

University of California, Davis

Electrical and Computer Engineering

Avian Influenza Pandemic

Business Continuity Plan

December 2006

This plan is developed for the Electrical and Computer Engineering (ECE) department and specifically covers the critical functions and positions, designated personnel and response/recovery actions of **ECE** as they apply to an influenza pandemic scenario. This document will be combined with similar plans from other schools, colleges and units and compiled into a campus-wide plan for responding to an influenza pandemic.

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I. ORGANIZATION CHAIN OF COMMAND, PANDEMIC PLANNING WORKGROUP AND COMMUNICATIONS COUNCIL

1. The organizational chain of command for **ECE** consists of:

Name	Position	Work Location	Email	Office Phone	Home	Cellular	Text capable?
Bahram Ravani	Chair	2064 Kemper	bravani@ucdavis.edu	4-6123	On file in dept. office	On file in dept. office	No
Linda Potoski	MSO	2064 Kemper	lrpotoski@ucdavis.edu	2-9548	On file in dept. office	On file in dept. office	No
Tim Metz	IT Lead	2154 Kemper	tmetz@ece.ucdavis.edu	2-8315	On file in dept. office	On file in dept. office	No

2. The Pandemic Planning Workgroup appointed for ECE:

Name	Office	Cellular or other
(Chair) Bahram Ravani	2064 Kemper	On file in dept. office
(MSO) Linda Potoski	2064 Kemper	On file in dept. office
(IT Lead) Tim Metz	2154 Kemper	On file in dept. office
(Safety Coordinator) Lance Halsted	2152 Kemper	On file in dept. office
(Student advisers) Kate Shasky	2064 Kemper	On file in dept. office

3. The Communications representative from **ECE** is:

Name	Office	Cellular or other
(Safety Coordinator) Lance Halsted	2152 Kemper	On file in dept. office
(MSO) Linda Potoski	2064 Kemper	On file in dept. office

4. The Business Office representative from ECE is:

Name	Office	Cellular or other
(Business manager/Research Administrator) Nikki Clark	2064 Kemper	On file in dept. office

II. SCENARIOS AND QUESTIONS

1. Consider this Scenario (*WHO/CDC Pandemic Alert Phase II*):

In spite of heavy surveillance, the Avian flu H5N1 virus has been found in poultry in the New York City outdoor markets. Public Health officials from the New York and the USDA have ordered mass destruction of poultry in that area and have put the rest of the continental U.S. on alert. Experts are predicting that it is only a matter of time before the disease spreads to poultry and perhaps other animals in the rest of the U.S. Some media reports are characterizing this outbreak as “one step from human infection”.

Specifically at UC Davis: UC Davis researchers are acting as subject matter experts in trying to explain the relative risks involved. Since the process of controlling an outbreak involves exterminating all animals in the surrounding area, animal activists are planning to protest the destruction of so many “innocent” animals. There are some concerns being expressed among staff and faculty about the recent events, with questions about whether it is still safe to eat poultry, what other animals might be infected and exactly how transmissible this is to humans.

Questions:

1. Is there an updated contact list (phone, email, cell, etc) for everyone within ECE? **Yes**

2. **Where is it kept?**

Email list serve: College of Engineering Academic Computing Services server; Phone list: departmental office, 2064 Kemper, also in the possession of Bahram Ravani, Linda Potoski, and Lance Halsted.

3. **Who is responsible for updating that list?**

Roberta Schreiner

CoE dean’s office staff members Stephanie Thompson and Debbie Chadwick for the College of Engineering Dean’s Office list; MSOs designate departmental administrative staff to maintain their respective contact lists, and then coordinate with dean’s office staff so that the dean’s office has up-to-date information via college listserves, web, etc.

College planning team members, as well as college administrators and the dean, will have hard copies of the above lists. Updated Emergency Contact email list serve will be developed by college IT staff (in progress).

