

Chairs' & Center Directors' Meeting Minutes

Date: November 15, 2010 (12:00 to 2:00 pm)

Location: EBU II – Room 443

Attendees: Abbaschian, Reza
Balandin, Alex
Bhanu, Bir
Boretz, Mitch
Davidson, Don
Haddon, Robert
Hartney, Pat
Lake, Roger
Lonardi, Stefano (for Laxmi Bhuyan)
Matsumoto, Mark
Parker, Linda
Payne, Tom
Ravi
Rodgers, Victor (for Jerry Schultz)
Stahovich, Tom
Tan, Sheldon (for Walid Najjar)
Wu, Jianzhong (for Yushan Yan)

Absent: Barth, Matt
Bhuyan, Laxmi
Najjar, Walid
Schultz, Jerry
Xu, Daniel
Yan, Yushan

The agenda for the meeting is shown in Appendix 1.

1. Welcome and call for agenda items - Reza

Reza congratulated Robert Haddon on the announcement of his Richard Smalley Research Award from the Electrochemical Society (ECM). This is the highest award made by ECM and includes a plaque and \$1,000 check. Also, Reza congratulated Alex Balandin for being named a Fellow of the Optical Society of America. Reza asked Chairs to work with their departmental award committees to nominate faculty for awards. Faculty Awards will be an agenda item for a future Chairs/Directors meeting. There were no items added to the agenda.

2. Approval of Minutes - Pat

The minutes of the October 25th Chairs/Directors meeting were unanimously approved.

3. Graduate Education - Mark

Mark distributed a summary of BCOE grad student cohort recruitment targets for this year. BCOE's total grad student target is 173 this year. For comparison, BCOE enrolled 148 grad students this Fall (with another 2-3 possible). Most if the target increase is at the M.S. level.

Mark then distributed an Academic Unit Profile summary for BCOE. This Profile shows that BCOE has over 70% more students than five years ago. The percentage of female students grew from 12% to 17% (which is the national average for engineering colleges). The percentage of BCOE's underrepresented minorities grew from 27% to 33%. Mitch pointed out that the actual number of underrepresented minorities increased from about 300 (27% of 1,259) to over 600 (33% of 2,014). It was pointed out that the number of BCOE grad students doesn't include those students on filing-fee waivers nor 12-15 BS/MS students that haven't received their BS degrees yet. Reza will send out the link to UCSB's Academic Profile data. He pointed out that UCSB and UCR receive about the same level of UC General Funds but that UCSB has about 50% more faculty than UCR. He is encouraging UCR to use UCSB's academic profile as a model.

Tom reported that he is revising BCOE's on-line MS degree program proposal in response to the Graduate Council's recent feedback. Tom feels that the Council is now supportive of BCOE's on-line MS program but wants to see a demo of an on-line lecture. Since the initial on-line degree program proposal is for Bioengineering, Victor offered to arrange for a BIEN lecture to be recorded and used as a demo. Tom and Mark will meet with the Council soon to discuss their feedback and the proposed lecture demo.

4. Undergraduate Education - Ravi

Ravi distributed a comparison of UCR's engineering vs. non-engineering incoming Fall 2010 freshmen GPA's, Academic Index Scores (AIS), and SAT scores. Ravi stated that UC will be using new admissions criteria for the Fall 2012 incoming class. This new criteria will not require an SAT subject exam. Also beginning with the Fall 2012 incoming class, UCR will be revising its AIS criteria by increasing the weight of academic factors (i.e., GPA and SAT scores) to about 90%. This will leave about 9% for non-academic factors (which is currently around 15-20% of AIS). He feels that the best option is for each college to set its own AIS threshold. The current criteria will be used for the Fall 2011 incoming class. However, Ravi has informed the campus that BCOE will no longer look at the referral pool (i.e., applicants that were not admitted to other UC campuses but did not apply to UCR) since BCOE's take rate was very low. Ravi stated that BCOE will try to restrict the number of incoming freshmen next year. He reminded departments that the best way to increase undergraduate student teaching load FTE (and therefore TA FTE) is by offering service courses.

