.

Indeed, one can expect some problems to arise when trying to sync this wide array of techno-gadgets. Professor Tashikazu accidentally misspells a word on the digital whiteboard. "It's very difficult for me to erase this," he says, shrugging with a chuckle at the camera. Later on, Davis loses the stream of Japan's PowerPoint presentation, but Bill Sykes has it back within minutes.



To make sure the class runs smoothly, the operation requires a team effort. And it is easy to see why the teams go to all the trouble. The result of topnotch technology and teamwork is astounding. The audio and video quality of videoconferencing has greatly improved since its inception. What used to be delayed and choppy pictures mixed with fuzzy audio that did not sync, is now real-time video synced to pristine audio. Interaction between universities becomes a pleasant and enjoyable collaboration.

Although Humanities 250 sounds like a one-of-a-kind course, there are typically four or five videoconferencing courses taking place around UC Davis each quarter. Departments taking advantage of the service include Animal Sciences, Economics, Nutrition, Biological Sciences, and many others.

The beauty of distance learning is in the multicultural nature of collaboration. In exchange for Professor Takao's class, UC Davis offered a class on violence in American culture for Japanese and UC Davis students. The course was developed after being specifically requested by Hosei University.

Even though Professor Takao is on the other side of the world, it doesn't mean he is unable to give UC Davis students their fair share of homework. Since it is difficult to find the same textbooks in both Japan and the United States, Takao relies on handouts for student reading. Before the videoconferencing class is over for the day, teaching assistants in Davis pass out a thick photocopied handout, "A History of Christianity in Japan," by Otis Cary, to be read before the extraordinary—and yet surprisingly ordinary—trans-Pacific experience repeats in just a few days. For a taste of distance-learning at its finest, consider dropping in to see the live action for yourself. You won't be disappointed.

Videoconferencing

Instructors interested in collaborating with universities across the world, or having colleagues in remote locations speak to their classes via a video feed, should contact Classroom Technology Services (CTS) to discuss options for incorporating these novel forms of technology into future classes. The service is free for any instructor whose course is listed with the registrar, and is available on a first come, first served basis. Videoconferencing for other purposes is also available on a recharge basis. Contact CTS regarding videoconferencing at vtc@ucdavis.edu, or 752-3553. More information is also available at cts.ucdavis.edu/services/vtc.html.

BANNER UPGRADE

Continued from page 1

order to meet federal requirements for financial aid and for the university to continue to receive support from the software's maker, SunGard SCT.

SunGard SCT may not have the name recognition of a brand like Microsoft, but their Banner student information system is used by many universities across the country. Although SunGard SCT provides the base software for more than 1,000 forms, the UC Davis team has created or modified an additional 400 forms that are unique to the campus.

Immediately, the Banner 7 testers notice that access from a Web browser is a major improvement—the forms can be viewed practically anywhere there is an Internet connection—but the newer version of the software also has additional modifications that reflect new security concerns and changing educational norms. Just some of the new and improved features include:

- Concurrent curriculum. This feature supports admission, enrollment, and graduation of a student on an unlimited number of programs, such as degree programs, extension courses, and certificate programs.
- Data history. With the addition of Concurrent Curriculum tables to Banner, some of the existing data will no longer be overwritten by new entries.
- Protection of personally identifiable information. The new system features powerful security measures and improved protection of sensitive biographic and demographic data.
- Multiple identification management. This enhancement is designed to prevent the accidental creation of duplicate identifications for students.
- New architecture. Banner 7 is now an open API (Application Programming Interface) architecture, which means better integration with other applications.
- Enhanced user interface. In addition to a larger screen size, which allows more information to be displayed, Banner 7 contains new fonts, icons, and separator bars plus prompts for labels and fields. Keyboard quick keys are also still available.
- Online help. Quick and easy access to online support is available via the Internet.

Most 15-inch and some 17-inch monitors do not support Banner 7's larger 1024 by 768 pixel screen size.

