



Meeting of the Academic Senate Executive Committee

Tuesday, September 27, 2016

01-409, 3:10 to 5:00pm

- I. **Minutes:** none.
- II. **Communication(s) and Announcement(s):** none.
- III. **Reports:**
 - A. Academic Senate Chair:
 - B. President's Office:
 - C. Provost:
 - D. Statewide Senate:
 - E. CFA:
 - F. ASI:
- IV. **Business Item(s):**
 - A. **Approval of Academic Senate committee charges for 2016-2017:** (pp. 2-3).
 - B. **Approval of 2 additional WTUs for Michael McCullough for service on the Academic Senate Curriculum Committee during fall quarter for a total of 6 WTUs.**
 - C. **Appointments to Academic Senate committees for 2016-2018:** (pp. 4-8).
 - D. **Appointment to University committee for 2016-2019:** (p. 9).
 - E. **Resolution on University-Wide Prompts for Student Evaluations of Instructors:** Manzar Foroohar, Statewide Senator (pp. 10-16).
 - F. **Resolution on Scheduling Events During Final Examination Period:** Dustin Stegner, Chair Academic Senate Instruction Committee (p. 17).
 - G. **Resolution on Proposal to Establish the Packaging Value Chain Center:** Jay Singh, Professor and Packaging Program Director (pp. 18-37).
 - H. **Resolution on Proposed New Degree Program for Master of Science in Packaging Value Chain:** Jay Singh, Professor and Packaging Program Director (pp. 38-48).
 - I. **Resolution on the Reintroduction of AS-603-03/IC,CC,GEC [Resolution on Credit/No Credit Grading (CR/NC)]:** Gary Laver, Chair Academic Senate (pp. 49-50).
 - J. **Resolution on Retiring Obsolete Academic Senate Resolutions:** Gary Laver, Chair Academic Senate (pp. 51-52).
 - K. **Resolution on Bachelor of Science Degree Proposal in Health Science:** Kris Jankovitz, Professor Department of Kinesiology (materials will follow).
- V. **Discussion Item(s):**

Clarification of TERMS OF OFFICE bylaws of the Academic Senate II.B.1 (p. 53).
- VI. **Adjournment:**

Charges for 2016-2017 Academic Senate Committees

Budget and Long-Range Planning Committee

- Review vision 2022 modification
- BLRP involvement in revisitations of campus-wide allocation models.

Curriculum Committee

- Examine blended programs
- Discuss double counting courses. **Winter 2017**
- Explore "course renewal" cycle (in tandem with GEGB). **Ongoing**
- Examine impact of Quarter Plus courses (in tandem with GEGB). **Ongoing**
- Ongoing review of curriculum proposals.

Distinguished Scholarship Awards Committee

- Evaluating candidates and recipients for the Distinguished Scholarship Award

Distinguished Teaching Awards Committee

- Evaluating candidates and recipients for the Distinguished Scholarship Award

Faculty Affairs Committee

- Develop a process for modifying the UFPA (University Faculty Personnel Action)
- Discuss the publication of grade distribution data in RPT
- Discuss double counting and getting a minor without additional courses.
- First full draft of University Faculty Personnel Action by January 1, 2016; Faculty Affairs Committee approval in Winter 2016; to Executive Committee thereafter.
- Review of CAP-project leftovers as needed.

GE Governance Board

- Ongoing review of curriculum proposals: catalog cycle proposals and continuous course review proposal.
- Explore "course renewal" cycle (in tandem with ASCC). **Ongoing**
- Examine impact of Quarter Plus courses (in tandem with ASCC). **Ongoing**

Grants Review Committee

- Sponsor the CSU research competition
- Review and awarding of campus grants

Instruction Committee

- Discuss ways to raise faculty and students awareness about academic dishonesty/plagiarism.
- Field trip policy review.
- Revision of campus cheating policy.
- Review of CAP-project leftovers as needed.
- 0415-Review and revise office hour policy. (as discussed with FACT – G. Stegner email 042715)
- Possible charges (1) review APDQ (Cen Sunata) (2) Explore viability of MWF schedule

Research, Scholarship and Creative Activities Committee

- Modification of Human Subject Guidelines/review proposal for website publication (Dean Wendt)
- Work with FACT to develop CORE/CORE Plus list (Bill Britton)
- Assist (if needed) Grants Review Committee with CSU research competition (winter 2017)

Sustainability Committee

- Respond to AS-787-14
 1. Produce a list of 2015-17 catalog courses meeting at least two SLOs and review new courses for the 2017-19 catalog.
 2. Encourage faculty to teach sustainability in new and existing courses
 3. Work with the CTLT to provide support for faculty seeking to teach classes involving sustainability
- Develop procedure to identify sustainability courses in catalog
- Respond to 2014 CSU Sustainability Policy directives.
 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."
- Support campus efforts to achieve, measure, document, and improve Cal Poly's AASHE STARS certification credits.
- Support campus efforts toward the Second Nature Climate Commitment.
 1. As part of the comprehensive Climate Action Plan, take actions to make carbon neutrality and resilience a part of the curriculum and other educational experiences for all students.³
- Develop and pilot more SLOs assessments.
- Work with students to better integrate approaches to sustainability inside and outside the classroom/curriculum.
- Follow up the April 216 Sustainability Charrette Action Items
 1. Define a Cal Poly statement on sustainability and integrate into the hiring process
 2. Study how Cal Poly might implement a sustainability graduation requirement
 3. Define organization and responsibility for a Cal Poly Office of Sustainability.
- Work with GEGB to develop sustainability pathways in GE.
- Comment on Vision 2022 sustainability issues.

³ <http://secondnature.org/wp-content/uploads/2015/09/Climate-Commitment-Second-Nature.pdf>

09.22.16 (gg)

2016-2018 Academic Senate Committees Vacancies

* Indicates willingness to chair if release time is available

COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENTAL SCIENCE

Distinguished Teaching Awards Committee

Lindsey Higgins, Agribusiness (4.5 years at Cal Poly) Tenure Track

Teaching is my passion. As a Cal Poly alumna and junior faculty member, I would love the opportunity to be a part of the committee that recognizes the best of the best in terms of teaching. During my time at Cal Poly, I have been very involved with the Center for Teaching Learning and Technology (CTLT), I have twice been invited as a speaker for the CTLT's Instructional Innovation Showcase, and have served on the Teaching Awards Committee for the Western Agricultural Economics Association since 2011. Furthermore, I have an active research program related to the scholarship of teaching and have published in a number of education journals including College Teaching and the Journal for the Advancement of Marketing Education. Being a member of this committee would be an incredible opportunity to not only serve, but also reap the benefits of being exposed to additional examples of teaching excellence at Cal Poly.

Instruction Committee

Ben Swan, Ag Education & Communication (7 years at Cal Poly) Tenured

I have served as our college's (CAFES) instructional enhancement committee chair the past two years and on the Instruction Committee this past year. I am a teacher educator and Cal Poly alumnus and very much value effective teaching. I enjoyed my year on the committee last year and look forward to contributing to the committee this year, if chosen.

Research, Scholarship & Creative Activities Committee (2016-2017)

Peggy Papathakis, Food Science and Nutrition (10 years at Cal Poly) Tenured

As a current recipient of this award, I value the commitment and integrity to identify and recognize exemplary accomplishments and outstanding scientific achievements of my colleagues. I wish to be part of the process that evaluates and rewards these individuals and their efforts.

Accomplishments: 1.4 million in successful grant funding for human subject research in nutrition collaboration with scientists across the university (in Stats, Child Development, KINE), and across universities (WASH U, St Louis; University of Malawi, College of Medicine) served as part of international consultative group for World Health Organization on establishing Nutrition Guidelines for infectious diseases

Sustainability Committee (2016-2017)

Yiwen Chiu, NRES (2 years at Cal Poly) Tenure track

As a multidisciplinary scientist, my main research foci are to understand the coupling and interaction of human and natural systems by applying integrated quantitative and analytical tools. I have 3 years of research experience at the Argonne National Laboratory as a postdoctoral appointee, with a PhD and MS degree in water resources science from the University of Minnesota and BS degree in forestry from the National Taiwan University. In the past 8 years, I participated in a total of 10 projects, in 8 of which I served as a lead modeler to develop simulation frameworks and manage large datasets for analyzing impact footprints associated with biomass cultivation, agricultural practices, and renewable energy technology. My current research focuses on the establishment and application of life-cycle environmental assessment (LCA) which aims to systematically optimize productivity while reducing impact footprint by taking local socioeconomic and climate characteristics into account. I am currently the PI of three research projects, in which LCA is applied to determine the environmental profiles of dairy and wine industries, in addition to river restoration projects. This year, I also have been elected as a member of the "Livestock Environmental Assessment and Performance (LEAP) Partnership Technical Advisory Group on Water Footprinting" under the UN FAO.

Working closely with diverse counterparts globally for nearly 10 years, I am eager to work together with Cal Poly's faculty, scholars, and students to support our long-term missions of sustainability.

COLLEGE OF ARCHTECHTURE AND ENVIRONMENTAL DESIGN

Grants Review Committee (2016-2017)

Faculty Affairs Committee (2016-2017)

Research, Scholarship & Creative Activities Committee

COLLEGE OF ENGINEERING

Distinguished Teaching Awards Committee

GE Governance Board (2016-2019)

Aaron Keen, Computer Science & Software Engineering (5 years at Cal Poly) Tenured

Early in my studies as a computer science engineering undergraduate at UC Davis I held a view not too uncommon among engineering students; that General Education courses simply took time away from studying my selected area of interest. As I matured, and following yet another registration cycle of “register for whichever GE course is available”, I began to appreciate the impact that General Education can have on the individual and on society as a whole. There were (and, at Cal Poly, are) many General Education courses available that would allow me to explore my interests outside of computing and that would force me to grow as a member of society. I finally realized that I should select my General Education courses with the same care taken when selecting major courses; that a well-considered General Education plan is an important component of a “whole” education.

