

# **Z6: INFORMATION SERVICES & TECHNOLOGY**

**Draft May, 2007**

## **University of California, Berkeley Influenza Pandemic Emergency Operations Plan Additional Unit Information**

The UC Berkeley Influenza Pandemic Emergency Operations Plan (EOP) includes information describing the guiding principles for response to a pandemic event on campus, the authorities, critical functions, special considerations for campus-wide issues, the campus communications plan, triggers for taking action, activation and coordination, and general responsibilities of the nine individual Department Operations Centers. This document contains additional information to prepare each UC Berkeley DOC for a response to a pandemic influenza event:

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## I. EXECUTIVE SUMMARY

During a pandemic flu emergency, Information Services & Technology (IST) will, unless instructed otherwise by Campus authorities, provide its normal array of services to the Campus, including

- central campus computing services
- network services (data & voice)
- web services
- administrative, financial, & student systems
- 800 MHz radio communications.

If unable to provide these services in adequate fashion due to the prevailing circumstances of the pandemic flu emergency (for example, absenteeism of its staff or disrupted supply chains), reduction or even cessation of some of these services is to be expected.

It is anticipated that, even if Campus authorities were to declare a temporary cessation of instruction, many research, administrative, and other activities would continue. Under this circumstance, IST will be expected to

- continue to provide types and levels of service necessary to support the activities that remain in operation, and
- ensure that the computing & communications resources of the campus are kept in the good order needed to support the eventual full resumption of campus activities.

## II. UNIT RESPONSE CHECKLIST

UC Berkeley Phase	GENERAL UNIT ACTIONS	SPECIFIC UNIT ACTIONS
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UC Berkeley Phase	GENERAL UNIT ACTIONS	SPECIFIC UNIT ACTIONS
<b>2 – Animal Outbreak of Highly Pathogenic Avian Influenza in North America</b>	<ul style="list-style-type: none"> <li>• Develop comprehensive unit plans</li> <li>• Develop and test unit communication plans</li> <li>• Conduct operations test during staff or safety meetings</li> <li>• Check the <a href="http://www.uhs.berkeley.edu/pandemicflu/">http://www.uhs.berkeley.edu/pandemicflu/</a> website regularly for updates and new information</li> <li>• Communicate developments with staff/faculty/students</li> <li>• Refer general questions from staff/faculty/students to <a href="http://www.uhs.berkeley.edu/pandemicflu/">http://www.uhs.berkeley.edu/pandemicflu/</a>.</li> <li>• Encourage adoption of hygiene etiquette behavior</li> <li>• Encourage personal preparedness plans for staff/faculty/students</li> </ul>	<ul style="list-style-type: none"> <li>• Plan how to perform all critical functions in the setting of an infectious disease outbreak.</li> <li>• Begin cross-training of critical staff. Embed cross-training as a permanent strategy for backing up vulnerable positions.</li> <li>• Identify critical supplies (incl. quantities).</li> <li>• Identify what work can be done from home.</li> </ul>
<b>2 - H5N1 Animal Outbreak in North America</b>	<ul style="list-style-type: none"> <li>• Check the <a href="http://www.uhs.berkeley.edu/pandemicflu/">http://www.uhs.berkeley.edu/pandemicflu/</a> website regularly for updates and new information</li> <li>• Communicate developments with staff/faculty/students</li> <li>• Refer general questions from staff/faculty/students to <a href="http://www.uhs.berkeley.edu/pandemicflu/">http://www.uhs.berkeley.edu/pandemicflu/</a>.</li> <li>• Encourage adoption of hygiene etiquette behavior</li> <li>• Encourage personal preparedness plans for staff/faculty/students</li> </ul>	<ul style="list-style-type: none"> <li>• Educate all appropriate parties about the details of IST pandemic planning</li> <li>• Check stockpile of critical supplies. Replenish if needed.</li> </ul>