4. **Is there a method for quickly contacting everyone in ECE with critical information? (For example: a phone tree)?**

Email/Listserve
College Intranet
Departmental Website
Phone Tree

5. Communications to employees, faculty or students in ECE is distributed via this method:

Email/Listserve
College Intranet

2. Consider this Scenario (*WHO/CDC Pandemic Alert Phase IV*):

For the past week, there have been rumors and unconfirmed reports of small clusters of person-to-person spread of H5N1 in Southeast Asia. The WHO has intensively investigated and initially could not confirm this development, although the level of suspicion is high and increasing all the time. As the WHO was attempting to verify the reports, CNN comes out with a report that the Avian Pandemic has arrived and is causing many deaths among residents and tourists in Southeast Asia. Finally, the WHO confirms that the virus has mutated and it is transmissible among humans, but it is still unclear how virulent it is. International efforts are attempting to contain these known outbreaks so the full range can be ascertained, although experts don't expect to be able to contain it for very long. Intensive surveillance in the U.S. has not found any evidence of H5N1 among the influenza-like illnesses that are normally present at low levels in the general population.

Specifically at UC Davis: There are nervous questions from faculty and staff about our plans to deal with an outbreak here. Some students are leaving because their parents have demanded they return home. Yolo County Public Health is urging caution until facts are verified.

Questions:

1. Who in ECE tracks and records employee absences?

Renee Kuehnau, Nikki Clark, and Linda Potoski

The tracking of employee absences is handled by various staff, supervisors and their back ups with the departmental Management Services Officer (MSO) acting as ultimate back up.

In the event of an emergency, faculty, staff and employed students will be instructed to call the designated individual for their group, if they are unable to reach their direct supervisor or contact via telephone.

2. Is there a method for monitoring faculty/staff who are ill with flu-like symptoms, including contacting staff who are unexpectedly absent from work?

Yes. Within each academic department and in the Dean's Office, the various staff supervisors and MSOs follow normal unit procedures established for this purpose and via the Emergency Contact list.

3. Does ECE encourage sick faculty/staff/students to stay home? And send home those faculty/staff/students home if they come to work/school?

We do encourage faculty/staff/students who have obvious symptoms to stay home or to go home if they are at work. Employees are sent home in accordance with campus protocol (<http://safetyservices.ucdavis.edu/emergencymgmt/AvianInfluenza.cfm>)

4. **Does staff, faculty, students have access to the latest information about disease transmission and does ECE provide basic disease transmission supplies (hand sanitizer, tissue, masks) at work?**

This information is available to all departmental staff via links to campus/departmental web sites. The department does not specifically provide disease prevention supplies, other than tissues.

3. Consider this Scenario (*WHO/CDC Pandemic Alert Phase V*):

Cases of H5N1 influenza have been verified in the U.S., some of those cases in California. Some countries have closed their airspace to all inbound flights. There is a public health alert notice from the State Department of Health Services and the state's Pandemic Flu Plan has been activated, which calls for immediate quarantine of known cases and all their contacts, and possibly stopping all traffic in and out of the affected areas in an attempt to contain the virus. School absenteeism rates (all levels) are extremely high, and there have been "unusually light" commutes the last few days. There is high absenteeism in all offices. Some stores have remained closed because of high employee absenteeism and the ones that are open are packed with consumers trying to purchase supplies. All business is disrupted, which includes normal deliveries of goods and services. Markets are being shopped out, long lines at open gas stations. Hospitals and health centers are quickly being overwhelmed with both the sick and the "worried well". There is some discussion of activating the National Guard.

Specifically at UC Davis: There haven't been any confirmed cases of Avian Flu in the Sacramento area. Students are leaving as they are being called home by parents, although it is getting increasingly difficult to use public transportation. Many classes are cancelled as there is high absenteeism among faculty and staff. Reasons for absenteeism include personal and family illness, although it is suspected that many faculty and staff are choosing to stay home. The Student Health Center is beginning to be overwhelmed with students who are ill or afraid they might become ill. Many faculty and staff are wearing gloves and masks and avoiding their colleagues. The Chancellor/Provost is considering a closure of the campus.

Questions:

1. Assume that **TODAY** only 50% of the normal staff/faculty in ECE have reported to work or school, and it appears this may be the situation for the next several weeks until the full extent of this influenza outbreak is known.

What are the critical functions and processes that must be maintained TODAY and the rest of THIS week?

EXAMPLE: Payroll, IT and communication, purchasing, research projects involving living organisms or perishable materials.

Payroll; IT and communication; student services provided through the ECE Student Affairs Office, and departmental faculty and staff advisers. For research core facilities managed by ECE, there are not critical functions for continuation of research.

