## ACADEMIC SENATE - SUSTAINABILITY COMMITTEE

Spring 2016 Due: Wednesday, June 8, 2016

MEMBERS						
Name	College/Unit					
Bennett, Penny	Admin					
Borin, Norm	OCOB					
Braun, David (CH)	CENG					
Elliot, Dennis	Admin					
Fernsler, Jonathan	CSM					
Levi, Daniel	CLA					
Lin, Nelson	ASI					
, Julie	Admin					
Reich, Jonathan	CAED					
Sobouti, Kaelan	ASI					
Tool, Katie	Admin					
Vacant	CAFES					
Vestermark, Jesse	PCS					

CHARGES								
Charge	Status/Notes							
Respond to AS-787-14  1. Produce a list of courses meeting at least two SLOs.  2. Encourage faculty to teach sustainability in new and existing courses (new)  3. Work with the CTLT to provide support for faculty seeking to teach classes involving sustainability (new)	1. GE Courses reviewed by ASSC and sent to AS Consent Agenda 5-01-15 1. Other course review began. CENG, CLA, COB, CSM completed. CAED started. 1. New SUSCAT courses sent to AS Senate Consent Agenda and approved. See list on pp. 3-4 2 & 3. John Farnsworth from Santa Clara U ran a workshop at the CTLT on May 6 with 20 attendees. See http://ctlt.calpoly.edu/teaching-sustainability-any-course. The flyer appears on p. 5 2 & 3 Identify funding sources. 2 & 3 Plan to include Sustainability Teaching strategies during CTLT New Faculty Orientation. 2 & 3 Plan CTLT Sustainability Learning Community during 2016-17.							
Develop procedure to identify sustainability courses in catalog (new)  • Report on case studies from other universities.	See May 17, 2016 meeting Minutes plus screenshots pp. 6-8. The May 31, 2016 meeting Minutes cover the communications with the Registrar about identifying sustainability courses on PASS.							
Respond to 2014 CSU Sustainability Policy directives. (new)  1. "The CSU will seek to further integrate sustainability into the academic curriculum working	Joint meeting with SAC (The President's Sustainability Advisory Committee) took place on 12-03-2015.							

within the normal campus consultative process.  2. The CSU will develop employee and student workforce skills in the green jobs industry, promote the development of sustainable products and services, and foster economic development."	
Promote/extend the Green Campus/Star Certification.	Working with SAC to move forward with the AASHE STARS data collection. Assist data collection efforts for academic STARS credits and retain SUSCAT review documentation in a form we can use for STARS. The Academic Senate Sustainability Committee PolyLearn site provides a starting point.
Make recommendations regarding the role of sustainability in the University's strategic plan/master plan/action plan.	Assist with campus-wide sustainability Charrette on April 29, 2016, jointly with SAC.
Continue assessing SLOs. Prepare and deliver report. Fall 2015.	The report of pilot assessments so far appears in the summary report on p. 9 with appendices on pp. 10 – 16 and the report by Daniel Levi & Rebecca Sokoloski on pp. 17 – 24.
Work with students to better integrate approaches to sustainability inside and outside the classroom/curriculum.	<ul> <li>Consider new course(s).</li> <li>Work with PowerSave Green Campus students in facilities.</li> <li>List student clubs active in sustainability. See p. 26.</li> </ul>
Work with GEGB to develop sustainable pathways in GE.	Discussed SUSCAT GE Courses on 5-22-15

## **NOTES:**

The Committee met six times during Spring quarter. Above please find a table summarizing the committee charges and progress made. Below, please find the detailed meeting minutes on pp. 27 - 50.

## **Report Appendices:**

New SUSCAT Courses Approved as of Spring 2016	p. 3-4
Flyer for John Farnsworth May 6 CTLT workshop Teaching Sustainability in Any Course	p. 5
Screenshots from other CSU Campuses showing green leaf sustainability course indicators.	p. 6-8
ASSC Sustainability Learning Objectives Assessments Fall 2011 – 2013	p. 9-16
Daniel Levi & Rebecca Sokoloski, Evaluating Sustainability on the Cal Poly Campus	p. 17-24
Cal Poly Sustainability Clubs, Fall 2015	p. 25
Meeting Minutes	p. 26-49

# SUSCAT Course Summary for Academic Senate Consent Agenda

**Note:** The Resolution On Approving Assessment Process For Courses Meeting Sustainability Learning Objectives (AS-792-15) directs the Academic Senate Sustainability Committee (ASSC) to identify which courses to list on the Cal Poly Sustainability Catalog (SUSCAT) following the approved assessment process. The resolution also directs the ASSC to place SUSCAT course recommendations on the Academic Senate's Consent agenda. The first assessment phase during 2015 covered General Education courses (GE courses), and those GE courses now appear on http://suscat.calpoly.edu/catalog/courses/.

This memo lists only additional non-GE courses recommended for SUSCAT through April 2016. The ASSC has reviewed all courses in CENG, CLA, COB, and CSM. The CAED course review continues, and the CAFES course review stalled, because the ASSC has no CAFES representative.

Date: April 29, 2016

Fall 2015 - Spring 2016 Review

COURSES T	O LIST ON SUSCAT	
Course Number	Title	GE Area
CAED		
ARCH 207	Environmental Control Systems I	
ARCH 307	Environmental Control Systems 2	
EDES 406	Sustainable Environments	
EDES 408	Implementing Sustainable Principles	
EDES 410	Advanced Implementation of Sustainable Principles	
CENG		
CE 527	Sustainable Mobility	
EE 420	Sustainable Electric Energy Conversion	
MATE 222	Materials Selection Life Cycle	
MATE 232	Materials, Ethics, and Society	
ME 488	Wind Energy Engineering	
CLA		
COMS 390	Environmental Communication	
GEOG 408	Geography of Development	
HIST 432	United States Environmental History	
GEOG 325	Climate and Humanity	
GEOG 333	Human Impact on the Earth	
СОВ		
ECON 431	Environmental Economics	
ECON 432	Economics of Energy and Resources	
GSE 532	Environmental and Natural Resource Economics	

CSM		
BIO 401	Principles of Conservation Biology	
BIO 434	Environmental Physiology	
BIO 446	Ecosystem Ecology	
MSCI 428	Marine Conservation and Policy	
MSCI 439	Fisheries Science and Resource Management	
PHYS 310	Physics of Energy	
PSC 491	Appropriate Technology for the World's People: Development	
PSC 492	Appropriate Technology for the World's People: Design	

COURSES TO REMOVE FROM SUSCAT								
Course Number	Title	GE Area						

# Teaching Sustainability in Any Course A CTLT Workshop Facilitated by John Farnsworth

## Sponsored by the CTLT and the Academic Senate Sustainability Committee

This interdisciplinary workshop will investigate ways of augmenting existing courses to include a sustainability component as an adjunct learning outcome. We will explore how the sustainability paradigm can augment and enliven existing courses, thus promoting deeper student engagement. We will also explore how a sustainability-across-the-curriculum approach can foster a transformative educational experience within a university community.

## Friday, May 6

Library Room 202A 12:10 to 2 pm

Visit <a href="http://ctlt.calpoly.edu/teaching-sustainability-any-course">http://ctlt.calpoly.edu/teaching-sustainability-any-course</a> to register.



#### Who is John Farnsworth?

Dr. John S. Farnsworth serves as Provost's Faculty Associate for Curriculum Development and Transformation and as Senior Lecturer in Environmental Studies and Sciences at Santa Clara University. He has been active in the sustainability across the curriculum movement since 2006, and has had a hand in training faculty at over 60 universities, both in Europe and the USA, in education for sustainability. He served one of the original faculty fellows for AASHE, the Association for the Advancement of Sustainability in Higher Education.

## Screenshots from other CSU Campuses showing green leaf sustainability course indicators.

From <a href="http://catalog.csuchico.edu/viewer/11/SYMB.html">http://catalog.csuchico.edu/viewer/11/SYMB.html</a>:

## **Sustainability Courses**

Courses marked with a green leaf symbol are a part of CSU, Chico's devotion to sustainability practices and education. These green courses emphasize environmentally responsible awareness and learning.

#### From <a href="https://catalog.csuchico.edu/viewer/12/search/courses/ABUS.html">https://catalog.csuchico.edu/viewer/12/search/courses/ABUS.html</a>:

ABUS 341	Natural Resource Economics	<b>)</b> 3.0	INQ	
Prerequisites	s: ABUS 101 or faculty permission.			
ABUS 350	International Agricultural Business Practices	3.0	SP	
ABUS 389	Internship in Agribusiness	1.0 -3.0	FS	
Prerequisites	s: Permission of Internship Coordinator.			
ABUS 390	World Food and Hunger Issues	<b>&gt;</b> 3.0	FS	GE GC
rom https:	//catalog.csuchico.edu/viewer/15/search/o	courses/PS	SC.html:	:
TOIII IILLES	j / catalog.csucinco.cuu/viewei / 15/ scarcii/ t	0001000710		
PSSC 390	Food Forever: Comparisons of Sustainable Food Production Systems	<b>#</b> 3.0	FA	GE GC
	Food Forever: Comparisons of Sustainable Food		200	
PSSC 390	Food Forever: Comparisons of Sustainable Food Production Systems	<b>2.</b> 0	FA	GE GC
PSSC 390	Food Forever: Comparisons of Sustainable Food Production Systems  World Food and Fiber Systems	<b>3.0</b>	FA SP	GE GC
PSSC 390 PSSC 392 PSSC 398 PSSC 399	Food Forever: Comparisons of Sustainable Food Production Systems  World Food and Fiber Systems  Special Topics	3.0 3.0 1.0 -3.0	FA SP INQ	GE GC
PSSC 390 PSSC 392 PSSC 398 PSSC 399	Food Forever: Comparisons of Sustainable Food Production Systems  World Food and Fiber Systems  Special Topics  Special Problems	3.0 3.0 1.0 -3.0	FA SP INQ	GE GC

## Screenshots from other CSU Campuses showing green leaf sustainability course indicators. (Cont'd)

#### From <a href="http://pine.humboldt.edu/registrar/catalog/documents/HSUcatalog2015-16.pdf">http://pine.humboldt.edu/registrar/catalog/documents/HSUcatalog2015-16.pdf</a>

- BA 417. Small Business Consulting [4] S. Complete a consulting project with local business under supervision of Small Business Institute director. Class preeting, field work each week. Senore and grad students only. [Prereq: [business majors] BA 340, BA 360, BA 370, or equivalent; (other majors) consent of SBI director. Weekly: 4 hrs lect/disc.]
- BA 444. International Marketing [4] F. Characteristics/potentials of foreign markets and marketing systems. Different outures' effects on consumers in those markets. [Prereq: BA 340 or equivalent, or IA1
- BA 445. Marketing Communications [4] F. Comprehensive examination of marketing communications activity and its environment; topics discussed include targeting positioning, objectives setting, budgeting, sales promotion, personal selfing, advertising, and public relations. [Prereg: BA 340 or equivalent.]
- BA 446. Marketing Research [4] S. Study and application of primary and secondary marketing research through group work or local organizations. Activities include survey design and execution, data entry and analysis, report preparation and presentation. [Prereq (BA 340) AND either [MATH 104 and BA 120] or [STAT 108.]]
- BA 448. Consumer Behavior [4] S. Study of how organizations design and modify marketing strategies by understanding changing consumer lifestyles and attitudes in a multicultural world, and the resulting consumer behaviors in the global marketplace. [Prereq: BA 340 with a grade of
- BA 450. Intermediate Financial Accounting I (4) F. This course helps students develop knowledge of accounting concepts, standards, and pro dures by examining complex issues related to the measurement and reporting of income, current assets, and current liabilities. [Prereq: BA 252 [C] or equivalent.]