UC Berkeley Phase	GENERAL UNIT ACTIONS	SPECIFIC UNIT ACTIONS
<p><b>3 – Confirmed Human to Human Outbreak Overseas</b></p> <p><i>Evidence of Sustained Human-to-Human Transmission</i></p>	<ul style="list-style-type: none"> <li>• Check the <a href="http://www.uhs.berkeley.edu/pandemicflu/">http://www.uhs.berkeley.edu/pandemicflu/</a> website regularly for updates and new information</li> <li>• Communicate developments with staff/faculty/students</li> <li>• Refer general questions from staff/faculty/students to <a href="http://www.uhs.berkeley.edu/pandemicflu/">http://www.uhs.berkeley.edu/pandemicflu/</a></li> <li>• Encourage adoption of hygiene etiquette behavior</li> <li>• Gather unit decision makers for preplanning; review list of critical and noncritical functions for unit</li> <li>• Contact staff/faculty/students on travel – refer to website for additional travel information specific to UC Berkeley</li> <li>• Begin monitoring daily absenteeism of staff/faculty/students</li> </ul>	<ul style="list-style-type: none"> <li>• Begin frequent communication &amp; education efforts toward <ul style="list-style-type: none"> <li>• IST management</li> <li>• IST staff</li> <li>• IST vendors</li> <li>• IST customers &amp; co-location customers regarding IST strategies for coping with pandemic conditions.</li> </ul> </li> <li>• Train staff in hygiene procedures, safety precautions, use of PPE, and (if appropriate) working in isolation areas.</li> <li>• Begin daily census count of IST staff.</li> <li>• Ensure that appropriate staff are set up to work-from-home. Provide equipment &amp; provide hookup where appropriate. (See Part III below.)</li> <li>• Encourage staff to update personal information in HRMS via the BLU portal</li> </ul>
<p><b>4 – Confirmed Human to Human Outbreak in North America</b></p>	<ul style="list-style-type: none"> <li>• Check the <a href="http://www.uhs.berkeley.edu/pandemicflu/">http://www.uhs.berkeley.edu/pandemicflu/</a> website regularly for updates and new information</li> <li>• Communicate developments with staff/faculty/students</li> <li>• Refer general questions from staff/faculty/students to <a href="http://www.uhs.berkeley.edu/pandemicflu/">http://www.uhs.berkeley.edu/pandemicflu/</a></li> <li>• Encourage adoption of hygiene etiquette behavior</li> <li>• Hold regular meetings with decision makers</li> <li>• Report to campus EOC:</li> <li>• Daily absenteeism reports of staff/faculty/students</li> <li>• At direction of EOC, prepare to activate plans to continue critical functions and implement alternate plans for noncritical functions</li> </ul>	<ul style="list-style-type: none"> <li>• Begin periodic checks with vendors to ascertain their ability to function.</li> <li>• Refresh IST management &amp; staff about issues of prioritizing/restructuring services in the event IST is unable to maintain pre-pandemic level of service (see Part III below).</li> <li>• Implement work-from-home as necessary.</li> <li>• Declare and implement start of the semester freeze on new development.</li> <li>• Test home access for IST staff.</li> <li>• Monitor remote access.</li> <li>• Purchase Personal Protective Equipment (PPE).</li> </ul>