Tom P. stated that BCOE should consider offering a common curriculum for freshmen before allowing them to select a major during their sophomore year. This common curriculum could include math and science courses (taught by BCOE) that would be more relevant to engineering students. A common curriculum would enable BCOE to offer more help to students and would enable BCOE to acquire more data on their readiness to pursue an engineering degree. Ravi stated that he developed a "Foundations of Engineering" proposal after the last BCOE Retreat along these lines. Reza asked Chairs to recommend faculty members to serve on a Common Curriculum working group to investigate whether BCOE should pursue such an effort. He expects this working group to provide feedback in 1-2 months. Victor stated that there may be other options to increase the quality of BCOE's undergraduates and to help them succeed.

Tom P. stated that large lecture rooms are now being used by other colleges since class sizes have increased (due to UCR's increased enrollment). On a related subject, Tom S. stated that ME may want to prioritize enrollment in ME 10 to ME sophomores (before other BCOE students could enroll). It was noted that such prioritization would have to be approved by the Academic Senate. The Academic Senate may be able to approve this prioritization since the impacted students are all in BCOE. Sheldon stated that BCOE's increased enrollments have significantly impacted teaching labs in EE.

5. Faculty Recruitment

BIEN, ME and EE reported that their faculty recruitment paperwork has been submitted to Rhonda's office. CEE and BIEN recruitment ads are out for publication. Reza reminded participants that the MSE faculty recruitment is targeted for CEE but could be given to another department if CEE doesn't identify an appropriate candidate. The composition of the MSE recruitment committee is similar to last year's committee and is chaired by Bahman Anvari. Reza stated that the recruitment of a senior level faculty member in Civil Engineering is delayed. Lastly, he noted that BCOE has been authorized for 11 searches vs. 10 for CNAS and 6 for CHASS.

6. Departmental Updates

ME reported that it has hired a temporary machine shop supervisor.

EE is concerned that the Instructional Cleanroom renovations in Pierce Hall are over budget.

It was recommended that each department have its own Lab Use recharge fee that could be charged to contract and grants as appropriate.

It was noted that BCOE's current Matlab license limits the number of "seats" and this has become a problem for researchers due to the high number of "seats" required for class instruction during certain times. Pat responded that a more cost-effective licensing agreement (with more "seats") has been negotiated with Matlab by Steven Haughton but can't be implemented until next year (since we recently paid Matlab's FY 10/11 license renewal). It was suggested that BCOE investigate the cost effectiveness of a campus-wide license with Matlab.

Lastly, it was also noted that there may be more cost-effective solutions for Adobe Acrobat licenses (which are currently \$64 each)

7. Staff Appreciation Luncheon – Pat

Pat stated that this year's Staff Appreciation Luncheon is scheduled for Wednesday, December 8, 2010 in EBUII 232. The lunch will start at noon and, as in past years, will be served by Chairs and Directors.

Afterwards, "Employee of the Year" awards will be made to staff members in each department/center by their respective Chair or Director. The awards include a plaque and \$75 gift card. Pat emphasized that the staff look forward to this event each year and appreciate the effort from their Chairs and Directors.

8. Safety and Space – Maggie

Pat introduced Maggie Souder as BCOE's new Safety and Facilities Coordinator. This position is different from Tim Willette's previous position and is primarily focused on coordinating safety programs in BCOE. Departments and Centers are still responsible for running their own safety programs but Maggie can assist in these efforts. Maggie pointed out the Safety attachments to the agenda and detailed the important points on these handouts. She will be working with department/center Lab Safety Officers (LSOs) to schedule annual laboratory visits and assessments and will try to participate in these visits for the coming year. Reza emphasized that faculty are ultimately responsible for safety issues in their labs and classrooms and need to take these responsibilities very seriously. Pat stated that although Maggie's primary focus is on BCOE safety, she also is responsible for coordinating BCOE Facilities so she will be spending most of her time for the first couple of months coordinating BCOE's move into the new MS&E Building.

7. Other Matters

Reza pointed out that the 11/29/10 Chairs/Directors meeting has been cancelled since he will be traveling to China with the Chancellor to solicit a major gift from a potential donor.