- Primarily for Accounting Option majors. [Prereq BA 451]
- BA 455. Governmental & Nonprofit Accou [4] S. This course covers accounting principle applicable to state and local governments and other nonprofit organizations, fund accounting procedures, and analysis and interpretation of fi nancial statements of governmental and nonprofit entities.[Prereq: BA 451 [C] and upper divis business majors only.]
- BA 460. Investment Management [4] F. Truditional and modern approaches. Sources/uses of information, alternative investment instruments, capital markets. Valuation of securities and portfolios under risk through technical/fundamental analyses and portfolio statistical models. [Prerect BA 360.]
- BA 462. Problems in Financial Management [4] S. Apply principles and techniques to financial decision making and policy formulation. Case study/enelytical approach. Short-term asset management, financial forecasting, capital expenditure, and capital structure policies. [Prereq: BA 468.1
- BA 464. International Business Finance [4] S. Specific finance problems encountered in a corporation with substantial international involvement. International equivalent of a corporate finance course, in contrest to a course that deals with international financial markets. [Prereq: BA 360.]
- BA 468. Capital Budgeting [4] F. Analyze investment decisions of a firm under risk and uncertainty. Apply case study/analytical approach to development and management of capital needs, aluation and ranking of investment projects. [Prereq: BA 360.]
- BA 470. Organization 6 Management Theories [4] F. Haw generic management process applies to all types of organizations (profit, not-forprofit, manufacturing, service, corporate, single proprietorships, large, small and all business

- Weekly: 3 hrs per credit unit. Rep once.]
- PA 494 Puni ss & Society [4] FS. Problems arising from interface of business and govern-ment, business ethics, government regulation, and ional business. Senior seminar. [Prereq: BA 340, BA 980, BA 370; or equivalent.]
- BA 496. Strategic Management [4] FS. Cap stone course integrating all business core courses into design of strategic business plans. Domestic/international cases. Simulations and projects. Micro/ mainframe computer applications. [Prereq: BA 340, BA 360, BA 370; business administration majors only; completion of all lower division core courses. Weekly: 4 hrs lect/disc.]
- BA 496S. Strategic Management [4] FS. Service learning course. This is a capstone experi ence course that integrates economic, financial, marketing, and management areas through the application of a strategic assessment of a local business. [Prereg: BA 210, BA 252, ECON 210, BA 340, BA 360, BA 370; business administration majors only; completion of all lower division core courses. Weekly: 4 hrs lect/ disc.]
- BA 499. Directed Study [1-4] FS. Research work. Open to advanced students with DA. [Rep.

#### CRADUATE

MBA 605. Strategic Sustainability Foundations (4) F. Introduction to frameworks supporting strategic sustainability. Topics include learning organizations, sustainability frameworks, business case for strategic sustainability, systems thinking tools, and examination of existing and emerging economic and management paradigms. [Prereq: undergreduate foundation courses in accounting economics, finance, and statistics; admission to MBA program.]

MBA 610, Research Methods [4] F. Fundamentals of designing a research project, assessing current research, managing large data sets, and

2015-2016 HUMBOLDT STATE UNIVERSITY CATALOG

📝 nuntainability-locumed; 🗐 nuntainability-related; activ activity, 🕅 may be concurrent; coreq corequinite[n]; CR/MC mandatory credit/no credit; CA dept approval

**Business Administration** 

## Screenshots from other CSU Campuses showing green leaf sustainability course indicators. (Cont'd)

## From <a href="http://pine.humboldt.edu/anstud/cgibin/filt\_schd.pl?relevant=./cschd/sched\_sustSpring.out">http://pine.humboldt.edu/anstud/cgibin/filt\_schd.pl?relevant=./cschd/sched\_sustSpring.out</a>

Spring 2016 Sustainability classes offered as of Friday, 03/25/2016 at 12:00 PM sched_sustSpring report generated: 25-MAR-16																
Class	#	Units	Notes*	Fee	Dates	Days	Time	Room	Instructor	Cap	Enr	Avail*	Wait Cap*	Wait Tot*	Sust*	Texts
ANTH 430 Queer Across Cultures	22805	4	IA			TR	15:00-16:50	NR_201	Berry,KL	5	1	4	99	0	SR	Texts
BA 340 Principles of Marketing	26932	4	IA			MW	09:00-10:50	SH_109	Sleeth-Keppler,DP	45	48	-3	99	0	SR	Texts
BA 340 Principles of Marketing	26938	4	IA			TR	15:00-16:50	SH_110	Sleeth-Keppler,DP	45	47	-2	99	0	SR	Texts
BA 340 Principles of Marketing	27211	4	IA			MW	13:00-14:50	SH_110	Ray Chaudhury,S	45	33	12	99	0	SR	Texts
BA 401 Adv Sustainable Mngmnt Apps	26943	4	IA			TR	13:00-14:50	SH_117	Lancaster,KA	48	45	3	99	0	SF	Texts
BA 494 Business and Society	26744	4	IA			TR	11:00-12:50	SH_109	Biteman,JH	40	41	-1	99	0	SR	Texts
BA 494 Business and Society	26745	4	IA			TR	15:00-16:50	SH_109	Biteman,JH	32	23	9	99	0	SR	Texts
BA 496 Strategic Management	26746	4	IA			MW	09:00-10:50	SH_116	Vizenor,NC	27	28	-1	99	0	SR	Texts
BA 496 Strategic Management	27576	4	IA			TR	09:00-10:50	SH_116	Vizenor,NC	27	27	0	99	0	SR	Texts
BA 496 Strategic Management	27939	4	IA			MW	15:00-16:50	SH_116	Gaines,CA	27	30	-3	0	0	SR	Texts
BOT 300 Plants & Civilization	25012	3	IA			MW	17:00-18:20	SCIB_135	Henkel,TW	120	106	14	99	0	SR	Texts

## From <a href="http://pine.humboldt.edu/anstud/cgi-">http://pine.humboldt.edu/anstud/cgi-</a>

## bin/filt schd.pl?relevant=./cschd/sched sustFall.out:

Fall 2016 Sustainability classes offered as of Tuesday, 05/17/2016 at 08:00 AM sched_sustFall report generated: 17-MAY-16																
Class	#	Units	Notes*	Fee	Dates	Days	Time	Room	Instructor	Cap	Enr	Avail*	Wait Cap*	Wait Tot*	Sust*	Texts
ANTH 315 Sex, Gender & Globalization	42280	4				TR	15:00-16:50	FR_107	Berry,KL	10	8	2	99	0	SR	Texts
ANTH 317 Women and Development	42725	4				MW	15:00-16:20	BSS_310		24	12	12	99	0	SR	Texts
							-	ONL					99	0	SR	Texts
ANTH 333 Primate Adaptation & Evolution	47004	4				MW	11:00-12:50	BSS_310	Ramsier,MA	24	24	0	0	0	SR	Texts
BA 340 Principles of Marketing	46132	4				TR	11:00-12:50	SH_110	Kordrostami,E	48	37	11	99	0	SR	Texts
BA 340 Principles of Marketing	46630	4				MW	15:00-16:50	SH_109	Kordrostami,E	48	21	27	99	0	SR	Texts
BA 340 Principles of Marketing	46631	4				TR	13:00-14:50	SH_110	Sleeth-Keppler,DP	48	35	13	99	0	SR	Texts
BA 379 Business Plan Development	46113	4				TR	09:00-10:50	SH_002	Vizenor,NC	23	20	3	99	0	SR	Texts
BA 470 Organization & Mgmt Theories	46122	4				MW	13:00-14:50	SH_110	Stumpf,TS	48	48	0	99	1	SR	Texts
BA 494 Business and Society	46115	4	below			TR	13:00-14:50	SH_115	Mortazavi,S	30	30	0	99	14	SR	Texts
BA 494 Business and Society	46116	4					-	ONL	Mortazavi,S	30	32	-2	99	10	SR	Texts
BA 496 Strategic Management	46774	4				MW	11:00-12:50	SH_115	Lane,M	30	33	-3	99	14	SR	Texts

## Academic Senate Sustainability Committee

Sustainability Learning Objectives Assessments Fall 2011 – 2013

This report briefly summarizes pilot assessment activities for Cal Poly's Sustainability Learning Objectives (SLOs) carried out by members of the Academic Senate Sustainability Committee (ASSC) from Fall 2011 to Spring 2013. The committee seeks one or more instruments to establish baseline SLOs assessment and track subsequent progress. The ASSC considered and employed assessment options including in-class pop quizzes, in-class assignments, homework questions, exam questions, and surveys administered outside of class.

Each method offers advantages and disadvantages. Using existing class assignments or exam questions reduces the amount of overhead required to administer and evaluate results, adding just additional reporting and data analysis. Existing assignments may apply to a limited student cohort, unless the class fulfills a General Education requirement. Out-of-class surveys may engage a greater variety of students from across campus, but they add more administration and evaluation overhead than an already existing assignment requires.

Daniel Levi describes his studies in the attached draft report titled *Evaluating Sustainability on the Cal Poly Campus: Knowledge, Attitudes, Behaviors and Social Norms of Students* by Daniel Levi & Rebecca Sokoloski, 2013.

Appendices A-F on pp. 10–17 contain data summaries for various assessments piloted so far. Appendix A contains results from a group effort survey generated by the ASSC. Katie Tool administered the survey online to volunteers attracted by email solicitations distributed by committee members to students in various classes. Bob Echols and David Braun scored the results and required several iterations to develop the rubric in Appendix A before reaching at least 90% inter-rater agreement. In Appendix B, Norm Borin's assessment data from BUS 346 Introductory Marketing measure how well students incorporate sustainable marketing ideas for the product/service selected for their class projects. Appendix C has Scott Kelting's CM 311 Residential Construction Management data from in-class exams. Appendix D has two Electrical Engineering class assessments from David Braun. The EE 460 Senior Project Preparation (Fall 2011) assignment had students analyze sustainability and environmental issues in their Senior Projects, and the EE 306 Semiconductor Device Electronics (Fall 2011) assignment had students analyze sustainability issues in the corresponding electronics lab course. Appendix E contains Bob Echols assessment data from Physics 133 Electricity, Magnetism, and Electric Circuits (F10) and Physics 132 General Physics II (Waves, Thermo, Optics) (S12). Appendix F contains Jesse Vestermark's assessment of Kennedy's College Librarians' history of incorporating sustainable themes into their one-shot instruction sessions.

Appendix A -- Sustainability Survey Results March-April, 2013.