UC Berkeley Phase	GENERAL UNIT ACTIONS	SPECIFIC UNIT ACTIONS
<p><b>5 – Widespread Pandemic Overseas and North America</b></p> <p><i>Sustained Transmission = Pandemic*</i></p>	<ul style="list-style-type: none"> <li>• Check the <a href="http://www.uhs.berkeley.edu/pandemicflu/">http://www.uhs.berkeley.edu/pandemicflu/</a> website regularly for updates and new information</li> <li>• Communicate developments with staff/faculty/students</li> <li>• Refer questions from staff/faculty/students to <a href="http://www.uhs.berkeley.edu/pandemicflu/">http://www.uhs.berkeley.edu/pandemicflu/</a></li> <li>• Encourage adoption of hygiene etiquette behavior</li> <li>• Hold regular meetings with decision makers</li> <li>• Report to campus EOC:</li> <li>• Daily absenteeism reports of staff/faculty/students</li> <li>• Status of critical functions</li> <li>• Other information as directed by the EOC</li> </ul>	<ul style="list-style-type: none"> <li>• Restructure services as necessary (see Part III below).</li> <li>• Reassign staff as necessary.</li> <li>• Implement work-from-home as necessary.</li> <li>• Restrict remote access so systems aren't overloaded.</li> </ul>
<p><b>6 – Recovery</b></p>	<ul style="list-style-type: none"> <li>• Damage Assessment</li> <li>• Resumption of instruction, research, business activities</li> <li>• EOC moves into Recovery mode</li> <li>• Surveillance for subsequent waves of infection</li> <li>• Prepare to deactivate the EOC</li> <li>• Debriefing and After-Action Reports</li> </ul>	<ul style="list-style-type: none"> <li>• Continue daily census of IST staff.</li> <li>• Continue monitoring of vendor status.</li> <li>• Replenish/maintain stockpile of critical supplies.</li> </ul>

### III. CRITICAL FUNCTIONS

Plans for continuation of IST’s critical functions through times of crisis can be found in the IST Business Resumption Plans. Additional planning for response to emergencies is contained in the IST DOC Plan.

During an infectious disease pandemic, the principal impact on IST will be absenteeism of its own staff – perhaps 40% absenteeism for an extended period.

In addition, it is conceivable that a cessation of instruction and partial closure of the campus may be ordered by the Chancellor to enforce a social distancing strategy to limit the transmission of illness.

Beginning at Phase 3 of the pandemic, IST will monitor staff attendance daily.

Whether the campus is fully open or partially closed, IST will employ the following strategies for providing essential services with a shrinking staff count. The extent to

which these strategies are employed will vary with the severity of the pandemic. The Chancellor’s Office will provide overall guidance on strategy and policy issues; the EOC will provide operational guidance.

1. **Prioritization/restructuring of services:** To the extent necessary, priority will be given to services that are
  - essential to support campus activities, or
  - essential to maintain the campus in good order during a partial closure.

For IST these services include but aren’t limited to the following:

- Data Network
- Network Services
- Platform Services
- Voice Network
- Wireless- 800 MHz Radio, Cellular Phones, Public Address System
- Administrative, Financial, & Student systems
- Emergency web site hosting: <http://www.ucbemergency.org/>. Interim solution is to have it hosted at UCLA but a longer term solution involves hosting it at NYU which is currently in negotiation.

By these criteria, the higher-priority functions of IST are:

Phase	App Name	App Acronym	Server Name	Hardware
1	ACE,AFB,AWARDS,BIBS,BFS/APPO,BLK,BLU,BSI,CARS,COA,COMET,CRS,DAR,FAO,FAS,GDA,PPS,GL,HRMS,KRONOS,LRS,MST,OLADS,PERI,PGP,RCC,REEREO,REG,RES,RGS,RLS,SDR,SID,SRS,SSAR,STS,TBEARS,TC S,UCB,UGA			
1	Active Directory			
1	COA Validation Routine			
1	CALMAIL/EMAIL SERVICES			
1	CalNet Authentication			

	Web Service			
1	CalNet LDAP Campus Directory			
1	Kerberos Authentication Server			
1	TSM Backup Server - UCBackup Service			
1	Voice mail communité production server			
1	DNS			
1	MESH			
1	ADHOC WIRELESS NETWORKING			
1	DHCP			
1	PHONE SERVICE			
1	800MHZ RADIOS			

The lower priority functions of IST are:

Phase	App Name	App Acronym	Server Name	Hardware
2	Cal Messages, Cashier Deposit System, CalNet ID Database, CalNet Namespace Database, Calendar of Events, Security Logins			
2	DARS/DARWin,B earFacts for Stud, Fac&Staff, Fe neral Catalog System, Class Pass, eDesign/Small Dpt Apps, Graduate			