What level of staffing is required to maintain those processes and functions?

We anticipate that 1 IT staff, the department safety coordinator, and the MSO. These people would be augmented by other staff as needed.

2. **If the Chancellor/Provost ordered a closure of UCD for one month in this situation – similar to a holiday shutdown or furlough – what projects or services that your group provides could be postponed?**

We anticipate that everything would be postponed with the exception of the following: IT services and, payroll. Ongoing communications with faculty, staff and students would be a priority, as well.

3. **What policies does ECE have in place for prolonged employee absences?**

Extended absence notices on both voicemail and e-mail. We would also put into effect a centralized message on our main department webpage.

We have no specific policies for prolonged absences, other than university personnel policies.

4. **Are there any staff/faculty/students ECE on travel or abroad? Do you know where they are and how to contact them?**

The department routinely has staff and especially faculty and students who are traveling. We would make every effort to reach traveling staff and faculty in the event of an emergency. Information will also be posted on our departmental website.

With regard to students, we would expect that students who are traveling through formal campus programs (i.e., those through the Education Abroad Center) would be contacted and advised by those particular units.

5. **Are there alternatives that could be considered within ECE for delivery of services or classes? If so, what are they?**

The college does have very limited instructional TV capabilities as well as some video-conferencing facilities that could assist with the delivery of some instruction. Several instructors provide class notes and assignments via the web/email. Advising could be conducted by telephone or email. ECE will promote the use of remote educational presentations opportunities as provided by TRC and similar units on campus.

3. Consider this Scenario (*WHO/CDC Pandemic Alert Phase VI*):

The first Avian Flu cases were reported several months ago. While the virus isn't spreading as fast as predicted, thousands of people have been taken ill. The death rate in the U.S. *among those who become ill* is about 10% -- higher among children, teenagers, older people and those with compromised immune systems. The death rates in less developed countries is being reported as much higher, but travel restrictions are making it difficult to ascertain the total situation. There are worldwide travel restrictions and screening. Most social activities (events, conferences, etc) and tourism have been cancelled or postponed, and heightened health care precautions are widely used (masks, gloves, etc). A vaccine has been identified and is being produced, but it is not expected to be generally available for several more weeks. Although the CDC is predicting another outbreak in the next few weeks, it is being suggested that the social and economic conditions will continue to improve slowly.

Specifically at UC Davis: The Chancellor closed the campus for all but the most critical functions for two weeks, but is now reopened on a restricted level. The campus Emergency Operations Center was opened and is still open on a standby basis. Critical infrastructure functions and human/animal life safety issues are being managed. The academic calendar was adjusted. Some classes have resumed and some students have returned to complete their quarter. Others have opted to take an incomplete for this quarter and continue next quarter. Absenteeism is still high among faculty and staff, and those that remain are becoming overworked and fatigued. Reasons for absenteeism include personal illness, family illness, school closures and bereavement. There is a significant need for mental health services for faculty, staff and students. Supply lines are still unpredictable and most markets/stores are only open during limited hours.

Questions:

1. **What are the critical issues for ECE to consider in recovering from this disaster?**

- Issues related to communications. Ensure that effective, appropriate, and timely information is both received and disseminated to our units.
- Setting priorities on how to resume full business functions.
- Appropriate counseling services are available.
- Critical student services are resumed in conjunction with information on instructional issues and delivery of instruction delays, from the Academic Senate.

2. **What mitigation measures could have been put into place ahead of time that would have helped ECE weather this disaster better?**

We may need more cross-training of Dean's Office and departmental staff for emergency preparedness procedures. We will follow the Academic Senate approved policies related to student issues, classes, academic progress, etc., in dealing with a disaster or campus shut down.

We will encourage faculty and staff to use direct deposit for salaries and reimbursements in the event that paper documents are not able to be processed and staff in the business office may be limited.

III. BUSINESS IMPACT ANALYSIS

*(NOTE: For this section, expand the space as necessary to answer the question.)

1. What is the primary mission of ECE?

Teaching, research, and public service.

NOTE: In this context, “critical functions and processes” are defined as those acts (1) necessary to preserve lives (human or animal), (2) maintain the physical plant/infrastructure, or (3) continue essential business services until an emergency has abated. This would include (for example), care and feeding for animal facilities, maintaining the Data Center, keeping all utilities functional and maintaining public safety.

