Spring 2017 Meetings
1st and 3rd Tuesdays 1:00 – 2:30 p.m.
CEUS, 1744 Pearl Street

Tuesday, 21 Feb
Tuesday, 7 Mar
Tuesday, 21 Mar
Tuesday, 4 Apr
Tuesday, 18 Apr
Tuesday, 2 May
Tuesday, 16 May
Tuesday, 30 May

Environmental Affairs COMMITTEE

AGENDA

7 MARCH 2017

1. Call to Order
2. Public Comments
3. Approval of minutes
    a. 21 Feb 2017 (page 2)
4. Updates from strategic planning
5. Environmental Science major (page 3)
6. Updates from CEUS
7. Announcements
8. Adjournment

Environmental Affairs Committee
Minutes Tuesday, 21 February 2017

Attendees: see attendance and voting table below

1. Call to Order: 1:15pm

2. Public Comments
    a. Sustainable Works has had a funding shut down.
        i. They are looking for funding – corporate sponsorship
        ii. Perhaps at the SMC Board meeting, look for long-term commitment.
        iii. Other ideas from the committee for funding were: foundation money, PBAR (Associated Students), Global Council, and lottery money (see Erica LeBlanc)
    b. There was a suggestion that the EAC sponsor an annual theme for sustainability. Ex: fossil fuels, maybe faculty would consider offering extra credit for participating in that theme.
    c. The City of Santa Monica still has a strong focus on Environmental issues.
    d. Getting Hollywood to increase visibility of sustaible living in film and TV. Let's come up with some possible ideas, and then call a meeting of folks from across the industry to see how difficult it will be to get buy-in.
    e. Earth week: April 17-21
    f. Free farmers market food: starting with 8 boxes per week for providing food to students on campus. Volunteers are needed, and it could be a service-learning experience, opportunity for independent study or extra credit.

3. Approval of minutes
    a. 7 December 2016 vote #1

4. Carbon Footprint project: Ferris would like to build this project for inspiring people to use their wallet to resist thefossil fuel industry.
    a. Choose a theme to really focus the efforts
        i. Develop a calculator for determining how much CO2 is being saved/released by a person's actions
        ii. Develop benchmarks to inspire people to continue
    b. Follow the congressional environmental and science committees
        i. Develop a "Pruitt Report"
        ii. Provide a button on the CEUS web site for action messages

5. "Welcome" video update. It is now 2.5min long.
    a. The committee was really impressed with the progress and the product. Replace "hydration station" with "bottle filling station"
    b. Perhaps have the faculty from the film department have a look at it
    c. Can we approach the "Green Campus ratings people to add Community colleges?

6. REV (6-month sustainability circle) update:
    a. SMC is hosting the circle on March 9th.
    b. Our interest in hosting is to gain better management buy-in to the project.
    c. Bruce emphasized that we need to sell the mission, and move the whole campus to be a cohesive action group.
    d. There was a mid-stream phone call at 2:30 that day that anyone from the committee was welcome to join.

7. Updates from CEUS: covered in public comments

8. Announcements
    a. Garen: we need to work on the Env. Scie degree (model after Cal and UCLA), and it would be great to do some fundraising and develop an Environmental Chair of Excellence.
    b. Ferris: would like to develop a "pathways" folder for students to pursue the Env. Majors.
    c. We definitely need to be involved in the placement of CEUS during strategic planning.
    d. Recycling program needs funding. This program is NOT funded by the college.

9. Adjournment: 2:20

Environmental Affairs Committee Attendance & Voting

Date: 1:15 .		**Vote 1: 1:35pm**			**Vote 2:**		2:20pm
		mins: 7 Dec 2016			**adjourn**		
		yes	no	Abstain	yes	no	Abstain
Voting Members	**arrival**						
Alexandra Tower, Chair	1:15pm	x			x		
Ferris Kawar, Vice Chair	1:00pm	x			x		
Garen Baghdasarian	1:00pm			x			x-absent
Stuart Cooley							
Janet Harclerode	1:00pm	x			x		
Michell King	1:00pm	x			x		
Kristin Lui-Martinez	1:00pm	x					x-absent
Angie Misaghi	1:00pm			x	x		
Poliana Raymer	1:00pm			x			x-absent
Dawn Vaughn	1:00pm	x			x		
Bruce Wyban	1:00pm	x			x		
Student Representatives							
Sharon Nat	1:00pm	x					x-absent
Interested Parties (non-voting)							
Interested Students:							
Henry Haprov	1:00pm						
Total		**8**	**0**	**3**	**7**	**0**	**4-absent**
1st		Ferris			Janet		
2nd		Bruce			Bruce		

Environmental Science Major

UCLA:

1. Transfer applicants to the Environmental Science major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA:
    a. two general chemistry courses with laboratory for majors
    b. two general biology courses with laboratory for majors
    c. two calculus courses
    d. two calculus-based physics courses.