	Admissions Interface, Online Schedule of Classes, SEVIS-Student Interface			
2	General purpose academic unix server			
2	Graduate Admissions Interface			
2	Infobears			
2	Telebears primary, Infobears backup, Telebears Summer Session			
2	Pass through SQL and web for Acorde app			
2	TSM Backup Server - UCBackup Service			
2	SQL database server for Acorde application			
2	web site for tracker student room reservation			
2	Student Awards, BearFacts for Stud, Fac & Staff, Cal Messages, General Catalog System, Class Pass, LMS-Course Web, eDesign/Small Dpt Apps, FSAtlas(SEVIS), Graduate Admissions Interface, Online Schedule of Classes, RecSports, SEVIS-			

	Student Interface			
2	Student Awards, Cal Messages, Cashier Deposit System, Kronos Timekeeping System, LoginID Request Application, Payroll Personnel System, RecSports			
2	Webcast			
2	HRMS	HRMS	HRMS3 HRMS4 HRMS5 HRMS6	

To cope with a temporary, 40% absentee rate, IST will both reduce-or-cease lower-priority services AND will restructure the higher-priority services to focus on truly critical tasks.

The following is a **PALETTE OF SPECIFIC STRATEGIES** to accomplish **prioritization/restructuring of essential functions**. The severity of the pandemic will influence which of these strategies are adopted.

Function	Strategy
See prioritization tables above	IST will follow the Tier list in the IST Business Resumption plan referenced in the tables above to prioritize and restructure essential services.

2. **Reassignment of personnel.** Personnel performing lower-priority activities may be temporarily reassigned to higher-priority tasks. Any temporary reassignment should be consistent with allowable personnel practice and with safe work practice.

The following is a **PALETTE OF SPECIFIC STRATEGIES** to accomplish this **reassignment of personnel**. The severity of the pandemic will influence which of these strategies are adopted.

Function	Strategy
Make plan	Get inventory of staff skill sets
	Find appropriate candidates to cover essential functions

3. **Cross-training.** Cross-training of critical personnel is a “training-in-advance” strategy that is most appropriate where a critical function is normally performed by one or two people whose absence would be a showstopper. The positions in IST that fall into this category are

- CalMail Staff
- Mainframe Staff
- Storage Staff
- 800 MHz Radio Staff
- Card Key Access Staff
- UNIX team
- Infrastructure Monitoring
- COA Validation Routine
- Telebears
- Webcast
- bSpace

Cross-training is also appropriate where **groups** of workers perform an essential function that would be severely impacted by the absence of a few, and where a reasonable amount of training would enable others to step in temporarily. An example of this is

- Voice Technicians
- Network Development Staff
- Web site administrators/ content providers
- Windows team

[Note: **cross-training** is a more intensive strategy than **reassignment**. Reassignment typically refers to positions that could be handled by a substitute who is provided minimal training at the time of reassignment. Cross-training is training-in-advance, where the skills needed are more complex, or where there could be possibility of physical injury without deliberate training.]

IST will adopt a cross-training practice to ensure that backup people, adequately (though perhaps minimally) skilled, exist where possible. In anticipation of 40% absenteeism during a pandemic, two backup people (per position) is more prudent than one.

The following is a **PALETTE OF SPECIFIC STRATEGIES** to accomplish this **cross-training**. The severity of the pandemic will influence which of these strategies are adopted.

Function	Strategy
<i>800 MHz Radio Staff</i>	<i>Contract with Motorola</i>

4. **Work-from-home.** This strategy will be practiced for all staff whose jobs permit. If the campus is fully open during pandemic, work-from-home may be advisable for reasons of social distancing. If the Chancellor declares a partial closure and orders non-critical staff to stay away, work-from-home will enable staff to function who otherwise would be idled.

The IST Business Resumption Plans identify those staff whose jobs could be performed (at least partially) from home.