After an hour and a half of exploring the new Banner environment, the session for Office of the University Registrar winds down. As they file out the door to head back to their offices, Dancy tells them, "Go back and play with it."

Access from a Web browser is a major improvement—the forms can be viewed practically anywhere there is an Internet connection.

In the following weeks, Dancy will conduct similar sessions for designated testers from the Financial Aid Office, Undergraduate Admissions, and the Office of Graduate Studies. Each office will test the Banner 7 forms specific to their unit and provide feedback to the Banner development team to eliminate software bugs prior to the September launch date. To learn more about the about the Banner upgrade, visit sis.ucdavis.edu/future.htm.

announcements

Guests Visiting UC Davis? Sign Them Up for Wireless Guest Access
UC Davis faculty and staff can offer their campus guests wireless Internet access. Accounts can be set up for one to seven days, and may be renewed for up to a total of 30 days. To create a guest account, faculty and staff must provide their guest's name, email address, and phone number. **wireless.ucdavis.edu/guestaccess.html**

Complimentary Email Forwarding
If you are retiring, graduating, or otherwise leaving the campus, but still wish to receive email from your UC Davis address, you may be eligible for a complimentary service that will forward your UC Davis email to an external address of your choice. **emailforwarding.ucdavis.edu/**

Campus Printer Repair Service Phased Out
Campus Printer Repair (CPR) has notified their existing campus clients that Hewlett Packard printer repair services will be phased out during spring quarter. Repair orders will no longer be accepted after April 14, 2006. A list of local repair vendors will be available on CPR's Web site after April 14. **cpr.ucdavis.edu/**

IET Wins Communication Award for Online Grading Flyer
IET won a communication award for "Submitting Final Grades Online" a flyer developed to provide information to faculty about submitting grades online. SIGUCCS sponsors annual communication awards to recognize outstanding publications developed at college and university computing centers. **iet.ucdavis.edu/2005_SIGUCCS_Award.html**

2006 University of California Computing Sciences Conference
Computing Services staff and managers throughout the university will be attending the 2006 UC Computing Services Conference, held July 16-18, 2006 at the Price Center on the UC San Diego campus. The program features four tracks—security, academic and research, business and finance, and emerging technologies—and explores the best in UC Computing Services. Registration information will be available online. **uccsc.ucr.edu/**

Highlights from Fall Digital Lecture Pilot

In an effort to improve lecture recording and distribution, Information and Educational Technology piloted a digital lecture recording and distribution system during fall 2005. Four classes participated in the pilot, three from the Psychology Department and one from the Nutrition Department. According to the *Report on Fall 2005 Pilot and Winter 2006 Developments*: "During winter 2006 quarter Computer Lab Management (CLM) and Mediaworks saw dramatic growth in the number of users of this system. Currently 13 classes use the campus podcast system with nearly 1,200 current users accessing digital lectures." The report goes on to note that a challenge to a full-scale deployment of the digital lecture system is the limited availability and installation of digital recorders. Classroom Technology Services is working with the Registrar to purchase and install permanent digital recorders in ten additional lecture halls over summer 2006. The rooms selected were those that currently have cassette recorders. More information about podcasting and the pilot can be found online at podcast.ucdavis.edu, or contact Rodd Kleinschmidt at 752-8121 or rkleinschmidt@ucdavis.edu.

Highlights from the Fall 2005 Pilot

- During fall 2005, MP3 lecture recordings were downloaded by up to 61 percent of the students in a given course. The most popular downloads were two review sessions.
- Excluding review session recordings, the download average among the four pilot courses was 25 percent of enrolled students.
- Both digital MP3 recordings and cassette recordings were made of every lecture for Psychology 101. The MP3 recordings were downloaded by 43 percent of the enrolled students. Only 2.4 percent of the enrolled students checked out cassettes (7 out of 296), with one student accounting for half of these checkouts.

iTunes U

Continued from page 1

faculty benefit from iTunes U in ways that pocasting and the MyUCDavis portal may not provide? What are the copyright issues? Are UC Davis students "digital natives," (as a University of Michigan official called his own university's students) and would they take advantage of lectures online? Will students continue to show up for classes or would iTunes U instigate a drop in attendance? Even though iTunes U is free, would it create incentive and monetary pressure on students to buy iPods?