I have served as the Computer Science and Software Engineering department’s curriculum committee chair for five years (and continue in that capacity). As the curriculum committee chair, I have met with students regarding General Education requires and reviewed substitution requests related to General Education requirements (our degree requirements prescribe a subset of some General Education categories). I hear students following the same strategy that I initially employed, to register for whichever General Education courses is available during the later registration passes. The use of this strategy is somewhat due to perceived difficulties in registering for General Education courses and to attempts to maneuver the General Education framework. I hope to improve the General Education outlook for our students.

I want to join the General Education Governance Board to gain a better understanding of the goals and objectives of the current General Education policy and to contribute to any new policy as a result of the recent General Education review.

From my time as a member of the CENG curriculum committee, I am familiar with the catalog review cycle and with the review of course proposals. As the CSSE curriculum committee chair, I have shepherded the proposals for two General Education courses offered by CSSE (CSC 320: Practical Computer Security for Everyone; CSC 311: Computational Art). I participated in (and at times led) the creation of the Computing for Interactive Arts cross-disciplinary minor and worked with those that created the Data Science cross-disciplinary minor. Much of my service work for the past decade has been devoted to curricular matters and, in particular, to streamlining requirements while increasing flexibility. I believe that I will be a valuable contributing member to the General Education Governance Board.

Instruction Committee

Sustainability Committee

Yarrow Nelson, Civil & Environmental Engineering (17 years at Cal Poly) Tenured

It has been a personal goal of mine to expand the curriculum at Cal Poly to provide more courses which could teach our students the skills necessary for addressing the many environmental issues facing our society. I would also like to see a graduation requirement to ensure that all our graduates receive some instruction on the sustainability issues we face.

I have been doing chemical and environmental engineering research for about 30 years, and I have been teaching environmental engineering at Cal Poly since 1999. These experiences have provided a strong background in the environmental impacts of human activity as well as technologies to minimize these impacts.

About 12 years ago I created a new Cal Poly course on industrial pollution prevention (ENVE 450) which addresses ways to reduce the environmental impacts of our industrial and commercial activities. This course provides a good background in sustainability for our ENVE undergraduates, although very few students outside the ENVE major can take this class due to prerequisites. I would like to see classes like this available to a broader range of Cal Poly students.

This year I also submitted a course proposal for a new class on the environmental engineering of energy production.

I am currently serving as Department Chair for the Department of Civil and Environmental Engineering. There are many faculty in this department who are interested in sustainability, and it is my hope to represent these interests. In particular, this department houses the Global Waste Research Institute and the Algae Research Group as well as Civil Engineering faculty who are involved in the development of sustainable building materials.

I have been the faculty advisor for the Cal Poly Zero Waste Club since its founding in 2006. I have also served as the faculty advisor for the Surfrider Club which engages students in political activities to safeguard our beaches from development and other environmental impacts. I have also served as the faculty advisor for the Cal Poly Society of Environmental Engineers.

Through club advising, course-related activities and other endeavors I have been involved with Cal Poly's Facilities Dept. over the years. I would like to see more interaction between Facilities and faculty involved in sustainability – particularly through grants such as the 'Campus as a Living Lab' grants administered through the Chancellor's Office.

As a member of the Academic Senate Sustainability Committee I will endeavor to improve both curriculum and campus facilities to greatly improve Cal Poly's commitment to sustainability.

COLLEGE OF LIBERAL ARTS

GE Governance Board (fall 2016)

Instruction Committee

Sustainability Committee

Brian Pompeii, Social Sciences (1 year at Cal Poly) Full-time lecturer

I am a Geography Lecturer in the Social Sciences Department where I teach Introduction to Cultural Geography, Global Geography, and Applications in GIS. The learning objectives of each of these classes includes obtaining knowledge regarding the basic tenets of Sustainability Science and Sustainable Development. As a human-environmental geographer supporting sustainability is a crucial part of my past and present research endeavors.

The major themes of my academic career focus on issues of sustainability, global environmental change, water management, and social vulnerability. The diverse range of theories, methods, and topics of my research are all complimentary in an overarching goal of improving our understanding of human-environmental interactions. Theoretically, I am guided by the tenets of sustainability science, political ecology, landscape studies of cultural geography, and risk-hazards research. I have experience practicing these theories to examine the pressing environmental issues of vulnerability to water shortage, vulnerability to coastal hazards, climate change, and hydrologic change.

As a recipient of a Cal Poly Research, Scholarly, and Creative Activities (RSCA) Grant I began conducting field work with Cal Poly students in the San Joaquin Valley in July 2016. One of the major goals of this research is to better understand drought response and recovery in Tulare County, often called the epicenter of the Great California Drought. I am encouraging two students to start a student club this Fall quarter that would provide drinking water in immediate assistance to households whose wells have gone dry. We plan to call the club the Cal Poly Drought Response Team. The constitution of the club will include a broader goal of promoting sustainable water use in California. Given that my teaching themes, research interests, and student interactions already revolve around issues of sustainability I believe I would be an excellent fit on the Academic Senate Sustainability Committee.

ORFALEA COLLEGE OF BUSINESS

Curriculum Committee

Lynn Metcalf, Industrial Technology & Packaging (30 years at Cal Poly) Tenured

I have experience serving on the Orfalea College Undergraduate Programs Committee, as a member (2003-2009 and 2015-2016) and as Chair (2005-2008 and incoming 2016-2017).

Over the past 12 years, I have prepared major curriculum proposals that have college and interdisciplinary impact, as well as new course proposals and modifications. Among these are

1. Marketing Concentration revision for the 2005-2007 catalog

2. New interdisciplinary **Minor in Integrated Marketing Communications** for the 2015-2017 catalog.
 - Worked with the department chairs from Journalism and Graphic Communication and with an industry Task Force to develop the initial program.
 - Developed and conducted student survey to assess interest.
 - Worked with Marketing Area faculty to refine the program proposal.
 - Shepherded the proposal through the UPC and the Academic Senate curriculum committees and made requested revisions

I've worked with former ASCC Chair, Andrew Schaffner, Susan Olivas, Cem Sunata and other members of the Registrar's office to implement curricular initiatives.

Additionally, I've served on program review committees pertaining to reaccreditation in the Orfalea College and, most recently in Fall 2015, as the internal reviewer for the Graphic Communication Department Re-Accreditation, Accrediting Council for College Graphic Communications, Inc.

Distinguished Scholarship Awards Committee

Li Dang, Accounting (10 years at Cal Poly) tenured - Incumbent

I have strong interest in contributing to developing a nurturing research culture. I am committed to quality research and the Distinguished Scholarship Awards Committee fits my service interest. I served on this committee in 2014-2015. Due to my sabbatical leave in 2015-2016, I was not able to finish the term. Upon my return, I would like to continue my service on this committee.

GE Governance Board (2016-2017)

Solina Lindhal, Economics (21 years at Cal Poly) Lecturer

I am a strategic thinker who gets along well with most people. After serving on the Academic Assessment Council last year and the Quantitative Literacy assessment project, I feel compelled to think more about how learning happens and is assessed, especially in our General Education courses. I especially am interested in how to promote GE in a Polytechnic environment that sometimes focuses on specialized career skills; I believe GE courses are more important than ever and I'd like to lend a hand ensuring that Cal Poly's GE courses remain high-quality.

After co-leading the CTLT's Learning Community about teaching large lecture courses (which are primarily GE courses) I am well-versed in the challenges that (large) GE courses face at Cal Poly. I have taught GE courses (Econ 201, 222, 304) at Cal Poly since 1995, in regular large, medium and special summer and Q+ courses. I believe I have "boots on the ground" experience.

As an Educational Technology consultant, I am aware of the trends that shape our classrooms, and know firsthand the promise (and the failure) of educational technology to improve outcomes. Further, I am the Lead for the Economics cohort of the Chancellor's Office Course Redesign with Technology grant program, and am in regular contact with other CSU faculty facing the same challenges we do.

In short, I believe that my interests and experience will be helpful on the GEGB.

Instruction Committee

PROFESSIONAL CONSULTATIVE SERVICES

Budget & Long-Range Planning Committee (2016-2017)

Mark Bieraugel, Library (5 years at Cal Poly) Tenured

I want to serve on this committee as I bring a unique point of view. At Kennedy Library we sit outside of a college, and we support all our faculty, students, and staff at Cal Poly research and information literacy needs. This point of view will bring something new, different, and helpful to the committee. I bring a background of working at for-profit businesses, and an interest in budgets and planning. My background also includes training in lean management techniques, useful for thinking about processes.

With five years' experience at Cal Poly I now have a deeper understanding of the university, its plans, its goals, and its challenges. I bring experience of serving as a senator, serving on the Academic Senate Executive Committee, and as a member RSCA Committee.

Distinguished Teaching Awards Committee (2016-2017)
Fairness Board
Grants Review Committee (2016-2017)
Instruction Committee (2016-2017)
Research, Scholarship & Creative Activities Committee

CURRICULUM APPEALS COMMITTEE – 3 Vacancies

Doug Keesey, English (28 years at Cal Poly) Tenured

I would be happy to continue serving on this committee.

I have served as GE Director (for 8 years) and Chair of the Senate Curriculum Committee (for 5 years). In addition, I have served on department, college, and Senate curriculum committees, and I've been a department chair. I've also served on GE committees (area and governance), and I've been an academic senator. If I were to continue, my input on the Appeals Committee would be informed by this wide range of experience. I would also work hard to keep an open mind, to hear both sides of an issue, and to take the time to really understand it. In thinking through issues, I would try to keep the best educational interests of the students as foremost in my mind.