2. Required: One course from each of the following six core environmental science areas. No more than two courses may be from any one department.
    a. One atmospheric and water science course from Atmospheric and Oceanic Sciences 101, 103, M105, 130, Earth, Planetary, and Space Sciences 153, or Geography 105;
    b. one climate science course from Atmospheric and Oceanic Sciences 102, Geography 102, 104, M106, or M131
    c. one Earth science course from Earth, Planetary, and Space Sciences 101, C113, 119, 139, 150, Environment M127, Geography 100, 101, or M107
    d. one ecology and conservation biology course from Ecology and Evolutionary Biology 100, 109, 116, 151A, 154, Environment 121, Geography 111, or 113

e. one environmental management course from Environment M134, M135, 157, 159, 160, 163, 166, or Public Policy C115
f. one pollutant sources, treatment, fate, and transport course from Atmospheric and Oceanic Sciences 104, Chemical Engineering C118, Civil and Environmental Engineering 153, 154, M166, Environmental Health Sciences 100, C125, C152D, or C164.

3. Social Sciences/Humanities Requirements
   a. One humans and environment course from Environment M132, M133, M137, 150, M153, Geography M128, 135, M137, 150, M153, 156, or Philosophy 125
   b. one policy and politics course from Environment M155, 157, M161, M164, 166, or M167.
4. Practicum/Colloquium Requirements
   a. Environment 180A, 180B, 180C, and four terms of 170 or 185A.
5. Minor and Concentration Requirements
   a. A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor. Successful completion of a minor is indicated on the transcript and diploma.
      i. **atmospheric and oceanic sciences minor,** seven 4-unit courses, including
         1. three from Atmospheric and Oceanic Sciences M100, 101, 102, 103, 104, M105, M106, C110, C115, M120, 130, 141, 145, 150, C160, C170, 180
         2. four additional courses, two of which must be upper division, from any of the above atmospheric and oceanic sciences courses beyond the minimum four required or from Atmospheric and Oceanic Sciences 1, 2, 3, 186 (must be taken twice), Chemistry and Biochemistry 103, 110A, 110B, 113A, C113B, 114, Earth, Planetary, and Space Sciences 15, Ecology and Evolutionary Biology 109, C119A, 122, 123A or 123B, 147, 148, Mathematics 115A, 115B, 132, 135, 136, 146, 170A, 170B, Physics 110A, 110B, 112, M122, 131, 132.
         3. Other relevant courses from related disciplines may be substituted with prior approval of the department. At least five courses approved for the minor must be upper division. One course may be taken on a Passed/Not Passed basis.
         4. Groups of courses relevant to specific subareas of atmospheric sciences include
            a. *atmospheric chemistry:* Atmospheric and Oceanic Sciences 104, Chemistry and Biochemistry 103, 110A, 110B, C113B, 114;
            b. *atmospheric chemistry and biology:* Atmospheric and Oceanic Sciences 101, 104, Ecology and Evolutionary Biology 109, C119A, 122
            c. *atmospheric dynamics:* Atmospheric and Oceanic Sciences 101, 102, Physics 112, 131, 132
            d. *atmospheric dynamics and mathematical modeling:* Atmospheric and Oceanic Sciences 101, 180, Mathematics 115A, 115B, 132, 135, 136, 142, 146
            e. *oceanography and biology:* Atmospheric and Oceanic Sciences 101, 103, 104, Ecology and Evolutionary Biology 109, 123A or 123B, 147, 148
            f. *upper atmosphere:* Atmospheric and Oceanic Sciences 101, M120, C170, Physics 110A, 110B, M122.
      ii. **conservation biology minor,** Ecology and Evolutionary Biology 100, 116 (or Environment 121), and four to six courses from 101, 103, 105, 109, 111, 112, 114A, 122, 129, 151A, 154, 176, 180A are required.
      iii. **Earth and environmental science minor,** five courses from Earth, Planetary, and Space Sciences 101, 112, C113, 139, 150, 153 are required.
      iv. **environmental engineering minor,** Civil and Environmental Engineering 153 and five courses from 154, 155, 156A, M165, M166, Chemical Engineering C118, Environment 159, 166, Environmental Health Sciences C125, C164 are required.
      v. **environmental health concentration,** Epidemiology 100, two courses from Environmental Health Sciences 100, C135, C185A, C185B, and three courses from Chemistry and Biochemistry 153A, Environmental Health Sciences C125, C140, C152D, C157, C164, 203 are required.