Chairs' & Center Directors' Meeting

November 15, 2010

Agenda

Engineering Building Unit II – Room 443

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|----|---|------------------|
| 1. | Welcome - Request for Agenda Items from the Floor | Reza |
| 2. | Approval of Minutes from October 25, 2010 Meeting | Pat |
| 3. | Graduate Education | Mark |
| 4. | Undergraduate Education | Ravi |
| 5. | Faculty Recruitment | Chairs |
| 6. | Department Updates | Chairs/Directors |
| 7. | Staff Appreciation Luncheon
- to be held December 8, 2010
- Chairs & Center Directors to present awards and serve | |
| 8. | Safety and Space | Maggie |
| 9. | Other Matters | |

The next scheduled meeting will be

Monday – December 13, 2010

Please note: Meetings will be held in EBU II – Room 443

2011-12 BCOE GRADUATE STUDENT COHORT RECRUITMENT TARGETS

		M.S.			Ph.D.			All		
		Int'l	Dom	Total	Int'l	Dom	Total	Int'l	Dom	Total
BIEN	Target	5	15	20	3	12	15	8	27	35
	10/11 SIRs	0	8	8	1	10	11	1	18	19
CEE	Target	2	3	5	8	8	16	10	11	21
	10/11 SIRs	2	6	8	10	16	26	12	22	34
CPSC	Target	7	8	15	12	8	20	19	16	35
	10/11 SIRs	12	7	19	9	10	19	21	17	38
ELEN	Target	8	5	13	25	7	32	33	12	45
	10/11 SIRs	3	4	7	22	6	28	25	10	35
MSE	Target	2	2	4	5	3	8	7	5	12
	10/11 SIRs	0	0	0	6	2	8	6	2	8
MCEN	Target	0	15	15	5	5	10	5	20	25
	10/11 SIRs	2	5	7	1	6	7	3	11	14
BCOE	Target	24	48	72	58	43	101	82	91	173
	10/11 SIRs	19	30	49	49	50	99	68	80	148

updated 11/12/10

10F Freshman Referral Admits					
Student Profile Report - Engineering v. Non-Engineering					
October 21, 2010					
		Engineering	Non-Engineering	Diff.	% Diff
GPA	Admit	3.7	3.72	0.02	0.54%
	SIR	3.62	3.68	0.06	1.66%
	Enroll	3.61	3.71	0.1	2.77%
AIS	Admit	1067	1055	-12	-1.12%
	SIR	1047	1053	6	0.57%
	Enroll	1046	1053	7	0.67%
SAT - Math	Admit	638	603	-35	-5.49%
	SIR	616	581	-35	-5.68%
	Enroll	618	577	-41	-6.63%
SAT - Verbal	Admit	581	565	-16	-2.75%
	SIR	553	551	-2	-0.36%
	Enroll	552	546	-6	-1.09%
SAT - Writing	Admit	570	563	-7	-1.23%
	SIR	551	550	-1	-0.18%
	Enroll	548	548	0	0.00%
SAT - Composite	Admit	1785	1727	-58	-3.25%
	SIR	1718	1682	-36	-2.10%
	Enroll	1717	1669	-48	-2.80%

BOURNS COLLEGE OF ENGINEERING - ACADEMIC UNIT PROFILE

<u>HEADCOUNT (Majors)</u>	Fall 2006	Fall 2007	Fall 2008	Fall 2009	Fall 2010
Lower Division	712	760	958	1,079	1,368
Upper Division	547	540	522	631	682
TOTAL Undergraduates	1,259	1,300	1,480	1,710	2,050
M.S.	41	51	65	69	84
Ph.D.	240	288	351	368	399
TOTAL Graduate	281	339	416	437	483
TOTAL Fall	1,540	1,639	1,896	2,147	2,533

ETHNICITY AND GENDER (Fall)