09.22.16 (gg)

Vacancies for 2016-2017 University Committee

ACADEMIC ASSESSMENT COUNCIL – 5 vacancies: CAED (2016-2019), CAFES (2016-2018), CENG (2016-2019), OCOB (2016-2019), & PCS (2016-2019)

Katherine O'Clair, Library (7 years at Cal Poly) Tenured - PCS

Over the past few years a significant part of my professional work as a librarian and educator has focused on the assessment of student learning. I have participated in internal and external professional development workshops to learn more about assessment and expand my professional repertoire. I would welcome the opportunity to apply what I have learned and contribute to the work of the Academic Assessment Council. I will also be extensively involved with Academic Programs and Planning's cycle to assess the WASC core competency of information literacy during the next few years. As a result, my experience will align well with the work of the Academic Assessment Council in this and other assessment projects. In addition, in Spring 2015 I served on the Academic Assessment Council on a temporary appointment on behalf of the library. I look forward to the opportunity to serve and contribute to the Academic Assessment Council through an Academic Senate appointment as the PCS representative.

ADVISORY COMMITTEE ON WORKPLACE VIOLENCE PREVENTION - (2016-2018)

ASI BOARD OF DIRECTORS - (2016-2017)

ATHLETICS ADVISORY BOARD - (2016-2019)

CAMPUS ADMINISTRATIVE POLICY (CAP) AD HOC COMMITTEE (2016-2018)

CAMPUS FEE ADVISORY COMMITTEE - (2016-2017)

CAMPUS SAFETY AND RISK MANAGEMENT COMMITTEE – 2 vacancies: (2016-2018) & (2016-2017)

DISABILITY ACCESS AND COMPLIANCE COMMITTEE - (2016-2018), 2 vacancies for Accommodation Review Board: (2016-2018) & (2016-2017)

HEALTH SERVICES OVERSIGHT COMMITTEE – (2016-2017)

INCLUSIVE EXCELLENCE COUNCIL - (2016-2019)

INTELLECTUAL PROPERTY REVIEW COMMITTEE – 3 vacancies: CAED (2016-2019), CAFES (2016-2017), & CSM (2016-2019)

STUDENT HEALTH ADVISORY COMMITTEE - (2016-2017)

STUDENT SUCCESS FEE ALLOCATION ADVISORY COMMITTEE - (2016-2017)

SUSTAINABILITY ADVISORY COMMITTEE - (2016-2018)

UNIVERSITY UNION ADVISORY BOARD - (2016-2017)

Adopted:

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

AS-__-16

**RESOLUTION ON UNIVERSITY-WIDE PROMPTS FOR STUDENT EVALUATIONS
OF INSTRUCTORS**

- 1 WHEREAS, The 2014-2017 Collective Bargaining Agreement mandates that “Written or electronic
2 student questionnaire evaluations shall be required for all faculty unit employees who
3 teach” (15.15); and
4
- 5 WHEREAS, The objectives of student evaluation are to contribute to the continuous improvement of
6 instruction and students’ learning; and
7
- 8 WHEREAS, Cal Poly Academic Senate resolution AS-759-13 RESOLUTION ON STUDENT
9 EVALUATIONS states the following:
10
11 “That the Academic Senate requires that student evaluations include university-wide
12 questions...”
13
- 14 WHEREAS, AS-759-13, “Resolution on Student Evaluations,” does not establish any arguments for
15 the necessity and value of adding university-wide prompts to students evaluations; and
16
- 17 WHEREAS, AS-759-13 was based on “Academic Senate Instruction Committee Report on Student
18 Evaluations at Cal Poly February 12, 2013;” and
19
- 20 WHEREAS, The report acknowledges the importance of contextualization of students’ evaluations
21 in regards to differences between colleges and programs and different types of courses;
22 and
23
- 24 WHEREAS, The report does not establish a strong argument for the necessity and value of adding
25 university-wide prompts to student evaluations; and
26
- 27 WHEREAS, The Academic Senate should not take any action without the reasons and justification
28 for an action made explicit; therefore be it
29
- 30 RESOLVED: That the Academic Senate oppose the inclusion of university-wide prompts for student
31 evaluations without a data-driven strong argument for the necessity and value of adding
32 university-wide prompts to student evaluations; and be it further
33
- 34 RESOLVED: That The Academic Senate revoke AS-759-13 “RESOLUTION ON STUDENT
35 EVALUATIONS;” and be it further
36
- 37 RESOLVED: That the Academic Senate instruct the Faculty Affairs Committee to produce a “Well-

designed student evaluation instrument (with demonstrable validity and reliability) in providing diagnostic information and feedback..." as recommended by The CSU, CSU Academic Senate, and CFA Joint Committee "Report on Student's Evaluations" (March 12, 2008); and be it further

RESOLVED: That the Faculty Affairs Committee fully consult with Cal Poly academic departments and programs for designing a valid and reliable student evaluation instrument.

Proposed by: Academic Senate Executive Committee
Date: September 6, 2016

Adopted: April 16 2013

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

AS-759-13

RESOLUTION ON STUDENT EVALUATIONS

1 WHEREAS, The 2012-2014 CSU-CFA Collective Bargaining Agreement states that “[w]ritten
2 or electronic student questionnaire evaluations shall be required for all faculty unit
3 employees who teach” (15.15); and
4

5 WHEREAS, The Collective Bargaining Agreement states that periodic evaluation review of
6 tenured, tenure-line, and temporary faculty unit employees will include student
7 evaluations (15.23, 15.28-29, 15.32, and 15.34); and
8

9 WHEREAS, The CSU, CSU Academic Senate, and CFA Joint Committee “Report on Student
10 Evaluations” (March 12 2008) recommended that “[c]ampuses should use a well-
11 designed student evaluation instrument (with demonstrable validity and
12 reliability) in providing diagnostic information and feedback, and those involved
13 in evaluations should have an understanding of their formative as well as
14 summative uses” (p. 9); and
15

16 WHEREAS, The “Report on Student Evaluations” stated that “[t]he faculty on each individual
17 campus have the right, through their governance process, to develop the campus-
18 based program of student evaluations of teaching” (p. 7); and
19

20 WHEREAS, The objectives of student evaluations are to contribute to the continuous
21 improvement of instruction and students’ learning; therefore, be it
22

23 RESOLVED: That the Academic Senate requires that student evaluations include university-
24 wide questions and the opportunity for students to provide written comments on
25 teaching and course effectiveness; and that they may also include (1) college-
26 and/or department-level questions and (2) faculty generated questions; and be it
27 further
28

29 RESOLVED: That the Academic Senate approve the Instruction Committee’s report that
30 establishes university-wide student evaluation questions, scale, and metric used
31 for summarization of these questions; and be it further
32

33 RESOLVED: That the Academic Senate designate the Instruction and Faculty Affairs
34 Committees as the appropriate committees for making potential revisions to

35 university-wide student evaluation questions in the future, and these revisions are
36 subject to approval by the Academic Senate; and be it further
37

38 RESOLVED: That the Academic Senate approve that colleges, departments, and/or programs
39 may require the inclusion of additional student evaluation questions, based on
40 their respective faculty-based governance procedures; and be it further
41

42 RESOLVED: That the Academic Senate approve that faculty members may include student
43 evaluation questions for their own classes; and be it further
44

45 RESOLVED: That the Academic Senate approve that all student responses (numeric and/or
46 written) to faculty generated questions may be excluded from inclusion in the
47 faculty member's personnel action file (PAF) at the discretion of the faculty
48 member; and that any summary measures that may be calculated are not required
49 for inclusion in the faculty member's PAF; and be it further
50

51 RESOLVED: That the Academic Senate approve that colleges, departments, and/or programs
52 may require the inclusion of students' written comments, excluding written
53 responses to faculty-generated questions, in a faculty member's personnel action
54 file (PAF), based on their respective faculty-based governance procedures.

Proposed by: Academic Senate Instruction Committee
Date: February 12 2013
Revised: February 19 2013
Revised: March 17 2013
Revised: April 16 2013

**Academic Senate Instruction Committee
Report on Student Evaluations at Cal Poly
February 12 2013**

Background:

In Fall 2013, the Academic Senate Executive Committee, at the request of Provost KathleenENZ Finken, charged the Instruction Committee to examine the structure of student evaluations at Cal Poly. In particular, the Committee was asked to consider the benefits of university-wide student evaluation questions.

Findings:

The Academic Instruction Committee gathered course evaluations from across the University and compiled their questions in order to identify common evaluation questions. The data were divided between 27 departments across the Colleges Architecture and Environment Design, Liberal Arts, and Science and Mathematics, and three colleges—Colleges of Engineering, Agriculture, Food and Environmental Sciences, and Business—that use common evaluation forms. UNIV evaluation forms were not included because they tend to be focused on specific faculty members teaching the course.

There exists a significant amount of difference between the length and scope of current student evaluations, ranging from 2 questions in one department to over 40 in others.

Since there exists no clear metric to account for comparing college-wide evaluation forms and departmental forms, the information included below distinguishes between the two. The following evaluation questions were the most commonly asked across the University:

1.	Student's class level	3 colleges, 25 depts.
2.	Requirement vs. elective course	3 colleges, 25 depts.
3.	Instructor's overall quality	3 colleges, 21 depts.
4.	Instructor's communication or presentation of material	2 colleges, 18 depts.
5.	Instructor's preparation and/or organization	2 colleges, 15 depts.
6.	Instructor's knowledge of subject matter	1 college, 12 depts.
7.	Student's interest in the course or subject matter	1 college, 12 depts.
8.	Instructor communicated course objectives	1 college, 9 depts.
9.	Overall quality of the course	1 college, 8 depts.
10.	Instructor's interest and/or enthusiasm for the course	1 college, 8 depts.

Recommendations:

After considering the data gathered from across the University and several universities nationwide, the Instruction Committee recommends that the Academic Senate approve two university-wide evaluation questions:

1. Overall, this instructor was educationally effective.
2. Overall, this course was educationally effective.

Limiting the scope of the university-wide questions provides the greatest amount of flexibility for colleges, departments, and faculty to determine the content of student evaluation questions. Since these two questions are summative, the committee recommends that colleges, departments, and faculty should generate discipline specific formative evaluation questions.