1. What is your major?

Count	Response
1	Aerospace Engineering
1	Animal Science
1	Anthropology/geography
2	Architecture
2	Art and Design
1	Biochemistry
1	Biological Sciences
<u>5</u> 5	Business
	Business Administration
1	City and Regional Planning
4	Civil Engineering
1	Communication Studies
2	Computer Science
16	Construction Management
2	Economics
4	Electrical Engineering
1	English
1	Environmental Engineering
1	Environmental Management and
	Protection
1	General Engineering
1	Landscape Architecture
7	Mechanical Engineering
1	Physics
1	Political Science
4	Psychology
1	Recreation, Parks, and Tourism
1	chemistry
1	kinesiology
1	statistics

## 2. What is your college?

Value	Count	Percent
College of Agriculture, Food and Environmental Sciences	3	4.2%
(CAFES)		
College of Architecture and Environmental Design (CAED)	20	28.2%
Orfalea College of Business (OCOB)	12	16.9%
College of Engineering (CENG)	20	28.2%
College of Liberal Arts (CLA)	10	14.1%
College of Science and Mathematics (CSM)	6	8.5%

#### Appendix A -- Sustainability Survey Results March-April, 2013. (Continued)

#### 3. Write an excellent definition of sustainability.

- a. 0 points if misses sustainability all together
- b. 2 point for a vague definition related to sustainability, covering a single dimension or discipline.
- c. 4 points for a clear definition of sustainability, covering a single dimension or discipline; or vague definition covering multiple dimensions or disciplines.
  d. 6 points for a clear definition of sustainability, covering multiple dimensions or disciplines; or a clear definition close to either the Brundtland definition, Euston and Gibson definition, McDonough & Braungart definition, Cal Poly definition or another accepted definition.

Brundtland	Sustainability allows people to meet the needs of the present generation without compromising the ability of future generations to meet their own needs.
Euston & Gibson	Sustainability describes a condition in which natural systems and social systems survive and thrive together indefinitely
McDonough & Braungart	"Design systems that love all the children of all species for all time" or "The goal is a delightfully diverse, safe, healthy, and just world, with clean air, soil, water, and power, economically, equitably, ecologically, and elegantly enjoyed."
Cal Poly	The ability of natural and social systems to survive and thrive together to meet current and future needs.

If in doubt about whether to assign one score or the next even one, assign the odd number in between.

#### Student

Scores	Percent
0	7.0
1	9.2
2	29.6
3	12.7
4	26.8
5	7.0
6	7.7

#### 4. Describe how you expect to further sustainability after you graduate from Cal Poly.

- a. 0 points does not reduce ecological footprint
- b. 1 point reduces ecological footprint in traditional ways (e.g. recycling, biking to work, taking public transportation, etc.)
- c. 2 point reduces ecological footprint in non-traditional ways (e.g. influence others to be more sustainable)
- d. 3 points defines sustainability career plan

#### Student

Scores	Percent
0	13.5
1	37.6
2	2.1
3	46.8

Appendix B -- From Norm Borin BUS 346 Introductory Marketing I did not formally teach many sustainable marketing concepts this quarter but did require students to propose some sustainable marketing ideas for the product/service they selected for their project. I would not expect many to achieve a high level.

Student included no or a	Students inclusion of	Students included well
weak description of	sustainable marketing mix	thought out sustainable
sustainable marketing mix	ideas were moderate and	marketing mix ideas for
strategies for their	reflected some thought and	their product/service. Some
product/service	understanding.	critical thought and research
	Sustainability ideas were	were clearly put into it. The
	limited across the mix	report included green
	categories	concepts into multiple
		marketing mix categories
33	29	4

Students included well thought out sustainable marketing mix ideas for their product/service. Some critical thought and research were clearly put into it. The report included green concepts into multiple	Students inclusion of sustainable marketing mix ideas were moderate and reflected some thought and understanding. Sustainability ideas were limited across the mix categories	Student included no or a weak description of sustainable marketing mix strategies for their product/service
marketing mix categories	categories	
4	29	33

Appendix C -- From Scott Kelting CM 311 Residential Construction Management

Question Prompted	% of Correct
-	Responses
A low-lying, shallow, orten marshy depression artificially created during finish grade to aid water drainage in flat areas.	41%
A sediment control that captures sediment from stormwater runoff before it has a chance to leave the jobsite.	45%
The leakage of liquid or gas out of a contained space through small gaps; caused by pressure differences inside and outside of the space.	77%
A program backed by the U.S. government that helps businesses and individuals protect the environment through superior energy efficiency.	68%
Published and maintained by the ICC as the IECC, contains energy efficiency criteria for new residential commercial buildings and additions to existing buildings.	82%
Permit program that controls water pollution by regulating point sources that discharge pollutants into waters of the United States.	64%
Enacted in 1972, amended in 1977, regulates all discharges of pollutants into waters of the United States.	100%
A comprehensive program or plan prepared by MS4 to manage the quality of stormwater discharges.	91%
A rating of heating efficiency of a heat pump.	79%
A measurement of heating output in BTUs.	58%
An efficiency rating for air conditioners and heat pumps; compares the amount of electricity consumed to the number of BTUs in cooling delivered; the higher the number, the more energy-efficient the unit.	57%
A combined heating and cooling system; provides cooling by removing heat from the home and transferring it to the exterior, and it provides heating by removing heat from an external source and transferring it to the home.	54%

Appendix D – Electrical Engineering

From Braun EE 460 Senior Project Preparation (Fall 2011)

Analyze the sustainability and environmental issues associated with your senior project plan.

Max	10
possible	
average	6.84
median	8.00
stdev	2.03
N	22
0-4	4
4-6	3
6-8	16
8-10	6

From Braun EE 306 Semiconductor Device Electronics (Fall 2011)

Analyze sustainability issues associated directly or indirectly with your EE 346 experiment 4, 5, 7, or 8 (http://courseware.ee.calpoly.edu/~dbraun/courses/ee306/SustainabilityAnalysis.html)

Max	30
possible	
average	24.16
median	24.50
stdev	3.02
N	61
0-18	3
18-22	10
22-26	34
26-30	29

Appendix E -- Echols Physics 133 Electricity, Magnetism, and Electric Circuits (F10)

- A Write one or two definitions of sustainability. (SLO1)
- B) Explain several ways you could consider sustainability principles while navigating your career. (SLO4)

Score	Ques.	Ques.
	Α	В
0	8	8
1	28	12
2	11	10
3		15
4		2
5		
Avg	1.06	1.81
Total	47	47

Echols & Schwartz Physics 132 General Physics II (Waves, Thermo, Optics) (S12)

- A) Write one or two definitions of sustainability. (SLO1)
- B) Explain several ways you could consider sustainability principles while navigating your career. (SLO4)

Score	Ques.	Ques.
	Α	В
0-0.99	1	1
1-2	26	10
2-3	13	15
3-4	1	8
4-5	0	4
5-6	0	2
6-7	0	1
7-8		
Avg	1.48	2.38
Total	41	41

#### Appendix F -- From Jesse Vestermark

Here is my mini-assessment of Kennedy's College Librarians' history of incorporating sustainable themes into their one-shot instruction sessions. I was only able to survey 4 out of our 7 instructional librarians (including myself) since two are brand new and two have been out on sick leave. Still, I hope this contributes in some small way to a baseline assessment. I asked three questions and left a comment box at the end, with two comments submitted. Thanks for initiating this.

- 1. In general, I incorporate environmentally sustainable topics into my library instruction (either by faculty, student or my own choice) the following amount
  - not at all: 3
  - touch on them when possible (example: demo a search on a sustainable topic): 1
  - promote them when possible (example: describe the importance of and demo a search on a sustainable topic): 0

2. I amthe freedom to do so:		
<ul><li>not: 0</li><li>somewhat: 2</li><li>very: 2</li></ul>		
3. When performing cosustainable issues.	ollection development, I	seek out resources that address
novor: 0		

never: 0sometimes: 4often: 0

often: 0always: 0

#### 4. Comments:

This is not something I had previously considered except where sustainability is a part of the students' course.

I honestly do not think about sustainability in terms of information literacy.

## **DRAFT**

# **Evaluating Sustainability on the Cal Poly Campus: Knowledge, Attitudes, Behaviors and Social Norms of Students**

by

Daniel Levi & Rebecca Sokoloski
Psychology and Child Development Department
Cal Poly, San Luis Obispo

Paper written for publication in FOCUS

#### INTRODUCTION

Sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (UN Commission on Environment and Development, 1987). Sustainability creates the potential for long-term maintenance of human well-being, which has environmental, economic, and social dimensions. Environmental problems threaten our economic and social well-being. Change has to be seen as desirable, about creating a better future. It will not occur by threatening people with ecological doom, but by promoting positive attitudes toward sustainability (Porritt, 2005).

Since 2004, Cal Poly has been a signatory of the Tallories Declaration, which is a tenpoint plan to promote sustainability and environmental literacy in teaching, theory, and practice at universities. The plan's components include increasing awareness of sustainable development, educating for environmentally responsible behavior, fostering environmental literacy, and practicing institutional ecology.

The University has developed a set of Sustainability Learning Objectives for students. Cal Poly students should be able to: "1. Define and apply sustainability principles within their academic programs; 2. Explain how natural, economic, and social systems interact to foster and prevent sustainability; 3. Analyze and explain local, national, and global sustainability using a multidisciplinary approach; and 4. Consider sustainability principles while developing personal and professional values." (Cal Poly, 2013).

Cal Poly has undertaken a variety of actions in order promote sustainability. The management of the campus's physical environment has made major changes to improve sustainability, with expanded recycling and water conservation programs, energy and resource use audits, solar panels, and LEED certified new buildings. There are over 100 courses offered at Cal Poly that address sustainability issues, and 12 University minors focus on sustainability, including the Sustainable Environments Minor in the School of Architecture.

Students are not currently required to take a sustainability class (although this is under consideration by the University). However, the Green Campus Program works with student clubs, such as the Empower Poly Coalition, to promote sustainability knowledge and practices among students. Sustainability education and awareness programs are part of freshmen orientation. Programs in the dorms promote awareness of sustainability issues on campus, such as water use, transportation, energy use, and recycling. Sustainable behaviors are encouraged through programs such as the Red Brick Energy Competition among the dorms.

Cal Poly's efforts to promote sustainability have received a number of awards. In 2012 alone, Cal Poly received Best Practice Awards for water efficiency, innovative sustainability mentor program, and student sustainability program by the California Higher Education Sustainability Conference (Cal Poly, 2013).

#### **Assessing Student Sustainability**

Cal Poly has the goal of promoting sustainability. Part of this goal is to encourage the students to become more knowledgeable about sustainability issues and to act in a more sustainable manner. How does a university promote sustainability among its students? Should the focus be on increasing knowledge about sustainability or promoting sustainable behaviors? What are the appropriate measures to evaluate whether Cal Poly is successful? These are questions facing the University.

As a university, it is obviously important that Cal Poly focuses on teaching students about sustainability. Cal Poly's Sustainability Learning Objectives focus on the development of knowledge about sustainability and its application. Knowledge about sustainability is a necessary but not sufficient condition for encouraging sustainable behaviors. Research shows that there is a weak link connecting sustainability knowledge, attitudes and behaviors (Gifford, 2007). This is

why university programs also need to focus on the students' attitudes and behaviors toward sustainability.

Environmental psychologists have examined the relationship between knowledge, attitudes, and behavior about sustainability (Gifford, 2007). In addition to awareness and knowledge, performing sustainable behaviors relates to attitudes about sustainability, behavioral control (or how difficult is the behavior to perform), and social norms (the attitudes and behaviors of important other people in one's life) (Ajzen, 1991). For university students, social norms come from one's family, friends or peers, and professors.