Undergraduate

TOTAL Undergraduates	1,259	1,300	1,480	1,710	2,050
% Foreign			2%	2%	2%
% Female	12%	12%	15%	17%	17%
TOTAL Domestic Undergraduates	1,259	1,300	1,450	1,680	2,014
% Underrepresented	27%	29%	31%	31%	33%
% Minority	73%	74%	74%	74%	74%

Graduate

TOTAL Graduates	281	339	416	437	483
% Foreign	69%	66%	64%	65%	61%
% Female	27%	28%	27%	27%	27%
TOTAL Domestic Graduates	88	116	148	152	187
% Underrepresented	16%	21%	18%	16%	17%
% Minority	47%	49%	53%	49%	44%

ADMISSIONS

Freshman Student Admissions

Applications	3,122	3,017	3,698	4,395	5,795
Admissions	2,792	2,716	3,238	3,852	5,068
% Admitted	89%	90%	88%	88%	87%
Enrolled	397	398	566	563	830
% Matriculating (Take Rate)	14%	15%	17%	15%	16%

Advanced Standing (Transfer) Student Admissions

Applications	400	400	415	502	649
Admissions	243	243	205	208	247
% Admitted	61%	61%	49%	41%	38%
Enrolled	39	40	37	37	43
% Matriculating (Take Rate)	16%	16%	18%	18%	17%

Graduate Student Admissions

Applications	645	904	1,220	1,274	1,304
Admissions	195	298	349	292	365
% Admitted	30%	33%	29%	23%	28%
Enrolled	81	135	140	119	153
% Matriculating (Take Rate)	42%	45%	40%	41%	42%

Laboratory & Research Safety Plan

Supporting the campus Research, Teaching and Public Service missions, endeavoring to keep people and the environment from being harmed

Challenge

Student, faculty and staff safety, the costs of losses, emergency preparedness, continuity of operations, and Operational Risk, Regulatory Compliance, and Reputational Risk are driving the needs for a successful Laboratory & Research Safety Program at the University of California Riverside (UCR).

Traditional efforts to ensure the safety of the university's teaching and research laboratories have involved a large population of safety and health professionals to inspect, monitor and report on laboratory safety. This model is similar to what is used at the Department of Energy national laboratories at Los Alamos, Berkeley, and Livermore as well as UCSF and UCSD. Recent audits of the national laboratories have shown that having a large cadre of Environmental Health & Safety (EH&S) staff focusing on compliance with regulations is not as effective as expected.

Approach

Campus leadership has directed changes in roles to ensure that safety, loss prevention, emergency preparedness, and other responsibilities are met. This new direction reinforces that EH&S shall serve in a supportive role. The changes are based on the principle that responsibility and accountability for laboratory safety cannot be shifted away from the individuals managing the laboratories. It is therefore the responsibility of EH&S to help the research community ensure the safety of their laboratories.

Roles and Responsibilities

The campus approach to laboratory safety is based on the following accountability matrix:



For each of these authority levels, a detailed list of actions and guidance is outlined in the document *Roles & Responsibilities for Safety in Labs & Research* (Appendix A). In addition, the Faculty Senate shall review, advise, and serve as facilitator over this Laboratory & Research Safety Business Plan.

To further strengthen the University's cultural commitment to laboratory safety, the role of EH&S shall be that of a technical resource, trainer, facilitator, auditor, and mentor to the laboratories. The individuals with responsibility for the activities in the laboratory retain accountability for the safety of their operations.

Resources

Personnel. The full resources of the EH&S team are dedicated to UCR's Laboratory & Research Safety. The team is headed by personnel who have the academic training and laboratory experience required to assure the success of the program.

Analysis and Identification. While regulatory compliance is critical in the laboratory environment, a risk-based focus allows the team to identify and address the issues that are most likely to: interfere with operations, result in injury to faculty/staff/students, and/or impact the reputation of the University's programs.

Controls. To help strengthen the university's cultural commitment to safety and assure the risks are identified and addressed the EH&S team will conduct loss- and exposure-analysis, as well as hold focus group discussions. Such actions shall identify structural drivers of behavior (positive and negative) that have the potential to improve safe operations and reduce losses. Controls will be structured to address the risk and meet regulatory compliance requirements through leadership accountability.