<p>2. What are the critical functions and processes of ECE?</p>	<p>3. Who performs those critical functions and processes? Are there backups or alternative staff who could perform those functions?</p>
<p>Provide administrative support and oversight related to the teaching, research and public service missions.</p> <p>Provide advising to the students within the department including certification of graduation.</p> <p>Provide on-going access of e-mail servers for communication purposes with staff, faculty and students. This will require maintenance of technology, through college technology resources and/or the campus Data Center..</p> <p>For research core facilities managed by ECE, there are not critical functions for continuation of research.</p>	<p>Departmental faculty and staff within the department.</p> <p>ECE does have backups or alternative staff who could perform these functions in the event the primary staff person is unavailable.</p>
<p>4. What other campus units are necessary to maintain the critical functions and processes of ECE? What arrangements or agreements exist with those other units?</p> <ul style="list-style-type: none"> • IET, Payroll, Facilities/O&M, Fire and Security personnel, access to appropriate central campus staff with regard to HR and Academic Senate issues that may surface during this time period. Access to appropriate central campus services as they relate to maintaining well-being of animals in various research laboratories in departments. • Back up arrangements include: Various research laboratories have back-up generators in case of power failure. • We will need to work with campus facilities to assure heating, cooling, water and safety services are operational. We are compiling a complete list of contacts for these services. Back-up generators in various research laboratories/facilities are in place. • We will need to have close contact with University Communications. 	
<p>5. What process or functions (other than those defined as critical) does ECE perform?</p>	<p>6. How often is this process or function performed? How long could it be delayed?</p>

<p>We have instruction, research, outreach and service responsibilities and collaborations. We will need to communicate with all parties concerned and renegotiate deliverables, contractual agreements, and project expectations related to operational delays.</p>	<p>Instructional and research and other service/outreach obligations are continuous. Operations could be delayed for a month or two, perhaps longer, but would require significant communication efforts for continuity of programs and to implement procedures to return to normalcy.</p>
<p>7. Is there a readily available and accurate inventory of supplies on hand? What contracts, arrangement or agreements exist with vendors that ECE regularly works with for delivery of goods and services during a disaster?</p> <p>Yes, we do have inventory listings of supplies on hand. We anticipate that the delivery of goods and services during a disaster time period would depend not only on the availability of staff in the unit but also on how the specific event was affecting the rest of the general population itself. That is, during a pandemic disease event, the availability of drivers and delivery workers would be reduced as well causing long delays between deliveries, even if deliveries continued, albeit less frequently. This makes having an appropriate surplus of essential supplies on hand an important part of our individual units' disaster planning.</p>	
<p>8. What alternative methods are in place for delivery of services or classes? What are they?</p> <p>The college does have very limited instructional TV capabilities as well as some video-conferencing facilities that could perhaps assist with the delivery of instruction. Several instructors provide class notes and assignments via the web/email. Advising could be conducted by telephone or email ECE will promote the use of remote educational presentations opportunities as provided by TRC and similar units on campus.</p>	
<p>9. Does ECE have students, faculty or staff regularly on travel or abroad? What policies or plans are in place to contact them, ascertain their safety and advise them about returning home?</p> <p>ECE Faculty, students and staff routinely travel. It is the responsibility of the Department Chair and Academic Personnel Coordinator to know the location of their faculty and staff and to be able to reach them in the event of an emergency with pertinent information and updates.</p> <p>With regard to students, we would expect that students who are traveling through formal campus programs (i.e., those through the Education Abroad Center) would be contacted and advised by those specific units.</p>	

IV. Planning Scenarios for UC Davis Avian Influenza Pandemic Planning

- 1. These are the functions and processes we must continue to provide, regardless of the situation, and how we plan to continue them:**

Services related to IET and communications, specific student advising.

As mentioned previously, we believe that Payroll has back up plans that will allow for the distribution of pay, even during the time the campus would be shut down. Our goal would be to have at least one person following up with central Payroll to ensure that the issuing of pay would continue during this time. This would be an area where input from central campus with regard to how they envision this would work would be helpful to have and distribute to our units before we find ourselves in such an event. This would hold true for Facilities/O&M related emergency issues as well for water, power, etc.