The Committee recommends that a five-point Likert-type scale be used for university-wide questions and all numeric student evaluation questions. This scale would be divided as follows: 1. Strongly agree; 2. Agree; 3. Neither agree nor disagree; 4. Disagree; 5. Strongly disagree. Currently, student evaluation forms used across the University are largely based on such a rating scale (the ratings are typically labeled as A-E, 0-4, or 1-5). The Committee recommends that the University continue to use this same scale in order to provide continuity with previous evaluations and Retention, Promotion, and Tenure (RPT) cycles. This will be particularly important when evaluations are administered online rather than the current Scantron forms. The Committee also recommends that any summaries of Likert-scale numeric scores are reported as tabled distributions rather than their mean and standard deviation.

The committee supports the conclusion of the San José State University "Student Opinion of Teaching Effectiveness (SOTE) Guide 2011," which states that "statistically significant" differences exist between colleges and departments and, "[i]n light of this, it is important that RTP committees evaluating candidates from different departments and colleges (University level RTP) compare instructors to colleagues within their own departments and colleges" (p. 10). The importance of contextualizing student evaluation data has also been supported by the CSU, CSU Academic Senate, and CFA Joint Committee "Report on Student Evaluations" (March 12 2008) and Cal Poly Research and Professional Development Committee (AS-690-09). Such contextualization should also apply to the comparison of the different types of courses (for instance, large lecture courses as opposed to small seminars) to avoid conflating evaluation data from different course settings. Furthermore, data from university-wide questions should not be taken as actionable information as to why a student rated an instructor or course more or less effective. Colleges and departments should ask more specific questions to achieve those kinds of results. This is especially important given that research of student evaluations cautions that using non-contextualized student evaluations for faculty review "remains open for serious debate" (Craig, Merrill, Kline 2012).

State of California
M e m o r a n d u m

-16-

CAL POLY
SAN LUIS OBISPO

To: Steven Rein
Chair, Academic Senate

Date: May 23, 2013

From: Jeffrey D. Armstrong
President



Copies: K. Enz Finken
B. Kinsley
D. Stegner

Subject: Response to Academic Senate Resolution AS-759-13
Resolution on Student Evaluations

This memo formally acknowledges receipt and approval of the above-entitled Academic Senate resolution.

Please express my appreciation to the Academic Senate Instruction Committee members for their efforts in this matter.

Adopted:

**ACADEMIC SENATE
Of
CALIFORNIA POLYTECHNIC STATE UNIVERSITY
San Luis Obispo, CA**

AS-__-16

RESOLUTION ON SCHEDULING EVENTS DURING FINAL EXAMINATION PERIOD

1 WHEREAS, In the 2015-16 academic year, several departments, programs, and a
2 college attempted to schedule events, such as banquets, award
3 ceremonies, or official end-of-term gatherings, during the final
4 examination period because of space issues during commencement
5 weekend; and
6

7 WHEREAS, Events sponsored by departments, programs, and colleges could
8 create a conflict for students between their academic performance
9 and their wish to participate fully in such events; and
10

11 WHEREAS, Cultural commencement ceremonies, which are sponsored by clubs
12 rather than departments, programs, or colleges, have historically
13 occurred during the final examination period, but are separate from
14 students' academic majors; therefore be it
15

16 RESOLVED: That departments, programs, and colleges shall not request University
17 Scheduling in the Office of the Registrar to schedule such end-of-term
18 events during the final examination period, and be it further
19

20 RESOLVED: That departments, programs, and colleges shall not schedule such end-of-
21 term events on or off campus during the final examination period.

Proposed by: Academic Senate Instruction
Committee

Date: July 1, 2016

Adopted:

**ACADEMIC SENATE
Of
CALIFORNIA POLYTECHNIC STATE UNIVERSITY
San Luis Obispo, CA**

AS-__-16

**RESOLUTION ON PROPOSAL TO ESTABLISH
THE PACKAGING VALUE CHAIN CENTER**

1 RESOLVED: That the Academic Senate of Cal Poly endorse the attached proposal
2 for the establishment of the Packaging Value Chain Center.

Proposed by: Jay Singh, Professor and Packaging
Program Director
Date: August 2, 2016



CAL POLY
Packaging Program

Proposal to Establish the Packaging Value Chain Center

**California Polytechnic State University
San Luis Obispo, CA**

Submitted by: Jay Singh, Professor and Packaging Program Director
Industrial Technology Area
Orfalea College of Business

Date: April 13, 2016 (Revised August 17, 2016)

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This proposal is for the establishment of a Packaging Value Chain Center at Cal Poly. The primary intent of the proposed Center is to broaden the current fortes in packaging research at Cal Poly through a broader *process view* of the global packaging industry. The proposed *value chain* based approach will signify comprehensive research opportunities involving all activities performed by organizations in the packaging industry aimed at delivering a valuable product to the market.

BACKGROUND

A. *The Discipline of Packaging Technology*

Packaging is the technology that includes the process of design, evaluation, production of packages and subsequently enclosing or protecting products for distribution, storage, sale, and use. It can be described as a coordinated system of preparing goods for transport, warehousing, logistics, sale, and end use. Packaging contains, protects, preserves, transports, informs, and sells. In many countries it is fully integrated into government, business, institutional, industrial, and personal use¹.

In academia, *Packaging* as an interdisciplinary field involves business, design, technology, science, engineering, and the environmental disciplines. Packaging science and technology has become, more than ever, a key to business success because of dramatic economic and technological changes across a range of industrial sectors, particularly the globalization and outsourcing of some portion of nearly all value-added products. Additionally, the public policy environment, both domestic and international, is placing new demands on the packaging industry to improve its environmental footprint, reduce energy consumption, enhance recycling and contribute positively to global sustainability. Global packaging sales rose by 3% in real terms to \$797 billion in 2013 and are projected to grow at an annual rate of 4% to 2018 and reach \$975 billion.

B. *Packaging Technology at Cal Poly*



The Cal Poly Packaging Program has developed a national reputation as a significant source of packaging research and education. An increasing number of companies support packaging related research and development projects at Cal Poly, resulting in a growing portfolio of larger research projects funded by government and other third-party organizations. The Cal Poly Packaging Program, by most assessments, is considered among the top five university-based programs in the United States in Packaging Science and Technology. Located at the Orfalea College of Business, the program is offered as a Major (Industrial Technology with Packaging emphasis), a Concentration (Consumer Packaging Solutions) and a Minor. The program is also currently developing a MS in Packaging Value Chain (PVC) degree (and certificates) aimed at professionals with a targeted launch date of Fall 2017.

¹ Soroka (2009) *Fundamentals of Packaging Technology*, Institute of Packaging Professionals

C. Packaging Value Chain

The term packaging value chain refers to the network of interconnected businesses and their value creation processes, covering all stages of suppliers - from the point of origin of a packaging solution and all tiers of customers out to the point of consumption of the product and the ultimate end-of-life of the packaging. As the power of business customers grows with the increasing technology development, information ubiquity and globalization of markets, delivering customer *value* is becoming increasingly critical. From packaging being regarded merely as a logistical or materials issue, there has been a shift in the value-creating logic of the packaging industry.



Packaging continues to grow beyond being a support function that puts products in some type of container to a strategic business function aimed at creating value. As a business function, packaging spans the entire range of a packaged goods company's activities and brings the holistic agenda to the table. In doing so, it becomes the strategic enabler that helps other functions deliver benefits to the consumer. Strategically considered, packaging incorporates procurement, R&D, marketing, sales, sustainability and plays a role in defining margins and profitability. Following are some future trends and drivers for development of packaging supply chain models:

- Global growth of the middle class
- Network optimization
- Packaging Technologies – Materials and Design
- Modeling and simulation, product, package and supply chain
- Sustainability
- Transparency and risk mitigation

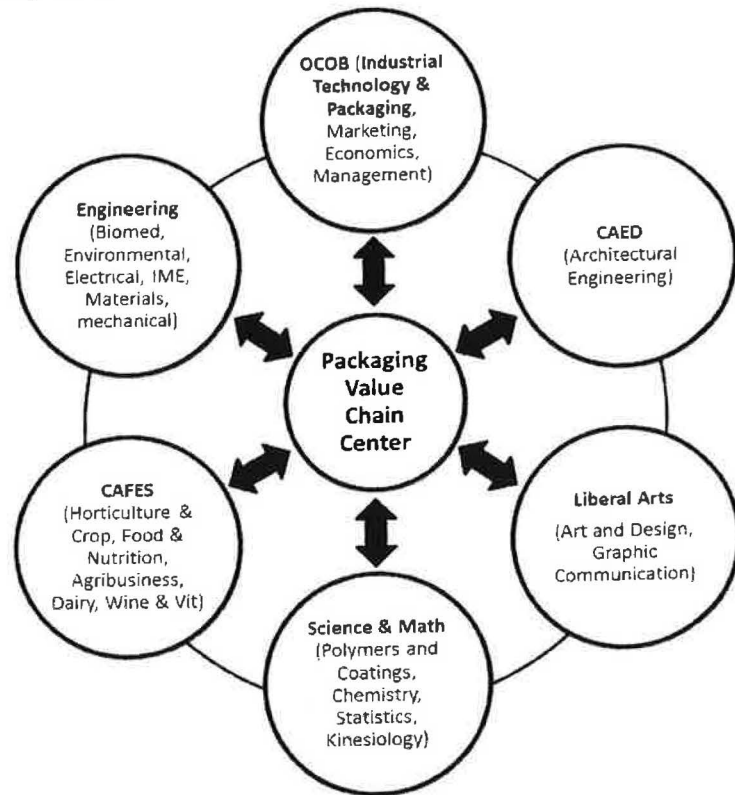
Shifting Production Systems

Current	Future
■ Linear	■ Circular
■ Global	■ "Glocal"
■ Mass	■ Niche & Custom
■ Big Batch	■ Small Batch
■ Big box	■ E-tail
■ Regional Brands	■ Global Brands
■ Global Brands	■ Regional Brands
■ Extractive	■ Biological
■ Brown	■ Green

The implication of the above mentioned trends and drivers is big shifts in the production system that will demand 'more and different' from packaging across the value chain.