Evidence suggests that students would welcome and benefit from iTunes U. A pilot project conducted this past fall showed a student demand for audio recordings of lectures online. (See below, left.) Liz Gibson, director of Mediaworks and head of the workgroup, agrees with iTunes U's potential for enhancing teaching and learning. "The ability to easily obtain quality audio recordings of lectures is a tremendous study tool for students. Students often miss key points when taking notes or copying diagrams off the board. To sit back, listen, and absorb the content during the lecture, and then go back and take notes from these recordings is a tremendous learning opportunity that will come to the campus at a minimum cost to us."

Regarding the possibility of a drop in student attendance, Gibson goes on to say, "Those students who choose to skip a lecture on the basis of a recording, will only be hurting themselves, and will quickly learn that it is not nearly the full learning experience that they truly need and should come to expect."

For Bob Ono, an additional advantage to iTunes U's potential educational value lies in its ability to direct students towards choosing legal downloads, like those from the iTunes Music Store, over music and movies obtained illegally.

Stay Tuned...

While a couple of iTunes U pilot programs have been initiated with other campuses, an official agreement drafted by Apple is still in the works, and if UC Davis participates, the campus would be one of the first fully licensed under the iTunes U system. UC Davis has begun the application process, so a final decision on iTunes U still awaits a verdict. Numerous questions and issues need addressing, and the agreement presented by Apple will help shape the group's decision in April. For more information on the iTunes U task force, please contact Liz Gibson at 752-3777 or email her at emgibson@ucdavis.edu.

Educational Technology GRANTS for FACULTY

Instructors wishing to enhance their teaching by utilizing computer technology can apply for several UC Davis grants. The Undergraduate Instructional Improvement Program Grant (UIIP) has a twice-yearly application deadline, however, other grant applications are accepted year-round. For more information on technology grants available to faculty—including information about how to apply and links to application forms—visit trc.ucdavis.edu/trc/grants/faculty/index.html.

Undergraduate Instructional Improvement Program Grants (UIIP)