We need to maintain communications and will use available technologies, e-mail, cell phones, telephones, text messaging, web site. We will establish distributed capability from homes of key staff with back up as available. Using whatever technologies are available, designated IT and communications staff, the ECE Department will endeavor to connect to servers and update website.

- 2. These are the functions and processes that could be delayed for up to one week – but no longer, how long they could be delayed and what resources we would need to maintain them.**

Everything could be delayed for a week.

We will follow established campus policies regarding class closures on student progress, time to degree, etc.

Communication is a priority.

- 3. These are the functions and processes that could be delayed for up to one month – but no longer, how long they could be delayed and what resources we would need to maintain them.**

Again, everything could be delayed for a month with the exception of the services as outlined in question #1 of this section.

We will follow established campus policies regarding class closures on student progress, time to degree, etc.

We would also need additional exceptions to various academic calendar deadlines such as those relating to the academic merit and promotion process and processes internal and external for research administration issues (proposals, reporting, etc.)

- 4. These are the functions and processes that could be delayed for longer than one month.**

Again, everything could be delayed for a month with the exception of the services as outlined in question #1 of this section.

We will follow established campus policies regarding class closures on student progress, time to degree, etc.

We would also need additional exceptions to various academic calendar deadlines such as those relating to the academic merit and promotion process and processes internal and external for research administration issues (proposals, reporting, compliance issues, etc.)

Impact on contractual obligations will need to be evaluated.

Attachment A. Departmental Plans Regarding Research Laboratories

Contact list for **ECE** is as follows:

The Department Safety Coordinator is Lance Halsted, 2152 Kemper Hall, 2-8959.

The following is a list of department personnel, work phone numbers, office locations, and email addresses.

	UC DAVIS		
2-0583	DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING		
2-2455	Ravani, Bahram (Interim Chair)	bravani@ucdavis.edu	2064B Kemper Hall
2-2455	Abdel-Ghaffar, Khaled (Vice Chair)	colinge@ece.ucdavis.edu	2064D Kemper Hall
2-2455	Wilken, Kent (Vice Chair)	zding@ece.ucdavis.edu	2064E Kemper Hall
	STAFF		
2-3153	Allison, Barbara	allison@ece.ucdavis.edu	2038 Kemper Hall
2-1437	Clark, Nikki	ndclark@ucdavis.edu	2064 Kemper Hall
2-8959	Halsted, Lance	halsted@ece.ucdavis.edu	2152 Kemper Hall
2-1726	Kemp, Laura	lrkemp@ucdavis.edu	2064A Kemper Hall
2-1215	Kuehnau, Renee	kuehnau@ece.ucdavis.edu	2064 Kemper Hall
2-8315	Metz, Timothy	tmetz@ece.ucdavis.edu	2154 Kemper Hall
2-1986	Parker, Maria	mdjparker@ece.ucdavis.edu	2064 Kemper Hall
2-7537	Pigg, Steve	pigg@ece.ucdavis.edu	2158 Kemper Hall
2-9548	Potoski, Linda	lrpotoski@ucdavis.edu	2064C Kemper Hall
2-6989	Schreiner, Roberta	schreine@ece.ucdavis.edu	2064 Kemper Hall
2-8251	Shasky, Kate	kpshasky@ece.ucdavis.edu	2064 Kemper Hall
2-8472	Young, Phil	pyoung@ece.ucdavis.edu	2156 Kemper Hall
	INSTRUCTIONAL STAFF		
2-4141	Abdel-Ghaffar, Khaled A.	ghaffar@ece.ucdavis.edu	3181 Kemper Hall
2-9810	Akella, Venkatesh	akella@ece.ucdavis.edu	2117 Kemper Hall
2-5545	Al-Asaad, Hussain	halasaad@ece.ucdavis.edu	2113 Kemper Hall
2-8066	Algazi, V. Ralph (Emeritus)	algazi@ece.ucdavis.edu	127 TB207
4-6562	Amirtharajah, Rajeevan	ramirtha@ece.ucdavis.edu	3173 Kemper Hall
2-0583	Auyeung, Tak (Lecturer)	tauyeung@ieee.org	3112 Kemper Hall