D. Packaging Value Chain Center Background

Considering the importance of packaging to the international economy and the enhanced reputation of the Cal Poly Packaging Program, the Orfalea College of Business seeks to form a *Cal Poly Packaging Value Chain Center* that will further enhance professional development opportunities for Cal Poly faculty, build links with industry and the community, provide an identifiable campus entity for practitioners, foster interdisciplinary work (figure on right), aid in obtaining external support and complement the instructional program. The Center will also provide a venue to interlink multiple departments, colleges, and centers within Cal Poly. Moreover, the Center will perform an



important coordinating and clearinghouse role among students, faculty and staff who are involved in this interdisciplinary field and interested in practicing their academic disciplines.

Dr. Jay Singh, Director of the Packaging Program, developed this proposal through discussions with Dean Scott Dawson of the Orfalea College of Business, Dr. Eric Olsen, Chair of Industrial Technology Area, and Mary Kelting, Associate Dean of Advancement in the Orfalea College of Business. These discussions focused on the most effective utilization and expansion of Cal Poly's *learn-by-doing* philosophy in a business/technology-oriented education supported by faculty intellectual contributions in applied, discipline-based and pedagogical research.

This proposal has the full support from the Packaging Advisory Board and the OCOB Dean's Advisory Council.

VISION AND MISSION

The vision of the Cal Poly Packaging Value Chain Center is *to create a nationally recognized education and research Center in the realm of interdisciplinary packaging related themes. Its mission will be to enhance interdisciplinary research and development opportunities among Cal Poly faculty and students and the packaging industry through collaborative research-based projects addressing real-world issues.*

Both the vision and mission of the Packaging Value Chain Center comport with the Cal Poly Strategic Plan to integrate, connect and interlink Cal Poly disciplines, faculty, staff and students, all as partners in teaching, learning, scholarship and service to provide a comprehensive polytechnic educational experience and common polytechnic identity.

PURPOSE

A. OBJECTIVE

Drawing on the expertise of numerous Cal Poly faculty, representing nationally recognized programs across all six colleges, the Cal Poly Packaging Value Chain Center will advance packaging innovation and improve the prospects for successful outcomes. The Center will provide a forum that:

1. Attracts packaging related decision makers from across industries and across corporate functions
2. Promotes idea sharing and idea generation
3. Supports programmatic multi-disciplinary research efforts that draw on the combined expertise of Cal Poly faculty and provide value to industry partners.

Following is a representative list of researchers with *potential* of interdisciplinary packaging-focused research at Cal Poly.

- *Architecture*: Clare Olsen
- *Graphic Design*: Mary LaPorte and Enrica Lovaglio Costello
- *Economics*: Sanjiv Jaggia and Steve Hamilton
- *Electrical Engineering*: Dean Arakaki
- *Finance*: Pratish Patel and Cyrus Ramezani
- *Food Science & Nutrition*: Amy Lammert, Amanda Lathrop, Samir Amin and Gour Choudhury
- *Geotechnical & Geoenvironmental Engineering*: Jim Hanson and Nazli Yesiller
- *Graphic Communication & Printing*: Malcolm Keif and Colleen Twomey
- *Industrial & Manufacturing Engineering*: Tali Freed
- *Industrial Technology*: Jay Singh, Eric Olsen, Ahmed Deif, Koushik Saha, Javier de la Fuente and Ajay Kathuria
- *Management*: Kevin Lertwachara and Rami Shani
- *Marketing*: Jeff Hess, Lynn Metcalf and Joan Lindsey-Mullikin
- *Polymers & Coatings*: Philip Costanzo, Ray Fernando and Chad Immoos
- *Statistics*: Soma Roy and Gary Hughes

B. RESEARCH FACILITIES

The currently existing teaching and research lab facilities in the Packaging Program include the following:

- i. *Distribution Testing*: This facility is well equipped to simulate the physical distribution environment packages typically experience in real life. It is International Safe Transit Association (ISTA) certified and is equipped with physical and ambient environmental simulation equipment.
- ii. *Package Design*: This facility is equipped for designing and prototyping paper-based packaging such as boxes, folding cartons, and displays.
- iii. *Rapid Prototyping*: This lab is equipped with a 3D printer
- iv. *Materials and Analytical Testing*: This lab is equipped with the most commonly used material testing equipment for paper, plastic and glass substrates towards application in packaging
- v. *Polymer Processing*: This facility has a majority of processing equipment at different scales for converting plastic resin into films and forms.

With the approval of this proposal, the facilities and related research capabilities that will be developed/expanded are:

- i. *Healthcare Packaging*: Expansion that will consist of most commonly used testing and measuring equipment for pharmaceutical and medical device packaging applications. (~144 sq. ft. expansion)
- ii. *Consumer Evaluation*: This facility will consist of a simulated retail environment to carry out consumer studies and a flexible area to be used for focus groups and usability studies. (~1100 sq. ft. expansion)
- iii. *Package Design*: The expansion will consist on new equipment for printing/plotting blanks for packages, laminating on corrugated and paperboard, and for prototyping packages from printed blanks. (~225 sq. ft. expansion)
- iv. *Rapid Prototyping*: New small 3D printers for student use and a 3D printer with capabilities to produce parts and tooling on a variety of materials (rubber-like, clear, flexible, etc.). (~225 sq. ft. expansion)
- v. *Analytical Testing*: This lab will be equipped with characterization instruments to evaluate mechanical, thermal, thermo-mechanical, permeability, chromatography and rheological studies of the polymeric materials. (~225 sq. ft. expansion)

C. CURRENT PACKAGING RESEARCH VENUES

- i. *The Cooperative Research Consortium in Packaging Science and Technology*

The Cal Poly Cooperative Research Consortium in Packaging Science and Technology was established in 2008. The Consortium is in its eighth



year of successful operation with the consistent support of ten or more organizations annually and the Cal Poly Office of Research and Economic Development. This Consortium represents a partnership among Cal Poly Industrial Technology faculty and researchers from several other departments/colleges, and companies either producing or utilizing packaging to sell their products. Following is a selective list of research projects undertaken:

- Evaluation of Sustainable Recycled and Biodegradable Substrates in Packaging
- Characterization of Single and Multi-Layer Films for Modified Atmospheric Packaging
- Life Cycle Inventory (LCI) as a Tool for Packaging Sustainability
- Radio Frequency Identification (RFID) Tag Embedded-Distribution Packaging Solutions
- Global Database for Packaging Life Cycle Assessment (LCA) Studies
- "First Mile" Distribution Analysis for Fresh Produce Packaging Systems
- Validation of post-consumer recycled and bio-based, biodegradable substrate composition, American Society for Testing and Materials (ASTM) label claims for sustainability, food safety, performance and regulatory compliance
- Migration of low-molecular weight compounds from polymeric substrates

ii. Cal Pack Labs



Cal Pack Labs, a fee-for-service initiative the Packaging Program established in 2003, has been successfully assisting the industry through development/improvement of packages/package systems as related primarily to the distribution environment. Dozens of fee-for-service or contract-service projects are successfully undertaken each year. A central mission of Cal Pack Labs is to provide education, research and testing services to the packaging industry. This initiative puts into practice Cal Poly's desire to engage faculty in research in their field of expertise. At Cal Pack Labs, faculty is engaged in research, testing and consulting services in a packaging environment to solve current industry issues. Faculty has the opportunity to obtain experience from these activities through the application of research methods and individual consultation, leading to future research opportunities, and ultimately apply the relevance of their results in classroom situations.

iii. Expanding Packaging Program

The Packaging Value Chain Center is a great opportunity for Cal Poly to position itself as a leading research institution in the ever-evolving field of packaging. The establishment of the proposed Packaging Value Chain Center will draw from the present success of the packaging research initiatives and help broaden the scope to:

- Provide cross-discipline/cross-campus opportunities for the professional development of faculty through basic and applied research and development activities through industry consultations and faculty exchanges in the area of packaging science.
- Foster and facilitate interdisciplinary efforts among departments and across colleges.

- Provide a clearinghouse for information of interest to practitioners in the packaging industry and to conduct executive training workshops and conferences for their continuing education.
- Enhance the packaging curriculum being covered in various Cal Poly units such as Food Science and Graphic Communication by facilitating and supplementing academic learning.
- Develop opportunities for undergraduate and graduate students to practice their academic disciplines by providing learn-by-doing research opportunities in the field of packaging science and technology.
- Provide supplementary educational support by acquiring gifts, general-purpose grants and equipment donations for all educational units across campus.

The Cal Poly Packaging Value Chain Center will have the capacity to pursue a range of research not typically possible at a single organization. It will provide a venue for cross-company collaboration and provide opportunities for learning and the exchange of ideas amongst the Cal Poly researchers and the industry.