vi. **environmental systems and society minor,** seven courses from Environment M109, M111, 121, M130, M132, M133, M134, M135, M137, 150, M153, M155, 157, 159, 160, M161, 163, M164, 166, M167, 186 are required.

vii. **geography/environmental studies minor,** three courses from Geography M106, M107, M109, 110, 113, M115, 116, 122, 123, 124, 125, 126, M127, M128, 129, M131, 132, 135, M137, 159C, 159D, 159E, and any two additional upper division geography courses (except those from the preceding list and courses 194 through 199) are required.

6. Each course applied toward requirements for the major, except Environment 170 and 185A, must be taken for a letter grade. Students must maintain an overall grade-point average of 2.0 (C) or better in all courses applied toward the major.

UC Berkeley

College Requirements

Undergraduate students in the College of Letters & Science must fulfill the following requirements in addition to those required by their major program.

For detailed lists of courses that fulfill college requirements, please review the College of Letters & Sciences page in this Guide.

Entry Level Writing
All students who will enter the University of California as freshmen must demonstrate their command of the English language by fulfilling the Entry Level Writing requirement. Fulfillment of this requirement is also a prerequisite to enrollment in all reading and composition courses at UC Berkeley.

American History and American Institutions
The American History and Institutions requirements are based on the principle that a US resident graduated from an American university should have an understanding of the history and governmental institutions of the United States.

American Cultures
American Cultures is the one requirement that all undergraduate students at Cal need to take and pass in order to graduate. The requirement offers an exciting intellectual environment centered on the study of race, ethnicity and culture of the United States. AC courses offer students opportunities to be part of research-led, highly accomplished teaching environments, grappling with the complexity of American Culture.

Quantitative Reasoning
The Quantitative Reasoning requirement is designed to ensure that students graduate with basic understanding and competency in math, statistics, or computer science. The requirement may be satisfied by exam or by taking an approved course.

Foreign Language
The Foreign Language requirement may be satisfied by demonstrating proficiency in reading comprehension, writing, and conversation in a foreign language equivalent to the second semester college level, either by passing an exam or by completing approved course work.

Reading and Composition
In order to provide a solid foundation in reading, writing and critical thinking the College requires two semesters of lower division work in composition in sequence. Students must complete a first-level reading and composition course by the end of their second semester and a second-level course by the end of their fourth semester.

Breadth Requirements
The undergraduate breadth requirements provide Berkeley students with a rich and varied educational experience outside of their major program. As the foundation of a liberal arts education, breadth courses give students a view into the intellectual life of the University while introducing them to a multitude of perspectives and approaches to research and scholarship. Engaging students in new disciplines and with peers from other majors, the breadth experience strengthens interdisciplinary connections and context that prepares Berkeley graduates to understand and solve the complex issues of their day.

Unit Requirements
- 120 total units, including at least 60 L&S units
- Of the 120 units, 36 must be upper division units

- Of the 36 upper division units, 6 must be taken in courses offered outside your major department

Residence Requirements
For units to be considered in "residence," you must be registered in courses on the Berkeley campus as a student in the College of Letters & Science. Most students automatically fulfill the residence requirement by attending classes here for four years. In general, there is no need to be concerned about this requirement, unless you go abroad for a semester or year or want to take courses at another institution or through UC Extension during your senior year. In these cases, you should make an appointment to meet an adviser to determine how you can meet the Senior Residence Requirement.
Note: Courses taken through UC Extension do not count toward residence.

Senior Residence Requirement
After you become a senior (with 90 semester units earned toward your BA degree), you must complete at least 24 of the remaining 30 units in residence in at least two semesters. To count as residence, a semester must consist of at least 6 passed units. Intercampus Visitor, EAP, and UC Berkeley-Washington Program (UCDC) units are excluded.
You may use a Berkeley Summer Session to satisfy one semester of the Senior Residence requirement, provided that you successfully complete 6 units of course work in the Summer Session and that you have been enrolled previously in the college.