Priority Initiatives

1. Responsibility and Accountability system

Accountability will be assigned to each position, made possible with the support of EH&S serving in an advisory capacity. An accountability metrics system will be established based on roles, responsibilities, and authority levels. Quarterly reports will be generated and communicated from the Office(s) of Research, EVC/Provost, and Vice Chancellor of Finance and Business operations.

2. Laboratory Safety Audits

Departments will complete their own laboratory self-assessments using an electronic audit system provided through EH&S. Results will be reported to the Principal Investigators (PIs) and/or individuals responsible for work conducted in the laboratory being audited. Follow-up reports will be forwarded to the Department Chair if identified deficiencies are not corrected within a time frame appropriate for the hazard. EH&S will develop the protocols, provide training for use of the system, and oversee the process for self assessments. Additionally, EH&S will conduct a verification audit to reinforce the self assessment process.

3. Chemical Hygiene Plans

Departments will develop, update at least annually and distribute a written Chemical Hygiene Plan (CHP) which includes Standard Operating Procedures and addresses the policies, and other OSHA-required components. Each Laboratory will create and update written procedures specific to their laboratory in order to ensure that employees, students and visitors are protected from harm due to hazardous materials. Departmental Laboratory Safety Officers (LSOs) and EH&S will assist in the creation and maintenance of the CHP and in development of written protocols for the use of high-risk hazardous materials.

4. Training

All individuals working in a laboratory will be required to complete (at minimum) the Laboratory Safety Orientation training provided by EH&S in an online format. Additional safety training may be required based on the use of biohazardous materials, hazardous chemicals and hazardous waste, lasers, or radioactive materials. Laboratories shall provide specialized training for high-hazard operations (i.e., pyrophorics, carcinogens, etc.).

5. Accident Investigations

Principal Investigators and/or Supervisors will investigate all accidents as soon as possible, usually within 24 hours of discovery. Root cause analysis and corrective action plans for each incident or accident investigation shall be documented with guidance from EH&S.

Details for each of these initiatives are identified in the document *Top Priorities in Laboratory Safety* (Appendix B). The initiatives are a result of the Summary of Internal Audit of Laboratory Safety R2010-03 (Appendix C).

Structure

To effectively integrate safety into the way that laboratories and researchers do business, EH&S will work in partnership with departments to address the critical components of safety program: management, assessment and analysis, hazard prevention and control, training, faculty / staff / student involvement, and the integration of senior management. A sample of how the program's structure will be integrated at the departmental level is identified in the document *Laboratory & Research Safety Program Structure* (Appendix D). The structure will be based on the safety principles of the Voluntary Protection Program (VPP) established by the Occupational Safety and Health Administration (OSHA).

The EH&S Laboratory Safety Team

Directly advise and consult on safety that directly impact research procedures

Russell Vernon, Ph.D. (vacant)	Campus Laboratory/Research Safety Manager
Leslie Hofherr, MS, MPH	Campus Laboratory Audit Specialist
Edgar Romo, MS	Campus Biosafety Officer
Karen Janiga, MS	Campus Assistant Biosafety Officer and Environmental Health Specialist
Ondra Carter, BS	Radiation Safety Officer
	Campus Principal Safety Technician

Indirectly interact with lab personnel on safety but support the lab safety program

(vacant)	EH&S Director
Eduardo Trujillo	Campus Waste Operations Supervisor
Darwyn Vernon	Sr. Waste Technician
Janette Ducut, Ed.D.	Campus Training Manager
Beiwei Tu, MS, CSP, CIH	Campus Accident Prevention Specialist
(vacant)	Campus Industrial Hygiene (IH) Technician
Scott Corrin	Campus Fire Marshal
Cesar PI	Campus Fire Inspector
Xavier Martinez	Campus Fire Inspector
Lisa Martin, MOM, CPCP	Campus Business Continuity Planner
Paul Walker	Campus Emergency Manager
Brian Dahm, MBA	Management Services Officer
Lanie Ivey	Administrative Assistant