D. Environmental Factors Favoring Establishment of the of Packaging Value Chain Center

The Packaging Value Chain Center will leverage by way of illustration rather than limitation, the following synergistic efforts and circumstances:

- Current interdisciplinary collaborations will provide a larger platform to promote interlinked cross-campus, faculty-student engagement, increased fundraising opportunities, as well as increased exposure for each college among industry leaders
- Packaging technology has undergone a fast and significant development in recent decades; however the smartest developments are yet to arrive. Today's modern society depends to a large extent on the availability and use of modern packaging technology, comprising a vast variety of modern materials, high tech applications and smart operations. Modern packaging technology aims to meet a vast range of requirements ranging from providing food safety, via low cost storage and distribution, self-selling marketing, convenient consumer use, and responsible waste management practices
- The existing efforts in the area of packaging-related research have been significant over the past decade. A small core team with assistance from several other Cal Poly units has championed these efforts and *brought in millions of dollars in external funding*.
- The core packaging team includes four tenured/tenure track faculty members from very diverse qualifications within the Industrial Technology area. Numerous other experts currently exist in various other departments/colleges such as Food Science and Graphic Communications
- This proposal represents several significant activities across Cal Poly and seeks to enhance the same by providing a venue to foster and facilitate interdisciplinary efforts and cooperation among departments and colleges
- The Packaging Program at Cal Poly presently enjoys the reputation of being the premier educational and research program west of the Mississippi river and as such provides a tremendous opportunity to invite trendsetting and leading research to the campus

- Preliminary discussions with several Cal Poly departments and colleges indicate a high level of interest and involvement in packaging-related interdisciplinary research
- OCOB has identified Packaging as an area of global distinction and is completely supportive of its near and long term undertakings including the proposed Center
- The MS PVC program, geared towards professionals and targeted to be launched in Fall 2016, will also accommodate increased collaboration opportunities with the industry
- The Packaging Advisory Board, consistent of 29 leaders from the industry, and the OCOB Dean's Advisory Council are fully supportive and willing to be the ambassadors of the Center in terms of participation, promotion and recruiting
- The Cal Poly Packaging Program enjoys a global reputation as a leading packaging education and research venue. This was demonstrated at the World Packaging Conference hosted at Cal Poly in 2012. Approximately 150 attendees from 23 countries participated in 90 plus presentations over the 4 day event

PACKAGING VALUE CHAIN CENTER ACTIVITIES

The Packaging Value Chain Center proposes a multi-part structure which will offer flexibility to participating industry members and researchers from various colleges and departments to tailor their research initiatives and undertakings. This customizable approach will allow the sponsoring participants to meet the challenges of cutting edge science and technology in a diverse research environment.

Following are some of the key components of the proposed Packaging Value Chain Center. The design is modeled after the successful Center for UMass/Industry Research on Polymers at the University of Massachusetts.

A. Research Consortia

The Packaging Value Chain Center will continue to use the NSF-I/UCRC format used by the existing Packaging Consortium, in which the research costs and results will be shared with other members in a focused, team-oriented approach. New research consortia targeted towards specific research areas, such as the current focus on fresh produce, will allow small team dynamics between industry sponsors and Cal Poly faculty and students. Benefits to the sponsoring organizations include exclusive reports that they can access one to two years prior to any publications by researchers; meetings, symposia and workshops on the topics of interest; a nonexclusive, royalty-free, nontransferable right and license to access and use materials (software, documentation, manuals, reports, papers and other information licensed or otherwise furnished or made accessible) during their term of membership provided they satisfy all responsibilities and obligations under the consortium agreement.

B. Sponsored Research Projects

The Packaging Value Chain Center will also carry our traditional sponsored research projects through which individual organizations can support research on their topic of interest with individual or teams of faculty. The organization and research teams will collaboratively design the program to meet the sponsor's unique needs. The sponsors of this stream of research will be provided an option to join any of the research consortia in the Packaging Value Chain Center.

C. Unrestricted Research Grants (Gifts for Research)

Philanthropic donations will allow for creative and unrestricted use of funds by the Cal Poly researchers. Packaging Value Chain Center-based research professorships, internships and funding of industrial lectureships will be possible.

D. Short-Duration, Idea-Development Research Projects

This option will provide the participants a venue to scope out potential programs through idea development and concept feasibility in short-duration and focused research studies. The preliminary results will be useful to determine whether a longer-term research undertaking is warranted and will also assist in providing research direction for any future work. This program will be available on a limited basis with agreement of the individual (or a team of) faculty members(s) and the Packaging Value Chain Center Director. This will be accomplished through Cal Pack Lab Research, Testing and Consulting Services (Cal Pack Lab), an existing fee-for-service University mechanism.

E. Outreach and Education

Workshops, seminar series and summer workshops will also be organized resulting from research conducted at the Cal Poly Packaging Value Chain to provide an opportunity for students, faculty, and industry to contribute, learn and discuss the research topics undertaken. The Packaging program has been hosting a successful annual freshPACKmoves Seminar in Monterey for the past two years focusing on focus on packaging innovation; food safety and traceability; sustainable packaging solutions; and cold chain logistics for fresh perishables.

FINANCIAL RESOURCES

The table below, provides an itemized budget with estimated revenues and expenses of the Center for an initial period of five years. Start-up funds raised through the *Center Founders' Circle* and *Corporate* memberships as well as the current momentum of research activities (external grants and consortium revenues) will initially support the hiring of a part time Administrative Director and a Technical Director who will coordinate Center activities and operations. *The OCOB will provide an amount of up to \$50,000 as backstop funding loan to the Center in case of need during the first two years of operation.* In the third year, a combination of additional personal and corporate memberships, consortium revenue, initial return of external funds from grant related activity, workshop/seminar/conference revenues and gifts will support the

Administrative Director full time, the Technical Director part time as well as the post doc and student assistants along with any external resources to organize the events affiliated with the Center.

Start-up Funds: These funds will be raised through a Center Founders' Circle and Corporate membership campaign. This will be done through the support of the OCOB Dean's office and the Cal Poly Packaging Alumni group.

Private Gifts for Research: These unrestricted research grants will be solicited from individuals and private foundations interested in supporting the packaging related research efforts of Cal Poly and the Orfalea College of Business

External Funds: The Cal Poly Packaging Value Chain Center will be a focal point for significant grant writing activity by affiliated faculty and staff. Grant proposals will be submitted to both private foundations with an interest in packaging related research as well as government funding sources.

Earned Income – Conferences, Seminars and Executive Training programs: The Center will present a series of events and conferences starting in year 1 or 2, including boot camps, executive sessions, and a major annual symposium - *freshPACKmoves* (focused on providing the fresh produce industry a critical edge in the competitive arenas of packaging innovation, food safety & traceability, sustainable packaging solutions, and cold chain logistics for fresh perishables).

Endowment Income: The Center will raise an endowment based upon naming and other support opportunities. The income from this endowment will support the mission of the Center.

Intellectual Property: It is assumed that the research activity of the Center will occasionally result in intellectual property. The Cal Poly Intellectual Property Policy as placed by the Research and Economic Development division at <http://www.research.calpoly.edu/policyip> will be consulted upon with regards to ownership and other interest, administrative procedures, income allocations and implementation. With regards to any IP arising from Consortium activities, a Cal Poly sanctioned agreement on intellectual property that includes both non-exclusive licenses for member companies, as well as exclusive agreements when in the interest of consortium members will be considered.

Note: The Packaging research team from the OCOB has received over \$3,730,000 in external funding since 2003 through competitive grants for research from state and federal agencies as well as proprietary research for packaging organizations. These projects have been undertaken with investigators from several units at Cal Poly as well as other universities.

1. The Cooperative Research consortium in Packaging Science and Technology,
~\$1,400,000
2. Cal Pack Lab, ~\$126,000

3. External Grants, \$2,200,000

EXPENSES & REVENUES

The table below provides an overview of the estimated expenses and revenues for the first 5 years of the Cal Poly Packaging Value Chain Center.

Expenses	Year 1 ^a	Year 2 ^b	Year 3 ^b	Year 4 ^b	Year 5 ^b
Administrative Director*	\$162,000	\$170,100	\$178,605	\$187,535	\$196,912
Technical Director**	-	-	-	-	-
Interns	-	\$10,000	\$20,000	\$20,000	\$20,000
Consortium/Sponsored research	\$229,500	\$365,000	\$475,000	\$597,000	\$733,400
Fee-for-service	\$25,000	\$35,000	\$45,000	\$55,000	\$65,000
Scholarship for MS PVC students	-	\$20,000	\$30,000	\$40,000	\$50,000
Professional seminars/training	\$20,000	\$20,000	\$30,000	\$40,000	\$50,000
Rent	-	\$96,000	\$96,000	\$96,000	\$96,000
Center Operations	\$10,000	\$20,000	\$25,000	\$30,000	\$35,000
Travel Expense	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
TOTAL EXPENSES	\$456,500	\$746,100	\$909,605	\$1,075,535	\$1,256,312

Revenue	Year 1 ^{**}	Year 2 ^{***}	Year 3 ^{***}	Year 4 ^{***}	Year 5 ^{***}
Consortium	\$214,500	\$300,000	\$360,000	\$432,000	\$518,400
Sponsored research	\$50,000	\$100,000	\$150,000	\$200,000	\$250,000
Fee-for-service	\$30,000	\$40,000	\$50,000	\$60,000	\$70,000
Center Founders' Circle Membership	\$150,000	\$200,000	\$200,000	\$200,000	\$200,000
Corporate contribution/donation	\$25,000	\$100,000	\$200,000	\$250,000	\$300,000
Professional seminars/training	\$20,000	\$50,000	\$60,000	\$70,000	\$80,000
TOTAL REVENUE	\$489,500	\$790,000	\$1,020,000	\$1,212,000	\$1,418,400

*includes ~60% towards benefits package and 5% annual raises

**OCOB will compensate the Packaging Program Director for undergraduate/graduate programs and the technical director roles

**A majority of Year 1 expense and revenue numbers are accurate and any projections included are conservative

***Year 2-5 projections are estimated

A. EXPENSES

- a. Administrative Director: It is proposed that a person from the packaging or related industry be brought in to serve as the Administrative Director. This person will report to the Dean of OCOB. Specific responsibilities of the Administrative Director include:

- Coordination of Center-supported research projects
- Coordinate the selection and launching of research projects based on recommendations of the Center's Executive Committee (EC) and Advisory Board (AB). The organizational Chart is provided later in this document.
- Interaction with industry participants through the EC and AB as well as other formal and informal mechanisms
- Interaction with college and university leadership
- Promotion of the research and technology transfer missions of the Center
- Seeking new members for the Center activities
- Making the necessary policy decisions with regard to operation of the Center and implementation of Center-related university policies
- Leading and managing the outreach and executive education activities
- Developing the annual reports and coordinating meetings supportive of the mission of the Center

A salary, consisting ~60% benefit package, of \$162,000 and an annual salary increase of ~5% are planned in the budget.