Modified Senior Residence Requirement
Participants in the UC Education Abroad Program (EAP) or the UC Berkeley Washington Program (UCDC) may meet a Modified Senior Residence requirement by completing 24 (excluding EAP) of their final 60 semester units in residence. At least 12 of these 24 units must be completed after you have completed 90 units.

Upper Division Residence Requirement
You must complete in residence a minimum of 18 units of upper division courses (excluding EAP units), 12 of which must satisfy the requirements for your major.

In addition to the University, campus, and college requirements, listed on the College Requirements tab, students must fulfill the below requirements specific to their major program.

General Guidelines

1. All courses taken to fulfill the major requirements below must be taken for graded credit, other than courses listed which are offered on a *Pass/No Pass* basis only. Other exceptions to this requirement are noted as applicable.
2. No more than one upper division course may be used to simultaneously fulfill requirements for a student's major and minor programs, with the exception of minors offered outside of the College of Letters & Science.
3. A minimum grade point average (GPA) of 2.0 must be maintained in both upper and lower division courses used to fulfill the major requirements.

For information regarding residence requirements and unit requirements, please see the College Requirements tab.

Lower Division Requirements

Code	Title	Units
EPS 50	The Planet Earth	4
Select one of the following math sequences:		
MATH 16A& MATH 16B	Analytic Geometry and Calculus and Analytic Geometry and Calculus	
MATH 1A& MATH 1B	Calculus and Calculus	
MATH 10A& MATH 10B	Methods of Mathematics: Calculus, Statistics, and Combinatorics and Methods of Mathematics: Calculus, Statistics, and Combinatorics	

Code	Title	Units
Select one of the following physics sequences:		
PHYSICS 8A& PHYSICS 8B	Introductory Physics and Introductory Physics	
PHYSICS 7A& PHYSICS 7B	Physics for Scientists and Engineers and Physics for Scientists and Engineers	
CHEM 1A	General Chemistry	3
or CHEM 4A	General Chemistry and Quantitative Analysis	
CHEM 1AL	General Chemistry Laboratory	1
BIOLOGY 1B	General Biology Lecture and Laboratory	4
Course List		

Upper Division Requirements

Code	Title	Units
EPS 102	History and Evolution of Planet Earth	4
EPS 117	Geomorphology	4
EPS 150	Case Studies in Earth Systems [1]	2
ENE,RES 102	Quantitative Aspects of Global Environmental Problems	4
Electives, select 12 upper division from the following list of suggested courses: [2]		12
EPS 100A	Minerals: Their Constitution and Origin	
EPS 100B	Genesis and Interpretation of Rocks	
EPS C100	Communicating Ocean Science	
EPS 103/203	Introduction to Aquatic and Marine Geochemistry	
EPS 109	Computer Simulations in Earth and Planetary Sciences	
EPS 115	Stratigraphy and Earth History	
EPS 122	Physics of the Earth and Planetary Interiors	

Code	Title	Units
EPS 131	Geochemistry	
EPS C146	Geological Oceanography	
EPS C178	Applied Geophysics	
EPS C180	Air Pollution	
EPS C181	Atmospheric Physics and Dynamics	
ESPM 120	Soil Characteristics	
ESPM C128	Chemistry of Soils	
GEOG C136	Terrestrial Hydrology	
CIV ENG 115	Water Chemistry	
GEOG 140A	Physical Landscapes: Process and Form	
GEOG 142	Climate Dynamics	
GEOG 143	Global Change Biogeochemistry	
GEOG 144	Principles of Meteorology	
INTEGBI 113L	Paleobiological Perspectives on Ecology and Evolution	
INTEGBI 152	Environmental Toxicology	
INTEGBI 153	Ecology	
INTEGBI C155	Holocene Paleoecology: How Humans Changed the Earth	
INTEGBI 160	Evolution	
INTEGBI 184L	Morphology of the Vertebrate Skeleton with Laboratory	
Course List		

[1] This course can only be taken during the student's senior year.

[2] All elective courses used to fulfill the major requirements must be approved by the faculty adviser. This list is intended as a guide; the suggested courses are not limited to only courses included in this list.