The University has undertaken a variety of actions to improve its ecological footprint and to promote sustainability among the students. It is important to assess how well the University is performing in order to provide feedback to improve. The changes in the University's physical operations are regularly assessed using STARS (Sustainability Tracking, Assessment and Rating System). The University has identified the need to develop a better assessment system for examining whether it is meeting its Sustainability Learning Objectives. Our research was conducted to help examine some approaches to doing this and to see how well Cal Poly is doing promoting sustainability among the students.

#### **METHODS**

In order to assess Cal Poly students' knowledge, attitudes, and behaviors toward sustainability, my students and I have conducted several studies. These studies have been part of class projects in my Environmental Psychology class and Rebecca's senior project. The first study examined knowledge about sustainability with the open-ended question "What does sustainability mean to you?" It also pretested an attitude rating scale about the impact of sustainability on self and society. Over 140 students from General Education (GE) classes and the dorms participated in the study. In the second study, which was a senor project, over 100 students from GE classes completed a survey on sustainability attitudes, behaviors, and social norms. In both studies, the sample included students from a variety of majors and class levels.

#### **RESULTS**

Knowledge about sustainability was examined from the responses to the question "What does sustainability mean to you?" Two judges classified the responses into six issues related to

sustainability. A response could relate to more than one topic. (See Table 1 for the results.)

Although most students emphasized the conservation of energy and resources and concern about the future, only a minority of students recognized the economic and social implications of sustainability.

Table 1: Meaning of Sustainability		
	Percent	
Energy conservation and resource use	63%	
Concern about future generations	32%	
Sustainable economics and social justice	21%	
Protection of natural areas and wildlife	18%	
Reducing pollution	15%	
Managing human population growth	7%	

The attitude survey asked the students to consider the impacts of our society's shift toward sustainability on their personal life, society and the world. Attitudes toward sustainability were measured on a five-point scale from very negative to very positive. Table 2 presents the percent of positive responses (a 4 or 5 rating). Overall, the students had positive attitudes toward sustainability. They were more positive about the effects of sustainability on society and the world than the personal impacts of sustainability. There were not significant differences related to major, class level, or gender.

Table 2: Attitudes toward Sustainability				
	Percent Positive			
What is the impact of sustainability on these aspects of your life?				
Life satisfaction	77%			
Your career	67%			
Your health & well-being	94%			
Your friendships	41%			
What is the impact of sustainability on our society and world?				
Next generation	91%			

Quality of local communities	90%
U.S. economy	62%
Natural environments	90%
Overall view of sustainability	90%

Students also rated how often they engage in sustainable behaviors. The selection of behaviors was designed to be available to Cal Poly students, even those living on campus. Table 3 presents the results for the behaviors that student usually or always perform (which were 4 and 5 on a five-point scale that ranged from never to always). As can be seen from the table, the frequency of behaviors varied substantially among the topics. Students were good at doing laundry with full loads, using stairs, and recycling, but were less likely to take sustainability classes or participate in campus sustainability activities.

Table 3: Sustainable Behaviors

	Percent Usually or Always
Wash laundry only with full load	94%
Use stairs rather than elevators in library	89%
Recycle newspaper, glass or plastic bottles	78%
Consume beverages in reusable bottles	67%
Use both sides of paper when printing	63%
Conserve water by taking shorter showers	26%
Use reusable bags when shopping	24%
Take a class about sustainability	17%
Buy organic or local vegetables	16%
Participate in campus sustainability activities	8%

Students were asked about the sustainability attitudes and behaviors of groups that may provide social norms for evaluating their behaviors. Attitudes were measured on a five-point scale from very negative to very positive. The results on Table 4 present the sum of positive and very positive attitudes (4 or 5 on the scale). The frequency of sustainable behaviors was measured on a five-point scale from never to always. The results on Table 4 present the sum of

usually and always (4 or 5 on the scale). Table 4 also contains the correlations of these social norm ratings with the students' sustainability attitudes and behaviors.

The results show that the majority of the students' social groups had positive attitudes toward sustainability and over half of them frequently engaged in sustainable behaviors. The attitudes of friends and family were significantly related to both sustainability attitudes and behaviors. The behaviors of friends, peers, and professors were significantly related to both sustainability attitudes and behaviors. In general, friends were the most important social norm group and sustainability behaviors were more strongly related to social norms than attitudes. It is interesting to note that it is the sustainability behaviors of professors, and not their attitudes, that had a significant impact on student attitudes and behaviors.

Table 4: Social Norms			
	Percent Positive	Attitude	Behavior
		Correlation	Correlation
How do the following groups			
view sustainable practices?			
Friends	71%	.27*	.31**
Family	70%	.30**	.29**
Peers	72%	.25*	.16
Professors	75%	.15	.15
	Percent Frequency	Attitude	Behavior
		Correlation	Correlation
How often do the following groups			
engage in sustainable practices?			
Friends	61%	.24*	.36**
Family	71%	.11	.13
Peers	52%	.24*	.27**
Professors	55%	.21*	.27**
* p<.05 ** p<.01			

Background information about the students allowed for an analysis of the effects of being at Cal Poly on sustainability attitudes and behaviors. It should be noted that because this sample was collected in the spring quarter, all of the participants have been exposed to the Cal Poly educational experience. There were no significant differences related to major or gender. Although the upperclassmen had more sustainability knowledge, attitudes, and behaviors, only the difference in sustainability behaviors was significant and it was not very large.

#### CONCLUSIONS

This research presents an assessment of the sustainability knowledge, attitudes, and behaviors of Cal Poly students. Students recognized the environmental aspects of sustainability, but often do not acknowledge the economic and social aspects of sustainability. They had positive attitudes toward sustainability and believed our society's transition to a sustainable future will be good for society, but they were less certain of its benefits to their life and careers. The students performed many environmentally responsive activities, but few were taking classes on sustainability or engaging in campus sustainability activities. The norms of the people in the students' lives were positive, but positive attitudes were more prevalent than positive behaviors. The attitudes and behaviors of their friends had a significant impact on students' willingness to engage in sustainable behaviors.

There were few differences among students related to major or class level. This is a problem because if Cal Poly was having a positive effect on students, then there should be a more substantial effect due to class level. (This may be due to the fact that the only widespread sustainability education program on campus is aimed at freshmen in the dorms.) Cal Poly needs to do a better job showing students how sustainability will have a positive impact on their careers and the economy. Students view their professors as having a positive attitude about sustainability, but mixed enactment of sustainable behaviors. However, it is faculty behavior, and not attitudes, that had a significant impact on students' attitudes and behaviors.

The University environment provides an important setting for promoting sustainable behaviors. Psychological research on sustainability shows that one of the most important predictors of sustainable behaviors is other sustainable behavior (Gifford, 2007). Once people get in the habit of performing some sustainable behaviors, it is easier to persuade them to perform other sustainable behaviors. And, their sustainable behaviors encourage others through the

influence of social norms. The University has the opportunity to promote sustainable behaviors and have the impact of those efforts expanded through the effects of social norms.

University sustainability programs need to be assessed in order to demonstrate their effectiveness and provide feedback to improve the programs. Cal Poly has only begun to evaluate its sustainability educational experience and its effects on students' knowledge, attitudes and behaviors. The assessment system is still under development. Although measures of sustainability knowledge and the ability to think critically about sustainability issues are important, assessment approaches should not overlook the importance of sustainability attitudes and behaviors. We want to have students who are knowledgeable about sustainability, but we need them to be willing to act in a sustainable manner.

We wish to thank the following students for their help with this research: Lacey Buck, Victoria Carranza, Amanda Purser, and Cassandra Walker.

#### REFERENCES

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211.

UN Commission on Environment and Development. (1987). *Our Common Future*. Oxford paperbacks.

Cal Poly (2013). Sustainability. Retrieved at www.sustainability.calpoly.edu.

Porritt, J. (2005). Capitalism as if the World Matters. Oxford: Earthscan Publications.

Gifford, R. (2007). Environmental Psychology, 4<sup>th</sup> edition. Colville WA: Optimal Books.

## Sustainability ClubsFall 2015 V2.xlsx

## **Clubs provided by Dennis Elliot**

Empower Poly Coalition Zero Waste Club Society of Environmental Engineers Power Save Green Campus

#### **Environmental Clubs**

(ISO) Alpha Omega Epsilon

Design Village Conference

Forestry Honor Society

**Future Fuels** 

International Student Volunteers Club

Materials Engineering Student Societies

Net Impact

Poly Permaculture

**PolyPonics** 

Social Science Club

Society of American Foresters

Society of Environmental Engineers

Student Association for Fire Ecology

Surfrider, Cal Poly

Wildlife Club, Cal Poly

Zero Waste

## **Potential Sustainability Clubs**

**AIESEC** 

Air Conditioning & Refrigeration

Alpha Kappa Psi Professional Business Fraternity

Alpha Phi Omega (Community Service Fraternity)

Architecture and Environmental Design Student

Council

Biomedical Engineering Society

Chi Epsilon Honor Society

**Environmental Sciences Club** 

Rho Phi Lambda

Systems Optimization Club

## **Potential Sustainability Clubs**

Cal Poly Real Food Collaborative/Cooperative

## ASSC Meeting April 5, 2016 20-206 (1:10-2:00 pm)

Committee Members (and designations)

Name	Dept.	College/ Unit	Exp. Term/ Other	Present
Borin, Norm	Marketing	OCOB	2016	
Braun, David (Ch)	ElecEngr	CENG	2016	Y
Fernsler, Jonathan	Physics	CSM	2016	
Reich, Jonathan	Arch	CAED	2017	
Levi, Daniel	Psyc&CD	CLA	2016	
Tubeileh, Ashraf	HCS	CAFES	2017	
Vestermark, Jesse	Library	PCS	2017	Y
Elliot, Dennis	Fac. Serv.	Assoc. Dir. E&U	Ex Officio	Y
Moloney, Julie	Fac.Plan	Admin	Ex Officio	Y
Lin, Nelson	Student	ASI	Ex Officio (ASI)	
Sobouti, Kaelan	Student	ASI	Ex Officio (ASI)	Y
Tool, Katie	AcadProg	Admin	Ex Officio	
Bennett, Penny	GrC	Provost	Ex Officio	
Greenwald, Harvey	Math	Guest		
Francis, Hunter	CFS	Guest		
Singh, Kylee	Fac. Serv.	Guest		Y
Young, Trey	Student	Guest		

#### Cal Poly Sustainability Learning Objectives:1

Cal Poly defines sustainability as the ability of the natural and social systems to survive and thrive together to meet current and future needs. In order to consider sustainability when making reasoned decisions, all graduating students should be able to:

- Define and apply sustainability principles within their academic programs
- Explain how natural, economic, and social systems interact to foster or prevent sustainability
- Analyze and explain local, national, and global sustainability using a multidisciplinary approach
- Consider sustainability principles while developing personal and professional values

Academic Senate Resolution 688-09 approved by President Baker June 22, 2009

<sup>&</sup>lt;sup>1</sup> www.academicprograms.calpoly.edu/content/academicpolicies/sustainability\_lo

#### ASSC Committee Charges for 2015-16:2

- Respond to AS-787-14
  - 1. Produce a list of courses meeting at least two SLOs.
    - GE Courses reviewed by ASSC and sent to AS Consent Agenda 5-01-15
    - Other course review began. OCOB & CLA completed.
  - 2. Encourage faculty to teach sustainability in new and existing courses (new)
  - 3. Work with the CTLT to provide support for faculty seeking to teach classes involving sustainability (new)
    - Helen Cox (CSUN), Jillian Buckholz (CSUEB), Jim Pushnik (CSU Chico), Long Beach, Pomona, Fullerton, SFSU (Caitlin Steele), Meaghan Smith (CSU Chancellor's Office) (Living Lab), Tall Chief Comet (Humbolt)
    - John Farnsworth (Santa Clara U)
    - Carina Anttila-Suarez (Skyline College), Stephen Miller (Deputy Director, Strategic Energy Innovations)
    - Jonathan Reich & Joe Ragsdale, Art MacCarley, Steve Marx, Ryan Alaniz (Cal Poly) – need to extend this list. Linda Vanasupa (SUSTAIN SLO), Hunter Francis (CFS)
    - Identify funding sources.
- Develop procedure to identify sustainability courses in catalog (new)
  - Report on case studies from other universities.
- Respond to 2014 CSU Sustainability Policy directives. (new)
  - 1. "The CSU will seek to further integrate sustainability into the academic curriculum working within the normal campus consultative process.
  - 2. The CSU will develop employee and student workforce skills in the green jobs industry, promote the development of sustainable products and services, and foster economic development."
    - Joint meeting with SAC took place on 12-03-2015...