- b. Technical Director: The Director of the Packaging Program in OCOB will be the Technical Director of the Consortium and will report to the Dean of OCOB. Specific responsibilities of the Technical Director include:

- Consult with the Administrative Director on Center supported research initiative selection and launch
- Assist the Administrative Director in preparation of research project budgets
- Assist with defining the strategy with the research teams of each project
- Assist the Administrative Director in tracking and measuring each project's progress
- Supervise the operation, maintenance and procurement of any Center based research related software, supplies and equipment in the Cal Poly Packaging Program labs

OCOB will provide a compensation package to the Technical Director that will also include leadership roles in the undergraduate and graduate programs.

- c. Interns: Cal Poly students (undergraduates and graduates) will be provided paid internship opportunities towards assistance with the various administrative activities for the Center.

No interns are planned to be hired during the first year of operation of the proposed Center.

- d. Consortium/Sponsored Research: Cal Poly students (undergraduates and graduates) will be provided paid research assistant positions towards assistance with the various administrative activities for the Center. With the intent of building a reserve towards future promotion or research needs, a portion of the funding received via the research consortia and other sponsored research activities will be annually added into a related account.

It is anticipated that approximately \$229,500 from such research activities will be expended towards salaries, materials/equipment and travel for participating researchers during the first year of operation of the Center. This is based on a revenue of \$214,500 received for the consortium as well as other projected sponsored research revenue of \$50,000 this year.

- e. Fee-for-service: The Packaging Program, through its fee-for-service Cal Poly Corporation account, takes on testing/research projects from the industry. These are based on research capabilities and available equipment. Till-date, no internal or external promotion of such capabilities has been done. We anticipate that this venue will draw a significant amount of revenue through the promotion of the Center.

The projected expenses (salaries, materials, equipment maintenance, etc.) for the first year of operation of the Center for the fee-for-service activities is \$25,000

- f. Scholarships for MS PVC students: As previously mentioned, the Packaging Program is planning on launching an MS degree in Packaging Value Chain by Fall 2017. The on-campus students that enroll in this program will be financially assisted through scholarships towards their tuition and research.

No scholarships are planned to be disseminated during the first year of operation of the proposed Center.

- g. Professional Seminars/Training: The associated expenses represent the cost of marketing, organizing and hosting these events. The Packaging Program is hosting the third installment of freshPACKmoves Seminar in Monterey, California (May 16-18th, 2016). The seminar is designed to expand participants' knowledge base with access to first-hand intelligence, data-driven research, and top-notch speakers.

It is anticipated that the freshPACKmoves Seminar related expenses will be approximately \$20,000

- h. Rent: Upon the formal approval of the proposed Center, it is expected that on- or off-campus space will be sought towards administrative and meeting purposes.

No expenses are anticipated towards the Center office during the first year.

- i. Center Operations: These expenses will be primarily geared towards management of administrative and marketing undertakings.

It is anticipated that the related expenses will be approximately \$10,000 during the first year of operation

- j. Travel Expense: This expense is to reimburse primarily the Directors for travel related to the proposed Center activities.

It is anticipated that the related expenses will be approximately \$10,000 each year of operation

B. REVENUE

- a. Consortium: As previously discussed, the Cal Poly Packaging Research Consortium is currently in its 8th year of operation. While increasing the enrollment for the current consortium, the Center would allow for several other Consortia to be launched on other industry segments and or the packaging industries' collective research needs.

With 13 members this year, the membership dues amount to \$214,500

- b. Sponsored research: The Packaging Program has a great track record of attracting sponsored research aside from the Consortium. It is close to securing its second funded grant of approximately \$30,000 from the USDA's National Mango Board.

A conservative revenue of \$50,000 is anticipated for the first year of operation of the proposed Center

- c. Fee-for-Service: The Packaging Program has been successful in providing contract packaging research and testing to the industry through the Cal Pack Labs (Sponsored Programs) since 2003.

A conservative revenue of \$30,000 is anticipated for the first year of operation of the proposed Center

- d. Center Founders' Circle Membership: This involves \$25,000 pledge over 5 years from individuals. We are currently actively cultivating more than 20 individuals to support the center as a founders' circle member.

The solicitation for donations has started with the Packaging Advisory Board (PAB) members and \$40,000 has already been received. With an additional \$60,000 contribution to the Center by the OCOB Dean, we comfortably anticipate meeting the target of \$150,000 for the first year.

- e. Corporate: Corporate sponsorship levels being proposed are \$10,000, \$25,000 and \$50,000 annually. We anticipate that we would have as many as 10 corporations that are currently involved in our packaging program that are ready to be asked for sponsorship.

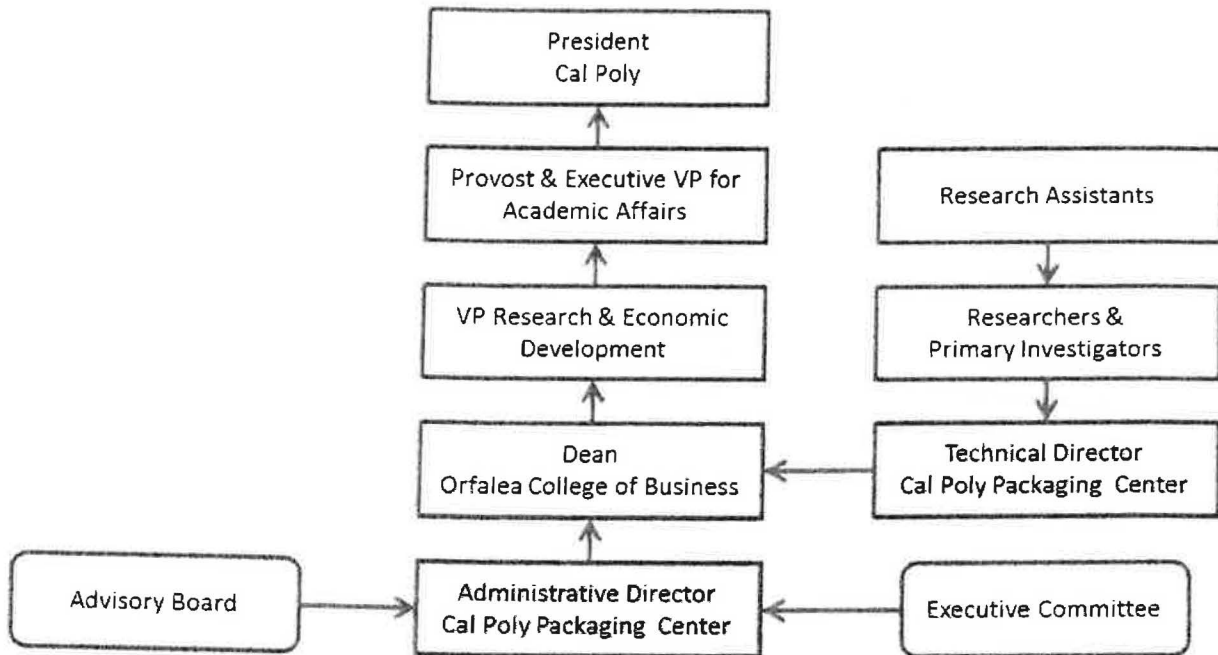
The PAB members will be discussing strategies towards seeking corporate donations at the April 22nd, 2016 meeting. We are conservatively including a \$25,000 solicitation for the first year of operation of the proposed Center.

- f. Professional Seminars/Training: This represents income from various outreach and education events hosted through the Center.

We are anticipating a revenue of \$20,000 from the upcoming freshPACKmoves Seminar

PROPOSED ORGANIZATIONAL CHART

The organizational chart below shows the reporting structure proposed.



The *Executive Committee* shall consist of the Directors plus three to five active faculty participants in the Center. The Directors will make recommendations to the Dean of the Orfalea College of Business for the appointment of faculty members to the Executive Committee. The Executive Committee shall be responsible for a) recommending candidates for Center participation; b) recommending members of the External Advisory Board; c) recommending Center programs and activities; d) recommending operating guidelines to implement Center programs and activities. Members of the Executive Committee will be appointed for two-year terms on a rotating basis. At a minimum, three members of the Executive Committee will be from colleges other than the Orfalea College of Business.

The *External Advisory Board* shall be composed of a minimum of five and a maximum of twenty members representing a spectrum of expertise and background associated with packaging science and technology. Initial appointments of between one and three years may be used to stagger Board membership terms. Thereafter, terms will be three years. The Board shall provide advice and comment on Center programs, shall engage in public relations and support activities for Center programs, and shall provide overall guidance and direction to the Center, working in consort with the Directors.

Adopted:

**ACADEMIC SENATE
Of
CALIFORNIA POLYTECHNIC STATE UNIVERSITY
San Luis Obispo, CA**

AS-__-16

**RESOLUTION ON PROPOSED NEW DEGREE PROGRAM FOR MASTER OF
SCIENCE IN PACKAGING VALUE CHAIN**

1 WHEREAS, Strategically considered, packaging incorporates procurement, R&D,
2 marketing, sales, sustainability, and plays a role in defining margins
3 and profitability; and
4

5 WHEREAS, There is an emerging emphasis on packaging value chain projected to
6 substantially impact current and future global supply chains; and
7

8 WHEREAS, The Industrial Technology Area has taught undergraduate
9 coursework in packaging technology for over twenty-eight years and
10 is considered amongst the top packaging programs in North America;
11 and
12

13 WHEREAS, The Industrial Technology Area is proposing a pilot online Master of
14 Science degree in Packaging Value Chain that exemplifies Cal Poly's
15 Learn by Doing philosophy and culminates in scholarly research
16 projects; and
17

18 WHEREAS, The Orfalea College of Business' Graduate Program Committee and the
19 Academic Senate Curriculum Committee have carefully evaluated this
20 proposal and recommend its approval; therefore be it
21

22 RESOLVED: That the Academic Senate of Cal Poly approve the proposal for the
23 Master of Science in Packaging Value Chain and that the proposal be
24 sent to the CSU Chancellor's Office for final approval.