Appendices

Appendix A	Roles & Responsibilities for Safety in Labs & Research
Appendix B	Top Priorities in Laboratory Safety
Appendix C	Internal Audit of Laboratory Safety 08/02/2010
Appendix D	Laboratory & Research Safety Program Structure (Chemistry sample)
Appendix E	Leaders of Organization with Laboratories at UCR
Appendix F	<u>Laboratory Safety Officer's Committee</u> (www.ehs.ucr.edu/about/iso.html)
Appendix G	UCR Policies and Procedures (laboratory specific) (http://fboapps.ucr.edu/policies/)
Appendix H	<u>Current Departmental Chemical Hygiene Plans</u> (www.ehs.ucr.edu/laboratory/CHP/currentchps.html)

Roles & Responsibilities for Safety in Labs & Research

Individual Responsible
Working in the lab or field

Oversight, reviews, audits
Faculty and other Supervisors

Actions & Guidance

1. Know & follow the UCR Laboratory Safety Rules and department Chemical Hygiene Plan
2. Create, improve and follow written procedures (SOPs)
3. Identify & report hazards to your supervisor and/or EH&S
4. Use Engineering Controls
5. Wear Appropriate Personal Protective Equipment
6. Ask questions of more experienced personnel
7. Provide guidance to less experienced personnel
8. Report injuries to supervisor
9. Cleanup spills promptly
10. Store chemical by hazard class
11. Store chemical in secondary containers
12. Label containers
13. Label storage locations
14. Update campus chemical inventory when new chemical arrive
15. Update campus chemical inventory when containers are emptied
16. Provide supervisor with suggestions for improving lab safety
17. Follow the Five Steps in ISEM
18. Review Material Safety Data Sheets and other safety data prior to working with unfamiliar substances
19. Report safety concerns to your supervisor promptly
20. Use creativity to enhance safety
21. Do not damage the environment
22. Manage hazardous waste properly
23. Prevent fume hood emissions of hazardous materials including strong acids
24. etc...

Individual Responsible
Faculty and other Supervisors

Oversight, reviews, audits
Department head (Chair or Director)

Actions & Guidance

1. Obtain approvals from the relevant committee for using vertebrates, humans, radioisotopes, radiation producing machines, lasers, select agents, viruses, bacteria, prions, etc, prior to beginning work, adding personnel or making changes from the approved work.
2. Provide resources for staff to work safely, measure and reward safety performance
3. Control access to areas with high hazard materials or activities

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4. Understand, review, modify and approve activities and safety measures in the spaces your assigned areas *Benzene, formaldehyde, - - -*
5. Report the building, room number, description of location, brief description of process or activity, number of employees engaged in using regulated carcinogens, the names and addresses of any collective bargaining units representing the employees using occupational carcinogens
6. Train all staff in your assigned spaces to work safely prior to beginning work and when the process changes
7. Develop written procedures capable of protecting your staff of the health hazards of the chemicals with which they work
8. Maintain chemical exposures below regulatory limits
9. Provide engineering controls and personal protective equipment to control the hazards to your staff
10. Provide storage cabinets appropriate to the hazard category of the chemicals stored with appropriate labels and connection to the exhaust system
11. Request resources to cover the costs of equipment, supplies and disposal of hazardous materials
12. Participate in department and campus safety committees
13. Audit the hazardous materials labeling, storage and disposal practices in your lab frequently
14. Involve the department administration in the filing of worker's compensation claims
15. Assist your staff in obtaining medical care when injured or overexposed to hazards
16. Conduct accident and near-miss investigations, develop and follow through with strategies to prevent reoccurrences
17. Ensure your chemical inventory in the campus database is updated at least every 60 days
18. Review Material Safety Data Sheets and other safety data information with your staff to ensure they understand the hazards and methods of preventing exposure
19. Review and update your location information in the campus econtacts system to maintain an accurate placard outside your lab doors quarterly
20. Request EH&S technical assistance when
 - a. remodeling your lab
 - b. designing a new workstation
 - c. working with hazardous materials or processes unfamiliar to you
21. etc. ...