Continue assessing SLOs. Prepare and deliver report.

- Work with students to better integrate approaches to sustainability inside and outside the classroom/curriculum.
  - Consider new course(s).
  - Work with PowerSave Green Campus students in facilities.
  - List student clubs active in sustainability.
- Promote/extend the Green Campus/AASHE STARS Certification.
  - 1. Assist data collection efforts for academic STARS credits.
    - Retain SUSCAT review documentation in a form we can use for STARS.
- Make recommendations regarding the role of sustainability in the University's strategic plan/master plan/action plan.
  - Do we consult with Linda Dalton?
  - Assist with campus-wide sustainability Charrette, jointly with SAC.
  - Set up a green funding program (TGIF) and carbon credits.
- Work with GEGB to develop sustainability pathways in GE.
  - Added by ExCom on 11-04-14.
  - Discussed SUSCAT GE Courses on 5-22-15

<sup>&</sup>lt;sup>2</sup> www.academicsenate.calpoly.edu/content/acadsen\_comm/sustainability

#### **Spring Quarter Meeting Schedule:**

```
Tuesday, April 5 (1:10 – 2 pm, 20A-206)
Tuesday, April 12 (1:10 – 2 pm, 20A-206)
Tuesday, April 26 (1:10 – 2 pm, 20A-206)
Tuesday, May 3 (1:10 – 2 pm, 20A-206)
Tuesday, May 17 (1:10 – 2 pm, 20A-206)
Tuesday, May 31 (1:10 – 2 pm, 20A-206)
```

The meeting came to order at 1:15 p.m.

- 1. Discussion took place regarding the draft flyer for the May 6 workshop with the CTLT by John Farnsworth from Santa Clara University regarding how add a sustainability component to existing courses.
- 2. Discussion took place regarding President Armstrong giving a green light for the campus to move forward with the Second Nature Climate Commitment, the AASHE/STARS certification, and the April 29 Sustainability Charrette.
  - a. For the Second Nature Climate Commitment, the next step involves actually signing the Commitment.
  - b. For AASHE/STARS certification, Kylee Singh has started the application process.
  - c. More discussion took place regarding the April 29 Sustainability Charrette. See next item.
- 3. The April 29 Sustainability Charrette has presentations and breakout sessions scheduled from 8 a.m. to 5 p.m., with the ATL as the designated location. Speakers include Elvyra "Vy" San Juan from the Chancellor's Office, Fletcher Alexander from CSU Chico, Jillian Buckholz from CSU East Bay, Helen Cox from CSU Northridge, and Dennis Elliot. The Charrette aims to share best practices from across the CSU and help Cal Poly advance its Sustainability programs and more effectively address Climate Change. Discussion took place regarding which Academic Senate and University Committees could best participate in the Charrette.

The meeting adjourned at 1:51 p.m.

#### **Attachments:**

none

### ASSC Meeting April 12, 2016 20-206 (1:10-2:00 pm)

Committee Members (and designations)

Name	Dept.	College/ Unit	Exp. Term/ Other	Present
Borin, Norm	Marketing	OCOB	2016	
Braun, David (Ch)	ElecEngr	CENG	2016	Y
Fernsler, Jonathan	Physics	CSM	2016	Y
Reich, Jonathan	Arch	CAED	2017	Y
Levi, Daniel	Psyc&CD	CLA	2016	
Vacant		CAFES	2017	
Vestermark, Jesse	Library	PCS	2017	Y
Elliot, Dennis	Fac. Serv.	Assoc. Dir. E&U	Ex Officio	Y
Moloney, Julie	Fac.Plan	Admin	Ex Officio	
Lin, Nelson	Student	ASI	Ex Officio (ASI)	
Sobouti, Kaelan	Student	ASI	Ex Officio (ASI)	
Tool, Katie	AcadProg	Admin	Ex Officio	
Bennett, Penny	GrC	Provost	Ex Officio	Y
Greenwald, Harvey	Math	Guest		Y
Francis, Hunter	CFS	Guest		
Singh, Kylee	Fac. Serv.	Guest		Y
Young, Trey	Student	Guest		

#### Cal Poly Sustainability Learning Objectives:<sup>3</sup>

Cal Poly defines sustainability as the ability of the natural and social systems to survive and thrive together to meet current and future needs. In order to consider sustainability when making reasoned decisions, all graduating students should be able to:

- Define and apply sustainability principles within their academic programs
- Explain how natural, economic, and social systems interact to foster or prevent sustainability
- Analyze and explain local, national, and global sustainability using a multidisciplinary approach
- Consider sustainability principles while developing personal and professional values

Academic Senate Resolution 688-09 approved by President Baker June 22, 2009

<sup>&</sup>lt;sup>3</sup> www.academicprograms.calpoly.edu/content/academicpolicies/sustainability\_lo

#### ASSC Committee Charges for 2015-16:4

- Respond to AS-787-14
  - 1. Produce a list of courses meeting at least two SLOs.
    - GE Courses reviewed by ASSC and sent to AS Consent Agenda 5-01-15
    - Other course review began. OCOB & CLA completed.
  - 2. Encourage faculty to teach sustainability in new and existing courses (new)
  - 3. Work with the CTLT to provide support for faculty seeking to teach classes involving sustainability (new)
    - Helen Cox (CSUN), Jillian Buckholz (CSUEB), Jim Pushnik (CSU Chico), Long Beach, Pomona, Fullerton, SFSU (Caitlin Steele), Meaghan Smith (CSU Chancellor's Office) (Living Lab), Tall Chief Comet (Humbolt)
    - John Farnsworth (Santa Clara U)
    - Carina Anttila-Suarez (Skyline College), Stephen Miller (Deputy Director, Strategic Energy Innovations)
    - Jonathan Reich & Joe Ragsdale, Art MacCarley, Steve Marx, Ryan Alaniz (Cal Poly) – need to extend this list. Linda Vanasupa (SUSTAIN SLO), Hunter Francis (CFS)
    - Identify funding sources.
- Develop procedure to identify sustainability courses in catalog (new)
  - Report on case studies from other universities.
- Respond to 2014 CSU Sustainability Policy directives. (new)
  - 1. "The CSU will seek to further integrate sustainability into the academic curriculum working within the normal campus consultative process.
  - 2. The CSU will develop employee and student workforce skills in the green jobs industry, promote the development of sustainable products and services, and foster economic development."
    - Joint meeting with SAC took place on 12-03-2015...

Continue assessing SLOs. Prepare and deliver report.

- Work with students to better integrate approaches to sustainability inside and outside the classroom/curriculum.
  - Consider new course(s).
  - Work with PowerSave Green Campus students in facilities.
  - List student clubs active in sustainability.
- Promote/extend the Green Campus/AASHE STARS Certification.
  - 1. Assist data collection efforts for academic STARS credits.
    - Retain SUSCAT review documentation in a form we can use for STARS.
- Make recommendations regarding the role of sustainability in the University's strategic plan/master plan/action plan.
  - Do we consult with Linda Dalton?
  - Assist with campus-wide sustainability Charrette, jointly with SAC.
  - Set up a green funding program (TGIF) and carbon credits.
- Work with GEGB to develop sustainability pathways in GE.
  - Added by ExCom on 11-04-14.
  - Discussed SUSCAT GE Courses on 5-22-15

<sup>&</sup>lt;sup>4</sup> www.academicsenate.calpoly.edu/content/acadsen\_comm/sustainability

#### **Spring Quarter Meeting Schedule:**

```
Tuesday, April 5 (1:10 – 2 pm, 20A-206)

Tuesday, April 12 (1:10 – 2 pm, 20A-206)

Tuesday, April 26 (1:10 – 2 pm, 20A-206)

Tuesday, May 3 (1:10 – 2 pm, 20A-206)

Tuesday, May 17 (1:10 – 2 pm, 20A-206)

Tuesday, May 31 (1:10 – 2 pm, 20A-206)
```

The meeting came to order at 1:15 p.m.

- 1. The committee approved minutes from the February 22, March 8, and April 5 meetings.
- 2. Discussion took place regarding the SUSCAT course review.
  - a. The attached spreadsheet summarizes the current status of the review for all colleges other than CAFES. College representatives should upload to the ASSC PolyLearn site the rubric Excel spreadsheets for all Maybe and Yes courses in their college completed since Spring 2015.
  - b. We aim to submit a list of courses to add to SUSCAT before the Academic Senate's May 2 deadline for submitting items for consideration this year.
  - c. Since several ASSC committee members face difficulty locating generic expanded course outlines containing course topics and detailed student learning outcomes, the committee liked a suggestion made to bring this to the attention of the Academic Senate Curriculum Committee.
- 3. Discussion took place regarding the Resolution on Adding a Sustainability Catalog Option to Pass (Plan A Student Schedule).
  - a. The committee liked a suggestion made to add a whereas clause about the Sustainability Learning Objectives Resolution.
  - b. The committee like a suggestion to show a mockup of what a PASS screen might look like after adding the Show SUSCAT Sustainability Classes option.
  - c. The attached version of the resolution reflects these changes.
- 4. Discussion took place regarding the May 6 workshop with the CTLT by John Farnsworth from Santa Clara University regarding how add a sustainability component to existing courses.
- 5. Discussion took place regarding the revised program for the April 29 Sustainability Charrette. The event seeks to benefit both Cal Poly as a thriving system and empower the various stakeholders.

The meeting adjourned at 2:00 p.m.