4-4834	Baas, Bevan	baas@ece.ucdavis.edu	2037 Kemper Hall
	Bower, Robert W. (Emeritus)	bower@ece.ucdavis.edu	
2-1423	Branner, G. Rick	branner@ece.ucdavis.edu	3123 Kemper Hall
2-2735	Brodie, Ivor (Adjunct)	ibrodie@ucdavis.edu	3118 Kemper Hall
2-8133	Chang, Tsu-Shuan	chang@ece.ucdavis.edu	3163 Kemper Hall
2-5825	Chuah, Chen-Nee	chuah@ece.ucdavis.edu	3125 Kemper Hall
2-1443	Churchill, John N. (Emeritus)	churchil@ece.ucdavis.edu	3169 Kemper Hall
	Colinge, J.P. (Sabbatical)	colinge@ece.ucdavis.edu	3135 Kemper Hall
2-1839	Current, K. Wayne	current@ece.ucdavis.edu	2001 Kemper Hall
	Dienes, Andrew J. (Emeritus)	dienes@ece.ucdavis.edu	
2-4625	Ding, Zhi	zding@ece.ucdavis.edu	3187 Kemper Hall
2-7395	Dorf, Richard C. (Emeritus)	dorf@ece.ucdavis.edu	3161B Kemper Hall
2-8066	Duda, Richard (Visiting Professor)	rod@duda.org	127 TB207
2-2627	Fink, Herman J. (Emeritus)	fink@ece.ucdavis.edu	115 TB 207
2-0180	Ford, Gary E.	ford@ece.ucdavis.edu	3177 Kemper Hall
	Gardner, William A. (Emeritus)	gardner@ece.ucdavis.edu	
2-7395	Ghausi, Mohammed S. (Emeritus)	msgghausi@ucdavis.edu	3161B Kemper Hall
2-0836	Ghiasi, Soheil	soheil@ece.ucdavis.edu	3171 Kemper Hall
2-4989	Gundes, A. Nazli	gundes@ece.ucdavis.edu	3161A Kemper Hall
	Haley, Stephen B. (Emeritus)	haley@ece.ucdavis.edu	
2-6289	Heritage, Jonathan P. (Emeritus)	heritage@ece.ucdavis.edu	3127 Kemper Hall
2-1443	Hsia, T.C. (Steve) (Emeritus)	hsia@ece.ucdavis.edu	3169 Kemper Hall
2-1958	Hunt, Charles E.	hunt@ece.ucdavis.edu	3137 Kemper Hall
2-2054	Hurst, Paul J.	hurst@ece.ucdavis.edu	2031 Kemper Hall
4-6732	Islam, Saif	saif@ece.ucdavis.edu	3139 Kemper Hall
2-8023	Knoesen, Andre	knoesen@ece.ucdavis.edu	2115 Kemper Hall
4-4370	Kolner, Brian H.	kolner@leorg.ucdavis.edu	3047 Engineering III
4-6454	Lagerstrom, Larry (Lecturer)	larryl@ece.ucdavis.edu	2003 Kemper Hall
2-8025	Levy, Bernard C.	levy@ece.ucdavis.edu	3183 Kemper Hall
2-0458	Lewis, Stephen H.	lewis@ece.ucdavis.edu	2035 Kemper Hall
2-7394	Lin, Shu (Visiting Professor)	shulin@ece.ucdavis.edu	3185 Kemper Hall
	Lin, Wen C. (Emeritus)		
2-5414	Luhmann, Neville C.	ncluhmann@ucdavis.edu	3017 Kemper Hall
2-0435	Okamoto, Katsunari (Adjunct)	ktokamoto@ucdavis.edu	3129 Kemper Hall
2-5634	Oklobdzija, Vojin G.	vojjin@ece.ucdavis.edu	3007 Kemper Hall
4-4289	Owens, John	owens@ece.ucdavis.edu	3175 Kemper Hall
2-7472	Pham, Anh-Vu	pham@ece.ucdavis.edu	3141 Kemper Hall
2-3087	Redinbo, G. Robert (Sabbatical)	redinbo@ece.ucdavis.edu	3110 Kemper Hall
2-0584	Soohoo, Ronald F. (Emeritus)	rfsoohoo@aol.com	131 TB 207
2-6885	Spencer, Richard R.	spencer@ece.ucdavis.edu	2041 Kemper Hall
4-7566	Tuqan, Jamal	tuqan@ece.ucdavis.edu	3167 Kemper Hall
	van der Schaar, Mihaela (Adjunct)	mvanderschaar@ucdavis.edu	
	Wang, Shih-Ho (Emeritus)	wang@ece.ucdavis.edu	
2-1970	Wilken, Kent D.	wilken@ece.ucdavis.edu	2119 Kemper Hall
4-9249	Yankelevich, Diego (Adjunct)	yankelev@ece.ucdavis.edu	3101 Kemper Hall
2-7063	Yoo, Ben	yoo@ece.ucdavis.edu	3179 Kemper Hall
2-7390	Zhao, Qing	qzhao@ece.ucdavis.edu	3165 Kemper Hall