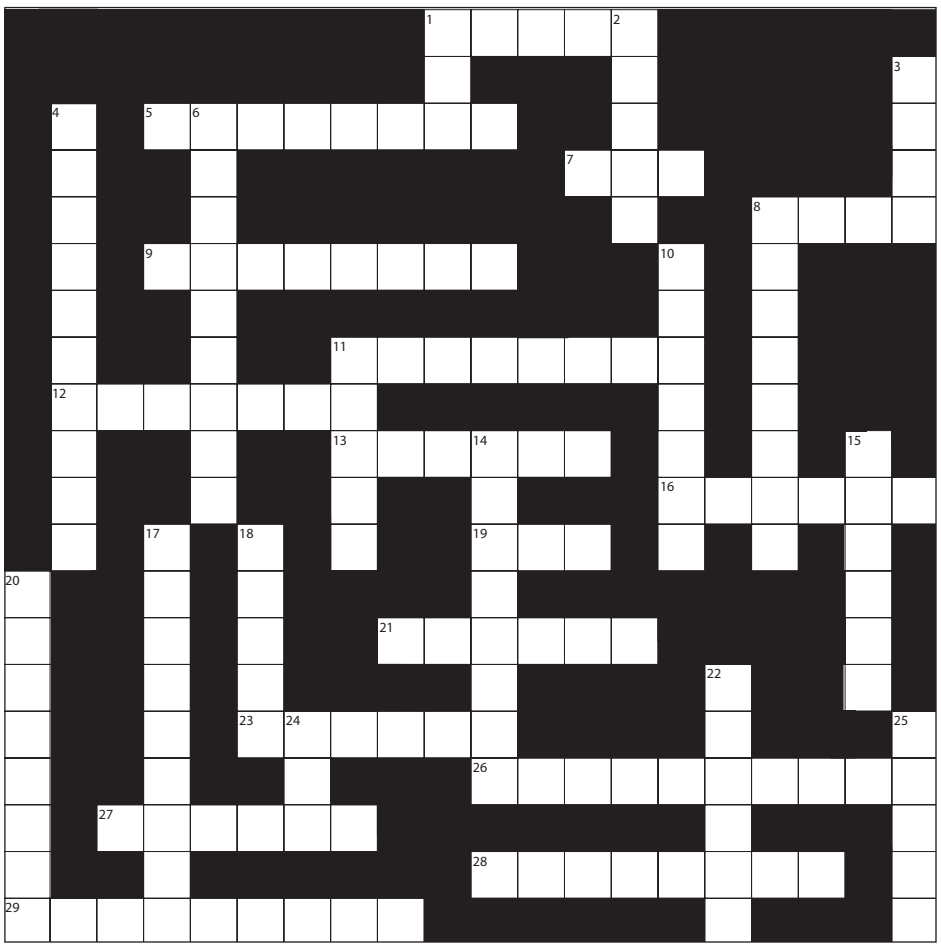
Instructional technology is one of this year's areas of emphasis for UIIP grants, and projects over $500 are encouraged. These grants are intended for: innovations that enhance undergraduate education; projects that enrich the educational experience of undergraduates (especially in large enrollment core courses); and departmental plans to strengthen undergraduate curricula or improve participation in campuswide initiatives.
Deadline for spring quarter: Friday, April 21, 2006

Educational Technology Resource Awards (ETRA)

This grant provides faculty with resources for instructional projects involving technology. Available services include—but are not limited to—digitizing slides, streaming video, and 3D animation. Faculty can also utilize multimedia database instructional software, such as Breeze or Almagest. Upon accepting this award, faculty must be willing to share the end product(s) with other faculty, either within their department or on campus.
Deadline: None. Applications are accepted year-round.

UIIP Minigrant Program

The UIIP minigrant is primarily for instructors whose technology projects are of a smaller scope and require immediate funding. This grant awards a maximum of $500, to be used for resources such as digital media or software. Financial support for guest lecturers up to a maximum of $250 is also available.
Deadline: None. Applications are accepted year-round.



cyber security crossword

Across

1. Malicious program that spreads from host to host
5. Internet scam that misdirects computers to fraudulent Web sites
7. Also called robots, spiders, and crawlers
8. Electronic version is not made with ham
9. A secret entryway for attackers
11. It just looks like a legitimate email from PayPal baiting you to update your credit card information
12. 1999 email virus allegedly named after an exotic dancer
13. To maliciously modify data
16. _____of Service. Attack causing loss of Web site access to users
19. Secure Sockets Layer
21. Sneaky marketing software
23. Networked communal computer
26. _____attack. Uses all phrases or words in this reference book when trying to crack a password
27. Data distiller
28. _____theft.
29. Digital_____. Electronic John Hancock

Down

1. Virtual Private Network
2. Hacker speak for transmission ventriloquism
3. Crawly, self-replicating program similar to a virus
4. Sometimes this virtual package delivered via email isn't so friendly
6. Domain_____. Web site holdup
8. Searching for viruses and vulnerabilities
10. To trade up software or hardware
11. Operating system band-aid
14. A strong one is at least six characters long and contains numbers, symbols, and upper- and lowercase letters
15. A slang term for a computer enthusiast
17. Use an anti-virus program to prevent _____
18. Specifies the URL is enhanced by a security mechanism
20. Authentication protocol used to log in to your UC Davis account
22. Morsel that stores information about you on your computer
24. Executable binary file
25. _____Cafe