#### **Attachments:**

SUSCAT\_Courses\_Total\_April\_2016.xls res\_PASS\_SUSCAT\_optionV5.docx

## Adopted:

# ACADEMIC SENATE of CALIFORNIA POLYTECHNIC STATE UNIVERSITY San Luis Obispo, CA

## **AS-** -16

## RESOLUTION ON ADDING A SUSTAINABILITY CATALOG OPTION TO PASS (PLAN A STUDENT SCHEDULE)

1 2 3	WHEREAS,	Resolution AS-688-09 "Resolution on Sustainability Learning Objectives", defines Cal Poly's Sustainability Learning Objectives; and
4 5 6 7	WHEREAS,	Resolution AS-787-14 "Resolution on Sustainability", directs the Academic Senate Sustainability Committee to develop a list of classes based on a revised Senate accepted assessment process that meet the Sustainability Learning Objectives; and
8 9 10 11 12	WHEREAS,	Resolution AS-792-15 "Resolution on Approving Assessment Process for Courses Meeting Sustainability Learning Objectives", identifies the process used to identify courses listed in the Sustainability Catalog (SUSCAT) now found online at http://suscat.calpoly.edu/; and
13 14 15	WHEREAS,	The Spring 2016 PASS webpage offers an option to "Show Fully Online Classes," although students do not have to take online classes to graduate; and
16 17 18 19	WHEREAS,	The 2014 CSU Sustainability Policy states, "The CSU will seek to further integrate sustainability into the academic curriculum working within the normal campus consultative process;" and
20 21 22	WHEREAS,	Other CSU campuses use systems to visually identify sustainability courses in their course catalogs or online registration systems; and
23 24 25	WHEREAS,	The Second Nature Climate Commitment and the AASHE/STARS programs include curriculum components; therefore be it
26 27 28 29	RESOLVED:	That the Academic Senate recommends adding to PASS (Plan a Student Schedule) a "Show Sustainability Classes" option to the Select Course List tab on http://pass.calpoly.edu/main.html. The attached mockup in Figure 1 shows what students could see on a PASS screen.

Proposed by: Sustainability Committee

Date: April 12, 2016

Revised:

## quarterly\_SC S16.docx

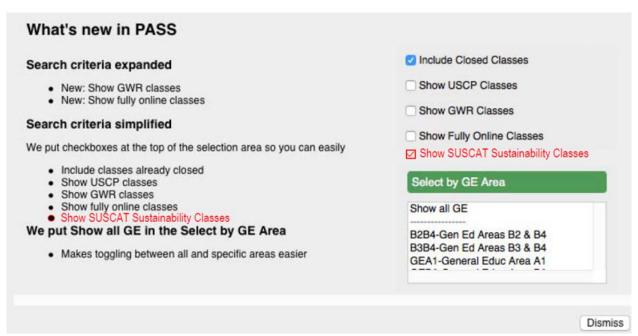


Figure 1—Concept showing how PASS could identify SUSCAT Classes.

### ASSC Meeting April 26, 2016 20-206 (1:10-2:00 pm)

Committee Members (and designations)

Name	Dept.	College/ Unit	Exp. Term/ Other	Present
Borin, Norm	Marketing	OCOB	2016	Y
Braun, David (Ch)	ElecEngr	CENG	2016	Y
Fernsler, Jonathan	Physics	CSM	2016	Y
Reich, Jonathan	Arch	CAED	2017	Y
Levi, Daniel	Psyc&CD	CLA	2016	
Vacant		CAFES	2017	
Vestermark, Jesse	Library	PCS	2017	Y
Elliot, Dennis	Fac. Serv.	Assoc. Dir. E&U	Ex Officio	Y
Hawkins, Julie	Fac.Plan	Admin	Ex Officio	Y
Lin, Nelson	Student	ASI	Ex Officio (ASI)	
Sobouti, Kaelan	Student	ASI	Ex Officio (ASI)	Y
Tool, Katie	AcadProg	Admin	Ex Officio	
Bennett, Penny	GrC	Provost	Ex Officio	
Greenwald, Harvey	Math	Guest		Y
Francis, Hunter	CFS	Guest		
Singh, Kylee	Fac. Serv.	Guest		Y
Young, Trey	Student	Guest		

#### Cal Poly Sustainability Learning Objectives:5

Cal Poly defines sustainability as the ability of the natural and social systems to survive and thrive together to meet current and future needs. In order to consider sustainability when making reasoned decisions, all graduating students should be able to:

- Define and apply sustainability principles within their academic programs
- Explain how natural, economic, and social systems interact to foster or prevent sustainability
- Analyze and explain local, national, and global sustainability using a multidisciplinary approach
- Consider sustainability principles while developing personal and professional values

Academic Senate Resolution 688-09 approved by President Baker June 22, 2009

<sup>&</sup>lt;sup>5</sup> www.academicprograms.calpoly.edu/content/academicpolicies/sustainability\_lo

#### ASSC Committee Charges for 2015-16:6

- Respond to AS-787-14
  - 1. Produce a list of courses meeting at least two SLOs.
    - GE Courses reviewed by ASSC and sent to AS Consent Agenda 5-01-15
    - Other course review began. OCOB, CENG, & CLA completed.

#### 2. Encourage faculty to teach sustainability in new and existing courses (new)

- John Farnsworth from Santa Clara U scheduled to run a workshop at the CTLT on May 6. See http://ctlt.calpoly.edu/teaching-sustainability-anycourse
- 3. Work with the CTLT to provide support for faculty seeking to teach classes involving sustainability (new)
  - Helen Cox (CSUN), Jillian Buckholz (CSUEB), Jim Pushnik (CSU Chico), Long Beach, Pomona, Fullerton, SFSU (Caitlin Steele), Meaghan Smith (CSU Chancellor's Office) (Living Lab), Tall Chief Comet (Humbolt)
  - Carina Anttila-Suarez (Skyline College), Stephen Miller (Deputy Director, Strategic Energy Innovations)
  - Jonathan Reich & Joe Ragsdale, Art MacCarley, Steve Marx, Ryan Alaniz (Cal Poly) – need to extend this list. Linda Vanasupa (SUSTAIN SLO), Hunter Francis (CFS)
  - Identify funding sources.
- Develop procedure to identify sustainability courses in catalog (new)
  - Report on case studies from other universities.
- Respond to 2014 CSU Sustainability Policy directives. (new)
  - 1. "The CSU will seek to further integrate sustainability into the academic curriculum working within the normal campus consultative process.
  - 2. The CSU will develop employee and student workforce skills in the green jobs industry, promote the development of sustainable products and services, and foster economic development."
    - Joint meeting with SAC took place on 12-03-2015...

Continue assessing SLOs. Prepare and deliver report.

- Work with students to better integrate approaches to sustainability inside and outside the classroom/curriculum.
  - Consider new course(s).
  - Work with PowerSave Green Campus students in facilities.
  - List student clubs active in sustainability.
- Promote/extend the Green Campus/AASHE STARS Certification.
  - 1. Assist data collection efforts for academic STARS credits.
    - Retain SUSCAT review documentation in a form we can use for STARS.
- Make recommendations regarding the role of sustainability in the University's strategic plan/master plan/action plan.
  - Do we consult with Linda Dalton?
  - Assist with campus-wide sustainability Charrette, jointly with SAC.
  - Set up a green funding program (TGIF) and carbon credits.
- Work with GEGB to develop sustainability pathways in GE.
  - Added by ExCom on 11-04-14.

<sup>&</sup>lt;sup>6</sup> www.academicsenate.calpoly.edu/content/acadsen\_comm/sustainability

Discussed SUSCAT GE Courses on 5-22-15

#### **Spring Quarter Meeting Schedule:**

```
Tuesday, April 5 (1:10 – 2 pm, 20A-206)
Tuesday, April 12 (1:10 – 2 pm, 20A-206)
Tuesday, April 26 (1:10 – 2 pm, 20A-206)
Tuesday, May 3 (1:10 – 2 pm, 20A-206)
Tuesday, May 17 (1:10 – 2 pm, 20A-206)
Tuesday, May 31 (1:10 – 2 pm, 20A-206)
```

The meeting came to order at 1:12 p.m.

- 1. The committee approved minutes from the April 12 meeting.
- 2. Discussion took place regarding the SUSCAT course review.
  - a. Discussion took place regarding the status of the SUSCAT course review. COB, CLA, and CENG reviews have completed. CAED and CSM reviews need until Friday to finish.
  - b. Two issues continue to hamper SUSCAT course review:
    - i. We still have no CAFES representative on the committee.
    - ii. Most colleges do not make expanded course outlines readily available, or, available at all.
  - c. The committee approved the additions to SUSCAT of courses listed in the April 24 memo with additions from CAED and CSM to arrive on the ASSC PolyLearn site by Friday.
  - d. Motion: "Submit the list with CAED and CSM additions to the Senate on Monday." MSP 8-Yes. 0-No.
- 3. Discussion took place regarding the Resolution on Adding a Sustainability Catalog Option to Pass (Plan A Student Schedule).
  - a. The committee discussed the resolution version 5.
  - b. Motion: "Submit the resolution to the Academic Senate for their consideration." MSP 8-Yes, 0-No.
- 4. Discussion took place regarding the May 6 workshop with the CTLT by John Farnsworth from Santa Clara University regarding how add a sustainability component to existing courses. As of Monday, the CTLT reports 11 participants have registered for the workshop.
- 5. Discussion took place regarding the April 29 Sustainability Charrette.
  - a. Dennis Elliot and Kylee Singh presented the revised program. Discussion took place regarding the "speed-dating" session during which presenters will share their expertise with participants in small groups designed to promote discussion.
  - b. Two EDES 408 student groups plan to present their projects at the charrette.
  - c. In response to concern that the charrette might yield lots of good ideas but receive little follow-up in terms of action and progress, discussion took place regarding how the ASSC might help. One idea: add progress reports in the quarterly ASSC reports about action(s) taken towards the goals arising from the April 29 charrette.

# quarterly\_SC S16.docx

The meeting adjourned at 2:00 p.m.

# **Attachments:**

# ASSC Meeting May 3, 2016 20-206 (1:10-2:00 pm)

Committee Members (and designations)

Name	Dept.	College/ Unit	Exp. Term/ Other	Present
Borin, Norm	Marketing	OCOB	2016	
Braun, David (Ch)	ElecEngr	CENG	2016	Y
Fernsler, Jonathan	Physics	CSM	2016	Y
Reich, Jonathan	Arch	CAED	2017	Y
Levi, Daniel	Psyc&CD	CLA	2016	
Vacant		CAFES		
Vestermark, Jesse	Library	PCS	2017	Y
Elliot, Dennis	Fac. Serv.	Assoc. Dir. E&U	Ex Officio	Y
Hawkins, Julie	Fac.Plan	Admin	Ex Officio	
Lin, Nelson	Student	ASI	Ex Officio (ASI)	
Sobouti, Kaelan	Student	ASI	Ex Officio (ASI)	
Tool, Katie	AcadProg	Admin	Ex Officio	
Bennett, Penny	GrC	Provost	Ex Officio	
Greenwald, Harvey	Math	Guest		Y
Francis, Hunter	CFS	Guest		
Singh, Kylee	Fac. Serv.	Guest		Y

# Cal Poly Sustainability Learning Objectives:<sup>7</sup>

Cal Poly defines sustainability as the ability of the natural and social systems to survive and thrive together to meet current and future needs. In order to consider sustainability when making reasoned decisions, all graduating students should be able to:

- Define and apply sustainability principles within their academic programs
- Explain how natural, economic, and social systems interact to foster or prevent sustainability
- Analyze and explain local, national, and global sustainability using a multidisciplinary approach
- Consider sustainability principles while developing personal and professional values

Academic Senate Resolution 688-09 approved by President Baker June 22, 2009

<sup>&</sup>lt;sup>7</sup> www.academicprograms.calpoly.edu/content/academicpolicies/sustainability\_lo

# ASSC Committee Charges for 2015-16:8

- Respond to AS-787-14
  - 1. Produce a list of courses meeting at least two SLOs.
    - GE Courses reviewed by ASSC and sent to AS Consent Agenda 5-01-15
    - Other course review began. CENG, CLA, COB, CSM completed. CAED started.
  - 2. Encourage faculty to teach sustainability in new and existing courses (new)
    - John Farnsworth from Santa Clara U scheduled to run a workshop at the CTLT on May 6. See http://ctlt.calpoly.edu/teaching-sustainability-anycourse
  - 3. Work with the CTLT to provide support for faculty seeking to teach classes involving sustainability (new)
    - Helen Cox (CSUN), Jillian Buckholz (CSUEB), Jim Pushnik (CSU Chico), Long Beach, Pomona, Fullerton, SFSU (Caitlin Steele), Meaghan Smith (CSU Chancellor's Office) (Living Lab), Tall Chief Comet (Humbolt)
    - Carina Anttila-Suarez (Skyline College), Stephen Miller (Deputy Director, Strategic Energy Innovations)
    - Jonathan Reich & Joe Ragsdale, Art MacCarley, Steve Marx, Ryan Alaniz (Cal Poly) – need to extend this list. Linda Vanasupa (SUSTAIN SLO), Hunter Francis (CFS)
    - Identify funding sources.
- Develop procedure to identify sustainability courses in catalog (new)
  - Report on case studies from other universities.
- Respond to 2014 CSU Sustainability Policy directives. (new)
  - 1. "The CSU will seek to further integrate sustainability into the academic curriculum working within the normal campus consultative process.
  - 2. The CSU will develop employee and student workforce skills in the green jobs industry, promote the development of sustainable products and services, and foster economic development."
    - Joint meeting with SAC took place on 12-03-2015...