The following is a list of research labs showing location and lab phone number.

LABORATORIES /RESEARCH /MISCELLANEOUS		
	Femtosecond Microphotonics (Heritage)	121 Kemper Hall
	Ultrafast Optoelectronics (Heritage/Knoesen/Yoo)	125 Kemper Hall
2-6251	Optical Materials (Knoesen)	127 Kemper Hall
	MEMS & Fiber Optics	131 Kemper Hall
	UG Workstations	1101 Kemper Hall
	UG Workstations	1105 Kemper Hall
	Optics Teaching Lab	1107 Kemper Hall
	Conference Room	1127 Kemper Hall
4-2257	Integrated Nanodevices and Systems Lab (Islam/Smith)	1207 Kemper Hall
	RF Micro & Multimeter Waves (Luhmann)	1209 Kemper Hall
4-2102	Field Emissions Lab (Hunt)	1217 Kemper Hall
	UG Teaching (Digital)	2107/2110/2112 Kemper Hall
	UG Teaching (Analog)	2155/2157/2161 Kemper Hall
	UG Teaching (EEC 195 A/B/C)	2147 Kemper Hall
	UG Teaching (Micromouse EEC194 A/B/C)	2151 Kemper Hall
	Homework Boxes	2131 Kemper Hall
2-6347	Solid-State Circuits Research (Current/Hurst/Lewis/Spencer)	2201 Kemper Hall
2-5074	Computer Engineering Research (Akella/Amirtharajah/Baas/Redinbo/Wilken)	2211 Kemper Hall
	Graduate Workstations	2206 Kemper Hall
2-8547	Microwave Microsystems Laboratory (Pham)	2212 Kemper Hall
2-1326	Signal Processing Lab (Ding/Levy/Lin/Tuqan/Abdel- Ghaffar)	2219 Kemper Hall
2-6800	Advanced Computer Systems Engineering Lab (Oklobdzija)	2221 Kemper Hall
2-7436	TRW Signal Processing & Communication Lab (Hurst/Lewis/Spencer)	2225 Kemper Hall
4-2218/4-4439	Yoo's Group	2227 Kemper Hall
4-5385	Robust & Ubiquitous Networking Research Group (Chuah)	2229 Kemper Hall
2-1435	Optical Switching & Communications System Lab (Yoo)	2230 Kemper Hall
	Grad Student Offices	3087 Kemper Hall
	Mailroom/Copier/Supplies	3089 Kemper Hall
4-9249	Opto Electronic Grads (Knoesen)	3103 Kemper Hall
	Superconductivity Grads	3112 Kemper Hall
	Grad Student Offices (Hunt/Smith)	3117 Kemper Hall
	Grad Student Offices (Heritage)	3122 Kemper Hall
2-4183	Student Office (Heritage)	3124 Kemper Hall
	Device Characterization Lab (Colinge)	3148 Kemper Hall
2-4608	Communications Research (Ding/Zhao)	3174 Kemper Hall
2-6427	Microwaves (Branner)	3176 Kemper Hall
	Dark Room	3176A Kemper Hall
	Microwaves & Milimeter Waves (Branner/Luhmann)	3182 Kemper Hall
	Microwave Teaching	3189 Kemper Hall
2-2735	Grad Student Offices (Hunt)	3118 Kemper Hall
4-7436	Grad Student Offices(Chang/Gundes)	3119 Kemper Hall
	Grad Student Offices (Hunt)	3120 Kemper Hall