Individual Responsible
Department head (Chair or Director)

Oversight, reviews, audits
Dean

Actions & Guidance

1. Meet with all new employees and provide safety guidance to your faculty and staff regularly
2. Meet with your safety staff regularly
 - a. Departmental Laboratory Safety Officer
 - b. Department Safety Coordinators
 - c. Building Supervisors for Emergency Conditions in the buildings where your department is housed
 - d. Department Emergency Staff
3. Update your departmental Chemical Hygiene Plan at least annually

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4. Prepare to continue business after a disaster
5. Facilitate the reporting of injuries to Worker's compensation and EH&S
6. Conduct or assist with accident and serious near miss investigations in your department
7. Report safety issues to your dean
8. Anticipate and prepare for abandonment and reassignment of lab rooms
9. Ensure labs are cleaned-up when occupants leave
10. Measure and reward safety performance

Individual Responsible**Dean**

1. Obtain regular reports on safety about each of your departments
2. Measure and reward safety performance
3. Bring safety issues to the attention of the Provost
4. Allocate resources to fund safety, accident prevention and environmental protection
5. Encourage your faculty to engage in safety issues, participate on safety committees and demand an outstanding safety program

Oversight, reviews, audits**Provost****Individual Responsible****Provost**

1. Strive for an award winning campus safety program
2. Encourage creative thinking toward improving safety
3. Engage faculty, staff and students in discussions about safety
4. Obtain reports for all levels of the organization on safety
5. Follow and encourage others to follow the UC Presidential Policy on Management of Health Safety & The Environment
6. Report to the Chancellor on progress with compliance with this policy

Oversight, reviews, audits**Chancellor****Individual Responsible****Chancellor**

1. Report to the President on progress with compliance with the Presidential Policy on Management of Health Safety & The Environment

Oversight, reviews, audits**President**

Individual Responsible
EH&S Director

Oversight, reviews, audits
Associate Vice Chancellor, Facilities

1. Provide technical consultation to the labs to assure they are able to operate safely
2. Assist in the development and review of research protocols, biological use, animal use, radioactive use authorizations and laser use
3. Train lab faculty, staff, students and visitors to complete risk based safety self assessments/audits
4. Complete selected periodic inspections to reinforce individual lab performance
5. Review design and construction projects in labs
6. Develop and present lab safety training
7. Facilitate emergency planning, preparedness & response
8. Assist the departmental Laboratory Safety officers to develop, implement and maintain chemical hygiene plans
9. Provide interpretation of complex technical rules and regulations pertaining to environmental health and safety to University administration, staff and students
10. Devise strategies for compliance that minimize negative impacts to research and education activities
11. Develop University policies and/or procedures for the safe and compliant operation of laboratory activities
12. Participate in technical and policy development needs to state and local regulatory agency officials and the legislature in relevant areas related to regulatory impacts to University of California facilities and operations
13. Review the design safety of process equipment
14. Conduct accident investigations with root cause analysis
15. Provide review and technical advice on pressure vessels, electrical hazards, centrifuges, and other lab equipment
16. Assess hazards, and preparing plans for experimental set-ups
17. Develop and implement field research and travel safety processes and plans for faculty, staff, students and affiliates

Lab Safety at UCR

Hypothesis:

- ▶ Society expects that no one in the university/research environment will get hurt, hurt others, damage the environment, or violate important laws
- ▶ There are strategic, operational, reputational as well as safety risks associated with research, teaching & public service
- ▶ Faculty's primary focus is on their research; they have an idea of what is safe and unsafe but they may not have the incentive to manage safety within their area of responsibility, or they may be faced with incentives to take risks that endanger people and the environment
- ▶ We can accomplish the university missions while controlling the risks
- ▶ People are motivated by structural incentives (e.g., recharge, budget, space & tenure)
- ▶ EH&S has knowledge of safety and environmental management processes, but EH&S does not control the management structures, incentives, educational processes, or the work environment

Goal:

Provide a health & safe working environment with environmentally sound practices by systematically integrating health, safety, environmental considerations, and sustainable use of natural resources into all activities making these an integral part of everyday actions

Path:

- 1st EH&S has basic lab safety tools in place to help leaders, faculty, supervisors and staff to use to provide a safe environment
- 2nd EH&S will help leaders, managers, faculty and staff establish and meet their safety responsibilities and goals
- 3rd EH&S drafts communication about changes in our approach to lab safety for leaders to revise and deliver
- 4th EH&S assists the campus to establish criteria based on known safety and environmental performance expectations, gathers relevant data, provides agreed-upon safety and environmental accountability measurement reports on progress toward goal for leaders to use in establishing safety related structures that will result in safe behavior

Principles & Process

1. Identify clear lines of authority and responsibility for ensuring safety and environmental protection at all organizational levels
 - a. Each individual is directly responsible for ensuring his or her own safety and for promoting a safe, healthy and environmentally sound workplace and community.
 - b. University employees who direct the activities of other individuals or control the employment and educational environment are responsible for protecting faculty, staff, students, visitors, the public and the environment

- c. Managers will ensure that employees possess the experience, knowledge, skills, and abilities necessary to discharge their health, safety and environment responsibilities
2. Before operations or activities are initiated, the person responsible for the activity must ensure that all protective safety and environmental requirements have been identified and addressed
3. EH&S to provide assistance and consultation to leaders, faculty, supervisors and individuals in the identification and control of their risk

Assessment of risks + priority = quantitatively

“How To” approach the goal with each project

1. Define the Scope of Activities

Goals and programs are translated into activities, expectations are set, tasks are identified and prioritized, and resources are allocated.

2. Analyze the Hazards

Hazards and environmental aspects associated with the activities are identified, analyzed, and categorized.

3. Develop and Implement Hazard and Operational Controls

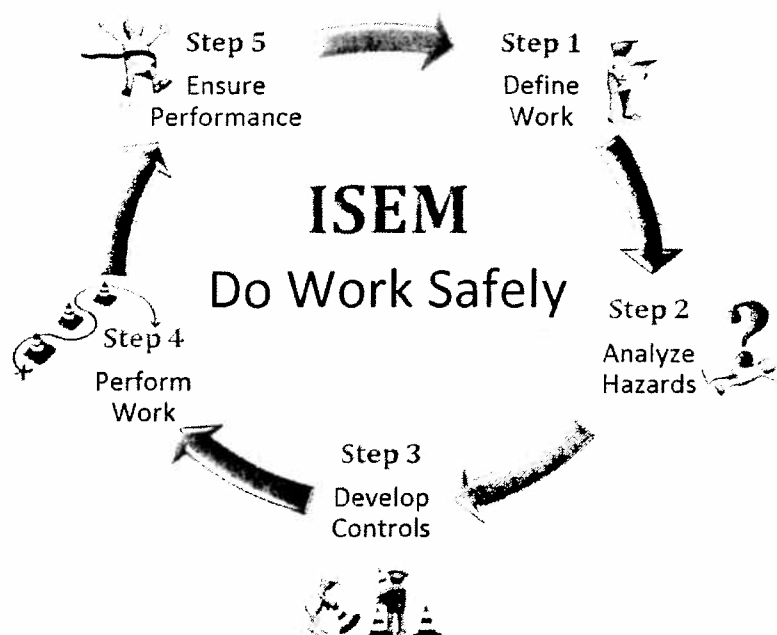
Applicable standards and requirements are identified and agreed upon, controls to prevent/mitigate hazards and aspects are identified, the safety and environmental parameters are established and controls are implemented.

4. Perform Activities within Established Controls

Readiness is confirmed and activities are performed safely and in compliance with applicable regulations and policies.

5. Provide Feedback and Assure Continuous Improvement

The appropriate parties obtain feedback on the adequacy of controls, identify opportunities for improving the definition and planning of activities, conduct departmental and independent oversight and, if necessary, participate in regulatory enforcement actions. As a complement to departmental management, the campus EH&S offices may be contacted to provide safety and environmental assistance, consultation, and independent oversight functions.



ROLES & RESPONSIBILITIES FOR SAFETY IN BOURNS COLLEGE OF ENGINEERING LABORATORIES AND RESEARCH