Continue assessing SLOs. Prepare and deliver report.

- Work with students to better integrate approaches to sustainability inside and outside the classroom/curriculum.
  - Consider new course(s).
  - Work with PowerSave Green Campus students in facilities.
  - List student clubs active in sustainability.
  - Sent Senate a Resolution on Adding a Sustainability Catalog Option to PASS
- Promote/extend the Green Campus/AASHE STARS Certification.
  - 1. Assist data collection efforts for academic STARS credits.
    - Retain SUSCAT review documentation in a form we can use for STARS.
- Make recommendations regarding the role of sustainability in the University's strategic plan/master plan/action plan.
  - Assist with campus-wide sustainability Charrette, jointly with SAC.
  - Set up a green funding program (TGIF) and carbon credits.

<sup>8</sup> www.academicsenate.calpoly.edu/content/acadsen\_comm/sustainability

- Work with GEGB to develop sustainability pathways in GE.
  - Added by ExCom on 11-04-14.
  - Discussed SUSCAT GE Courses on 5-22-15

## **Spring Quarter Meeting Schedule:**

```
Tuesday, April 5 (1:10 – 2 pm, 20A-206)

Tuesday, April 12 (1:10 – 2 pm, 20A-206)

Tuesday, April 26 (1:10 – 2 pm, 20A-206)

Tuesday, May 3 (1:10 – 2 pm, 20A-206)

Tuesday, May 17 (1:10 – 2 pm, 20A-206)

Tuesday, May 31 (1:10 – 2 pm, 20A-206)
```

The meeting came to order at 1:15 p.m.

- 1. Discussion took place regarding the April 29 Green to Gold Sustainability Charrette. This discussion filled up most of the meeting and focused on how to move forward based on the charrette momentum and ideas generated.
- 2. Discussion took place regarding the SUSCAT course review. The Senate has received the request to place on their consent agenda the latest list of courses to add to SUSCAT.
- 3. Discussion took place regarding the Resolution on Adding a Sustainability Catalog Option to PASS (Plan A Student Schedule). The resolution went to the Academic Senate and appears on the Executive Committee May 10 agenda. The ASSC notes that the EDES 408 student group comprising Brian Cronin, Jesse Gibson, Maggie Pratt, Sheila Vedula, and Scout Vernon gave a wonderful presentation at the April 29 Green to Gold Sustainability Charrette in support of a PASS SUSCAT Filter. If it would become possible for a Senator to yield time to this group should the PASS resolution reach the Senate floor, then the Senate might get an opportunity to learn students' thoughts about this issue directly.
- 4. Discussion took place regarding the May 6 workshop with the CTLT by John Farnsworth from Santa Clara University regarding how add a sustainability component to existing courses. As of Monday, the CTLT reports 20 participants have registered for the workshop.
- 5. Discussion took place about the lack of a ASSC representative from CAFES. A suggestion to request referrals from Hunter Francis received a positive response.

The meeting adjourned at 2:16 p.m.

#### **Attachments:**

# ASSC Meeting May 17, 2016 20-206 (1:10-2:00 pm)

Committee Members (and designations)

Name	Dept.	College/	Exp. Term/	Present
		Unit	Other	
Borin, Norm	Marketing	OCOB	2016	Y
Braun, David (Ch)	ElecEngr	CENG	2016	Y
Fernsler, Jonathan	Physics	CSM	2016	Y
Reich, Jonathan	Arch	CAED	2017	Y
Levi, Daniel	Psyc&CD	CLA	2016	
Vacant		CAFES		
Vestermark, Jesse	Library	PCS	2017	Y
Elliot, Dennis	Fac. Serv.	Assoc. Dir. E&U	Ex Officio	Y
Hawkins, Julie	Fac.Plan	Admin	Ex Officio	
Lin, Nelson	Student	ASI	Ex Officio (ASI)	
Sobouti, Kaelan	Student	ASI	Ex Officio (ASI)	
Tool, Katie	AcadProg	Admin	Ex Officio	
Bennett, Penny	GrC	Provost	Ex Officio	
Greenwald, Harvey	Math	Guest	Y	
Francis, Hunter	CFS	Guest		
Singh, Kylee	Fac. Serv.	Guest	_	Y

# Cal Poly Sustainability Learning Objectives:9

Cal Poly defines sustainability as the ability of the natural and social systems to survive and thrive together to meet current and future needs. In order to consider sustainability when making reasoned decisions, all graduating students should be able to:

- Define and apply sustainability principles within their academic programs
- Explain how natural, economic, and social systems interact to foster or prevent sustainability
- Analyze and explain local, national, and global sustainability using a multidisciplinary approach
- Consider sustainability principles while developing personal and professional values

Academic Senate Resolution 688-09 approved by President Baker June 22, 2009

<sup>&</sup>lt;sup>9</sup> www.academicprograms.calpoly.edu/content/academicpolicies/sustainability\_lo

# ASSC Committee Charges for 2015-16:10

- Respond to AS-787-14
  - 1. Produce a list of courses meeting at least two SLOs.
    - GE Courses reviewed by ASSC and sent to AS Consent Agenda 5-01-15
    - Other course review began. CENG, CLA, COB, CSM completed. CAED started.
  - 2. Encourage faculty to teach sustainability in new and existing courses (new)
    - John Farnsworth from Santa Clara U ran a workshop at the CTLT on May 6 with 20 attendees. See http://ctlt.calpoly.edu/teaching-sustainabilityany-course
  - 3. Work with the CTLT to provide support for faculty seeking to teach classes involving sustainability (new)
    - Helen Cox (CSUN), Michael ? (CSUEB), Jim Pushnik (CSU Chico), Long Beach, Pomona, Fullerton, SFSU (Caitlin Steele), Meaghan Smith (CSU Chancellor's Office) (Living Lab), Tall Chief Comet (Humbolt)
    - Carina Anttila-Suarez (Skyline College), Stephen Miller (Deputy Director, Strategic Energy Innovations)
    - Jonathan Reich & Joe Ragsdale, Art MacCarley, Steve Marx, Ryan Alaniz (Cal Poly) – need to extend this list.
    - Identify funding sources.
- Develop procedure to identify sustainability courses in catalog (new)
  - Report on case studies from other universities.
- Respond to 2014 CSU Sustainability Policy directives. (new)
  - 1. "The CSU will seek to further integrate sustainability into the academic curriculum working within the normal campus consultative process.
  - 2. The CSU will develop employee and student workforce skills in the green jobs industry, promote the development of sustainable products and services, and foster economic development."
- Continue assessing SLOs. Prepare and deliver report.
- Work with students to better integrate approaches to sustainability inside and outside the classroom/curriculum.
  - Consider new course(s).
  - Work with PowerSave Green Campus students in facilities.
  - List student clubs active in sustainability.
  - Sent Senate a Resolution on Adding a Sustainability Catalog Option to PASS
- Promote/extend the Green Campus/AASHE STARS Certification.
  - 1. Assist data collection efforts for academic STARS credits.
    - Retain SUSCAT review documentation in a form we can use for STARS.
- Make recommendations regarding the role of sustainability in the University's strategic plan/master plan/action plan.
  - Do we consult with Linda Dalton?
  - Assist with campus-wide sustainability Charrette, jointly with SAC.
  - Set up a green funding program (TGIF) and carbon credits.
- Work with GEGB to develop sustainability pathways in GE.

<sup>&</sup>lt;sup>10</sup> www.academicsenate.calpoly.edu/content/acadsen\_comm/sustainability

#### quarterly SC S16.docx

- Added by ExCom on 11-04-14.
- Discussed SUSCAT GE Courses on 5-22-15

# **Spring Quarter Meeting Schedule:**

```
Tuesday, April 5 (1:10 – 2 pm, 20A-206)

Tuesday, April 12 (1:10 – 2 pm, 20A-206)

Tuesday, April 26 (1:10 – 2 pm, 20A-206)

Tuesday, May 3 (1:10 – 2 pm, 20A-206)

Tuesday, May 17 (1:10 – 2 pm, 20A-206)

Tuesday, May 31 (1:10 – 2 pm, 20A-206)
```

The meeting came to order at 1:15 p.m.

- 1. Without objection, the agenda added two new items in position 4 suggested by Kylee Singh:
  - a. Outcomes from a conversation with the new ASI President.
  - b. Appointing a chair for 16/17.
- 2. Discussion took place regarding the SUSCAT course review. Additional courses under review this Spring and Summer should go through the ASSC early in the Fall to get on the Senate's consent agenda during Fall.
- 3. Discussion took place regarding the Resolution on Adding a Sustainability Catalog Option to PASS (Plan A Student Schedule).
  - a. The resolution appeared on the Executive Committee May 10 agenda, but didn't get covered. It got bumped to the Executive Committee May 17 agenda.
  - b. Discussion took place regarding supporting arguments for the resolution:
    - i. The SLOs exist. We seek to help students locate courses to help them achieve the SLOs.
    - ii. A PASS filter won't confuse students, because students are used to filters.
    - iii. Academic benefits could result from having students more easily locate sustainability courses.
  - c. Discussion took place regarding how other CSU campuses indicate sustainability courses with green leaf symbols in their catalogs and how other CSU campuses identify sustainability courses for AASHE/STARS. The following URLs show implementations from Chico and Humbolt.