The IST Business Resumption Plans also identify which of those staff currently have the **capability** to work-from-home (adequate computer, high-speed connection, remote access to network). Critical staff who do not have this capability will be assisted by IST to establish a suitable connection for the duration of the emergency. This assistance will include, if necessary, loan of a computer & other equipment, and reimbursement of home hookup charges.

#### IV. UNIT COMMUNICATIONS PLAN

The essential pandemic-related communications by IST are with the following identified audiences.

- IST management
- IST staff
- Vendors
- IST customers & co-location customers

Mode of Communication	Audience (√)					Good for urgent communication	Strengths/Weaknesses
	IST Management	IST Staff	IST Vendors	IST Customers	State & Local Responders		

<b>Telephone System</b>							
Phone tree	X	X				X	Time and labor intensive. May not have resources available during critical incident.
Internal Emergency Information Line	X	X				X	
External Information Line			X	X			
Mass Voice Mail Message		X	X	X		X	
Call center/phone bank							
Teleconferencing	X	X					
<b>Electronic</b>							
Mass E-mail message	X	X	X	X	X	X	May not be accessible by off duty employees.
Website Posting	X	X	X	X	X	X	Off Duty Employees may not have internet access
Intranet Posting	X	X				X	May not be accessible by off duty employees.
On-line chat	X	X	X	X	X	X	May not be accessible by all audiences. Some training may be involved for those less familiar with this mode of communication.
800Mhz Radio	X	X				X	
<b>Hard Copy</b>							
Mailing*	X	X	X	X	X		Time and labor intensive.
Interoffice Mail*		X					Time and labor intensive. Not reliable for off duty employees.
<b>In Person</b>							
Meeting	X	X				X	In person. May not be feasible or advisable during critical incident if social distancing is in effect.

Communication resources are discussed in the IST Business Resumption Plans. During a pandemic flu emergency, communication to all these groups should be “early and often”.

In addition, the IST DOC Liaison shall maintain close and frequent communication with the other DOCs.

**IST DOC Liaison Officers:**

Name	Office Address	Function/Role	E-mail(s)	Office Phone #
Helen Norris	2195 Hearst, 200E	IST Client Services Director	<a href="mailto:hnorris@berkeley.edu">hnorris@berkeley.edu</a>	(510) 642-5794
	2484 Shattuck	Telecom	<a href="mailto:glado@berkeley.edu">glado@berkeley.edu</a>	(510) 643-4516

Gladys Oddoye	Avenue	Customer Care Supervisor		
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The IST DOC Manager should expect to communicate directly with other DOC Managers as needed.

## V. SAFE WORK PRACTICES

Training in safe work practices during a pandemic is important for all staff, and especially important for field personnel who move around campus. Pandemic-related training will cover, at minimum, hygiene procedures, safety precautions, use of PPE, and working in isolation areas.

Training that is normally provided by supervisors will be augmented, as appropriate, by EH&S and by University Health Services. This augmented training will be carried out as soon as possible, and refresher training will be done by EH&S/UHS during the UC Berkeley Phase 3 response period (as above).

## VI. LOGISTICS: EQUIPMENT, VEHICLES, BUILDINGS, SUPPLIES

We can expect supply-chain failure during a nationwide pandemic. With other parts of the nation experiencing the same absenteeism issues as the Bay Area, out-of-area purchasing cannot be relied on to supplement/replace local suppliers.

Strategies for procuring & maintaining adequate supplies typically use a combination of inventory (stockpiling) and alternate vendors. Because there will be periods when certain items will be unavailable or delayed, strategic stockpiling is an important strategy for weathering a pandemic.

## VII. ACTION ITEMS

1. Establish a plan for stockpiling and/or procurement of essential supplies in the event that usual suppliers are unable to perform.
2. Provide cross-training of staff where appropriate (see section III above). Refresh annually.
3. *Other action items?*  
**Complete the palettes of specific strategies for the areas below:**
  - **reassignment of personnel**
  - **cross-training**

Survey IST management on the staff skill sets and implement plan for cross training.