#### At Chico:

http://catalog.csuchico.edu/viewer/11/SYMB.html

https://catalog.csuchico.edu/viewer/12/search/courses/ABUS.html

https://catalog.csuchico.edu/viewer/15/search/courses/PSSC.html

At Humbolt:

http://pine.humboldt.edu/anstud/cgi-bin/filt\_schd.pl?relevant=sched\_ind\_Fall.out http://pine.humboldt.edu/anstud/cgi-bin/filt\_schd.pl?relevant=./cschd/sched\_sustFall.out http://pine.humboldt.edu/registrar/catalog/documents/HSUcatalog2015-16.pdf

4. Kylee reported on a conversation with the new ASI President.

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- 5. During their May 10 meeting, the Executive Committee appointed Braun as ASSC chair for 2016-17. Discussion took place regarding readying a new ASSC chair next year for the 2017-18 academic year, for example as an understudy.
- 6. Discussion took place how to follow-up the May 6 CTLT workshop to support faculty seeking to add a sustainability component to existing courses.
  - a. The workshop was well-received by the participants. And, it seems that most participants already seek to teach sustainability in their courses.
  - b. It seems important to reach out to new faculty, for example during the New Faculty Orientation before Fall quarter.
  - c. Advertising should begin to let faculty know about the CTLT Learning Community around sustainability starting in the Fall.
  - d. Should we run a Summer workshop during 2016 or 2017, which might entice faculty otherwise overscheduled during the academic year?
- 7. Discussion took place regarding how to follow-up the April 29 Green to Gold Sustainability Charrette.
- 8. No follow-up has taken place concerning the lack of a ASSC representative from CAFES. A suggestion to request referrals from Hunter Francis still awaits action by Braun.

The meeting adjourned at 2:05 p.m.

#### **Attachments:**

# ASSC Meeting May 31, 2016 20-206 (1:10-2:00 pm)

Committee Members (and designations)

Name o	, ,	College/	Eve Towns /	Danagarat
Name	Dept.	College/ Unit	Exp. Term/ Other	Present
Borin, Norm	Marketing	OCOB	2016	Y
Braun, David (Ch)	ElecEngr	CENG	2016	Y
Fernsler, Jonathan	Physics	CSM	2016	Y
Reich, Jonathan	Arch	CAED	2017	Y
Levi, Daniel	Psyc&CD	CLA	2016	
Vacant		CAFES		
Vestermark, Jesse	Library	PCS	2017	Y
Elliot, Dennis	Fac. Serv.	Assoc. Dir. E&U	Ex Officio	
Hawkins, Julie	Fac.Plan	Admin	Ex Officio	
Lin, Nelson	Student	ASI	Ex Officio (ASI)	
Sobouti, Kaelan	Student	ASI	Ex Officio (ASI)	Y
Tool, Katie	AcadProg	Admin	Ex Officio	
Bennett, Penny	GrC	Provost	Ex Officio	Y
Greenwald, Harvey	Math	Guest		Y
Francis, Hunter	CFS	Guest		
Singh, Kylee	Fac. Serv.	Guest		Y

# Cal Poly Sustainability Learning Objectives:<sup>11</sup>

Cal Poly defines sustainability as the ability of the natural and social systems to survive and thrive together to meet current and future needs. In order to consider sustainability when making reasoned decisions, all graduating students should be able to:

- Define and apply sustainability principles within their academic programs
- Explain how natural, economic, and social systems interact to foster or prevent sustainability
- Analyze and explain local, national, and global sustainability using a multidisciplinary approach
- Consider sustainability principles while developing personal and professional values

Academic Senate Resolution 688-09 approved by President Baker June 22, 2009

<sup>&</sup>lt;sup>11</sup> www.academicprograms.calpoly.edu/content/academicpolicies/sustainability\_lo

# ASSC Committee Charges for 2015-16:12

- Respond to AS-787-14
  - 1. Produce a list of courses meeting at least two SLOs.
    - GE Courses reviewed by ASSC and sent to AS Consent Agenda 5-01-15
    - Other course review began. CENG, CLA, COB, CSM completed. CAED started.
  - 2. Encourage faculty to teach sustainability in new and existing courses (new)
    - John Farnsworth from Santa Clara U ran a workshop at the CTLT on May 6 with 20 attendees. See http://ctlt.calpoly.edu/teaching-sustainabilityany-course
  - 3. Work with the CTLT to provide support for faculty seeking to teach classes involving sustainability (new)
    - Identify funding sources.
    - Plan Sustainability Learning Community during 2016-17.
- Develop procedure to identify sustainability courses in catalog (new)
  - Report on case studies from other universities. Included in May 17, 2016 meeting Minutes.
- Respond to 2014 CSU Sustainability Policy directives. (new)
  - 1. "The CSU will seek to further integrate sustainability into the academic curriculum working within the normal campus consultative process.
  - 2. The CSU will develop employee and student workforce skills in the green jobs industry, promote the development of sustainable products and services, and foster economic development."
- Continue assessing SLOs. Prepare and deliver report.
- Work with students to better integrate approaches to sustainability inside and outside the classroom/curriculum.
  - Consider new course(s).
  - Work with PowerSave Green Campus students in facilities.
  - List student clubs active in sustainability.
  - Sent Senate a Resolution on Adding a Sustainability Catalog Option to PASS
- Promote/extend the Green Campus/AASHE STARS Certification.
  - 1. Assist data collection efforts for academic STARS credits.
    - Retain SUSCAT review documentation in a form we can use for STARS.
- Make recommendations regarding the role of sustainability in the University's strategic plan/master plan/action plan.
  - Do we consult with Linda Dalton?
  - Assist with campus-wide sustainability Charrette, jointly with SAC.
  - Set up a green funding program (TGIF) and carbon credits.
- Work with GEGB to develop sustainability pathways in GE.
  - Added by ExCom on 11-04-14.
  - Discussed SUSCAT GE Courses on 5-22-15

<sup>12</sup> www.academicsenate.calpoly.edu/content/acadsen\_comm/sustainability

# **Spring Quarter Meeting Schedule:**

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Tuesday, April 5 (1:10 – 2 pm, 20A-206)
Tuesday, April 12 (1:10 – 2 pm, 20A-206)
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Tuesday, May 17 (1:10 – 2 pm, 20A-206)
Tuesday, May 31 (1:10 – 2 pm, 20A-206)
```

The meeting came to order at 1:10 p.m.

- 1. Without objection, the committee approved minutes for the April 26, May 3, and May 17 meetings.
- 2. Braun reported on conversations with Cem Sunata, Susan Olivas, Tim Kearns, and Miles Clark about the PASS/SUSCAT resolution after the ExComm agendized it.
  - a. The following table estimates the project costs:

Set up Tasks	Who	Work
Data Entry: Add SUSCAT course attribute to catalog	Registrar's Office	<4 hours
database for $42 + 26 = 68 - 100$ courses.		
Coding: Revise PASS backend and frontend,	ITS PASS Team	8-40 hours
including testing		
Testing by Registrar's Office	Registrar's Office	<4 hours
Total		10-50 hours
_		
Annual maintenance	Registrar's Office	A few hours?

b. In Summary, Cem Sunata agreed to work with the ASSC to list SUSCAT Sustainability Courses on PASS. Please see the emails below. Cem's email is the first one in the chain

**Subject:** Re: Sustainability filter in PASS **From:** Braun <dbraun@calpoly.edu>

**Date:** 5/24/2016 1:31 PM

To: "Gary D. Laver" <glaver@calpoly.edu>, "Gladys E. Gregory" <ggregory@calpoly.edu>

CC: Cem Sunata <csunata@calpoly.edu>

Gladys and Gary,

In that case, on behalf of the Sustainability Committee, I'd like to formally request that the Senate pull the PASS/SUSCAT resolution from its agenda. Cem Sunata conveying his willingness to work with the Sustainability Committee to list the SUSCAT courses on PASS achieves what the resolution would have. Is it possible for the Senate Minutes to thank Cem Sunata and Susan Olivas for their roles in resolving this issue so nicely without involving the full Senate?

Thanks, Braun

On 5/24/2016 12:19 PM, Gary D. Laver wrote:

Hi, Braun.

Any person or group who sponsors a resolution may elect to withdraw it before it is moved to second reading (at which point it belongs to the Senate). This actually occurred earlier this year. In this

particular case, I'm assuming the Sustainability Committee is satis Died there is no longer a need for the resolution. If you, as the Committee's chair, contact Gladys with an e-mail formally pulling the resolution on behalf of the committee, we will not consider it this afternoon. I'm glad to hear your conversation with Cem went so well.

Take care,

Gary

-----

Gary D. Laver, Ph.D.

Chair, Cal Poly Academic Senate

Professor of Psychology

On May 24, 2016, at 11:05 AM, Braun < dbraun@calpoly.edu > wrote:

Gary,

Re: Sustainability filter in PASS

1 of 2 5/24/2016 2:48 PM

Cem Sunata and I had a very productive conversation this morning, and his email below makes the PASS/SUSCAT resolution moot. If the Registrar is willing to list the SUSCAT courses on PASS without the Senate having to consider a resolution, do we need to move forward with the resolution? I don't know what the protocol is. Is there a way to pull the resolution off the table?

Cheers,

Braun

----- Forwarded Message ------

**Subject:**Sustainability ②ilter in PASS **Date:**Tue, 24 May 2016 09:40:52 -0700 **From:**Cem Sunata <csunata@calpoly.edu>

To:David B. Braun < dbraun@calpoly.edu>

Hi David.

After seeing how HSU did it in their course listings, I'm willing to work with the sustainability committee to incorporate the sustainability <code>@ilter</code> in PASS. We can begin by inserting the URL as a temporary solution and work our way towards adding the <code>@ilter</code> by prioritizing the work with ITS.

Cem Sunata

**University Registrar** 

California Polytechnic State University San Luis Obispo CA 93407-0033 805.756.6012 - office 805.756.7237 - fax 805.503-5220 - cell csunata@calpoly.edu

- 3. Discussion took place regarding progress on SUSCAT course review.
  - a. Additional courses under review this Spring and Summer should go through the ASSC early in the Fall to get on the Senate's consent agenda during Fall.
  - b. A suggestion arose to review periodically the list of SUSCAT courses to check whether courses continue to teach sustainability. The Senate approved process (AS-792-15) appears online and permits anyone to request course review or appeal an earlier decision: http://digitalcommons.calpoly.edu/senateresolutions/793/
- 4. Discussion took place how the ASSC can contribute to the AASHE/STARS process this summer and next academic year. Kylee Singh has tasks for the ASSC to complete during Summer and Fall to collect data needed to earn several of the Academic Credits. Kylee Singh, Braun, and Jonathan Reich have Summer follow-up duties here.
- 5. Discussion took place how to follow-up the May 6 CTLT workshop with
  - a. New Faculty Orientation before Fall quarter. Kylee Singh and Braun have Summer follow-up duties here.

- b. Advertise for the CTLT Learning Community around sustainability starting in the Fall. Kylee Singh and Braun have Summer follow-up duties here.
- c. Should we run a Summer workshop during 2016 or 2017, which might entice faculty otherwise overscheduled during the academic year? The ASSC agreed to follow-up this idea during Fall quarter.
- 6. Discussion took place regarding prioritizing tasks for ASSC 2016-17 task list. Should the following receive higher priority?
  - a. AASHE/STARS
  - b. Assessment
  - c. A sustainability pathway through GE.
- 7. Discuss how to follow-up the April 29 Green to Gold Sustainability Charrette. Kylee Singh is organizing working groups around various themes, so ASSC members should respond to her email to sign up.
- 8. No follow-up has taken place concerning the lack of a ASSC representative from CAFES. Checking with the referrals suggested by Hunter Francis still awaits action by Braun.

The meeting adjourned at 2:08 p.m.

#### **Attachments:**