Proposed by: Jay Singh, Professor and Packaging
Program Director
Date: August 10, 2016

2016 Academic Plan – New Degree Summary Statement
(2015-16 AY)

Title of Proposed Program	Master of Science in Packaging Value Chain (Pilot Degree Program)
College	Orfalea College of Business
Department	Industrial Technology
Contact name(s) and email(s)	Dr. Jay Singh, jasingh@calpoly.edu

1. **Delivery Mode of program:** Fully Face-to-Face ☐ Hybrid ☐ Fully Online ☒

2. **A brief summary of the purpose (i. e., mission and goals) and distinctive characteristics of the proposed degree program.**

The proposed MS in Packaging Value Chain (MS PVC) pilot program is devoted to the *advancement of knowledge and to motivate and co-create holistic, efficient and effective solutions in the realm of packaging and its impact across the global value chains*. The focus of the program is to elaborate on the role of packaging towards creating value addition and includes courses that build on each other towards a holistic understanding of the global packaging diaspora. Towards this goal, the interdisciplinary MS PVC program incorporates packaging science/technology, data analytics, design, marketing, finance, supply chain, operations and statistics. The MS PVC program also intends to offer five certificates that have been carefully designed to accommodate individual needs of professionals looking to advance their knowledge without the need for a graduate degree.

Each course in this fully online program has been developed to engage students in the latest developments in the relevant topics through collaborative online discussions involving case studies, solving real-life problems, and interacting with professionals from the industry. Students will participate in practical exercises related to topics for each of the courses. Online delivery of the courses also offers the professional students flexibility to engage in course content and activities while maintaining a work schedule in their home communities.

Through standardized process and consistency in the delivery of content, student competencies (e.g. engagement in problem solving, creativity, collaboration, research, etc.) will be enhanced in comparison to knowledge and skills typically associated with standard achievement tests or two-hour instructor lectures. Technology tools and lesson plans used in this course will also facilitate students' collaborative learning with peers from varied geographical, personal and professional backgrounds. The courses will follow CSU's Quality Online Learning & Teaching (QOLT) rubrics with students engaged in course content, instructors, and their community of inquiry in a well-designed and consistently delivered series of courses. Students will be given accessible and varied content that addresses a variety of learning styles as opposed to a more passive, lecture style of learning. Coursework will match the rigor and expectations of a face to face delivery model as students will use the same software and course materials as a fully on-site student might use. Modules of online learning and course progression in the online environment allow students to work at their own pace with deadlines set well in advance for their personal planning.

3. **The program's fit with the campus mission, strategic plan, and commitment to Learn by Doing.**

Our Mission: Cal Poly fosters teaching, scholarship, and service in a Learn by Doing environment in which students, staff, and faculty are partners in discovery. As a polytechnic university, Cal Poly promotes the application of theory to practice. As a comprehensive institution, Cal Poly provides a balanced education in the arts, sciences, and technology, while encouraging cross-disciplinary and co-curricular experiences. As an academic community, Cal Poly values free inquiry, cultural and intellectual diversity, mutual respect, civic engagement, and social and environmental responsibility.

Packaging continues to grow beyond merely being a *support function* that puts products in some type of container into a *strategic business function aimed at creating value*. The MS PVC program is an interdisciplinary degree program that encompasses packaging science, design, marketing, finance, supply chain, operations and statistics. *The program is designed to develop competencies in the substantive packaging and related business acumen and to promote transference of learning to the workplace for professionals*. The intent of the program is to provide professionals and full time students with opportunities to assume leadership roles and advance their careers.

See letter of support from the Dean of Orfalea College of Business at the end of this document.

4. **Support Mode:** State-Support ☐ Self-Support/Extended Education ☒
5. **Anticipated student demand.** Please provide projections in the table below and identify the evidence you have used to make these projections (e.g., US Bureau of Labor Statistics).

Enrollment Projections		Year 1	Year 3	Year 5
Number of Students	MS Degree	15	25	35
	Certificates	34	50	70
Number of Graduates (Cumulative, assuming ~90% graduation rate)	MS Degree	0	32	81
	Certificates	0	67	166

Evidence:

- a. The 1-year *MS in Industrial & Technology Studies* (MS ITS) degree offered by the Industrial Technology Area in OCOB graduated over 30 students each year until 2004. Subsequently until its suspension in 2008, MS ITS was modified to a 2-year degree program and graduated an average of 13 students per year. The MS ITS degree had a substantial packaging emphasis in the curriculum and thesis requirement. A survey to Cal Poly undergraduate students who could have potential interest in the MS PVC degree program was undertaken from May 2-9, 2016. Despite the absence of information sessions and limited response period provided, 113 undergraduate students responded from Industrial Technology, Consumer Packaging Solutions Concentration (OCOB), Food Science & Nutrition, Graphic Communication and Packaging Minor. Based on a response of "extremely interested" and "interested", the survey concluded that 24 Cal Poly undergraduate students could potentially enroll in MS PVC degree program in Fall 2017. An additional 48 students indicated "moderate" and "slight" interest in the program.

- b. Through promotions at the other undergraduate Packaging degree programs in the US, we conservatively project an additional 5-7 students enrolling in the 1-year degree program. With approximately 500 students graduating per year with undergraduate packaging degrees in the US¹, we foresee our unique *packaging value chain* emphasis to a graduate degree being preferable to traditional MBA or related degrees to these professionals.
 - c. A graduate degree as well as relevant certificates in packaging or related field provides professionals with substantial opportunities to assume leadership roles and advance their careers in the packaging industry². Numerous support letters from potential employers supporting the MS PVC degree and certificate offerings have been provided in the full proposal. A sample list of over 70 open career opportunities (until May, 2016) that either 'required' or 'preferred' a graduate degree in packaging or related fields is also provided in the full proposal.
 - d. The Dean of Orfalea College of Business has budgeted \$75,000 for marketing the program by Fall quarter of 2016.
 - e. The consultant report provided in the full proposal offers workforce demand projections for the MS PVC students. Given the primary focus on working professionals, online dissemination of courses, global demand and the right positioning, we foresee robust demand and enrollment at and after the initial launch of the MS in Packaging Value Chain program in Fall 2017.
6. **Workforce demands and employment opportunities for graduates.** Please describe the demands and opportunities and identify the evidence you have used to draw these conclusions.

Expert reports forecast an annual growth for the global packaging industry of 3.5% per year to 2020, with sales to reach \$997 billion by 2020³. In a definitive study of the North American packaging industry, currently valued at \$169.1 billion, experts project its growth to \$186 billion by 2017⁴. Per the consultant report provided in the full proposal, the expectations from potential recruiters of graduates from the MS PVC program includes: *skilled work force (technology, business, communication skills, consumer knowledgeable, global understanding); promotable, versatile, adaptable; strong personal values; strategic/tactical thinkers; critical thinkers; big thinkers and "doers"; resourceful and agile; creative and innovative; program must be collaborative; program must be highly recognized; and looking for highly effective leaders, fast...collaborative, data driven, less hierarchical.*

In response to "where would the MS PVC graduates fit in the industry", the corporations responded: *product manufacturers, brands, packaging manufacturers, 3PLs, transportation companies, military – civilian jobs, military contractors, contract manufacturing, management consulting and design firms.*

In terms of MS PVC graduates' fit in their organizations, the corporations stated:

- *Operating Supply Chain Leader* for specific product or category
- *Think line management* that could have a role in *strategically directing packaging* to differentiate the company
- *Likely be Packaging Department* – savings in handling equip, etc.,

¹ Survey of major North American Packaging Programs conducted by Dr. Jay Singh, January-March 2015

² IoPP, 2015 Salary Survey. http://www.iopp.org/files/2015_Salary_Survey_Report_FY15.pdf

³ Smithers Pira, The Future of Global Packaging to 2020. Research Report published December 14, 2015

⁴ Smithers Pira, The Future of Packaging in North America to 2017. Research Report published November 23, 2012

- *Manufacturing engineering or operations*
- Could reside in *Procurement*. Likely in *Package Design* or *Package Design evaluation*
- Retail – comes from *Distribution* – replenishment, planning, etc.
- *Cross functional leadership roles* – look at who will hire (*Project Launch Manager*)
- *Packaging supervisors, plant packaging managers, engineering, maintenance prep engineers, marketing and packaging group, every dept. needs a process engineer...very transferable*

These comments and observations were invaluable in developing the MS PVC program as well as in collating the current rationale on leading corporations' needs related to packaging value chain, particularly when hiring university graduates.

7. Other relevant societal needs.

The term *packaging value chain* refers to the network of interconnected businesses and their value creation processes, covering all stages of suppliers - from the point of origin of a packaging solution and all tiers of customers; out to the point of consumption of the product and the ultimate end-of-life options for the packaging. As the power of business customers grows with the increasing technology development, information ubiquity and globalization of markets, delivering customer value is becoming increasingly critical. From packaging being regarded merely as a logistical or materials issue, there has been a shift in the value-creating logic of the packaging industry.

Packaging continues to grow beyond being a support function that puts products in some type of container to a strategic business function aimed at creating value. As a business function, packaging spans the entire range of a packaged goods company's activities and brings the holistic agenda to the table. In doing so, it becomes the strategic enabler that helps other functions deliver benefits to the consumer. Strategically considered, packaging incorporates procurement, R&D, marketing, sales, sustainability and plays a role in defining margins and profitability. Some future trends and drivers for development of packaging supply chain models are: global growth of the middle class; network optimization; packaging technologies – materials and design; modeling and simulation, product, package and supply chain; sustainability; and transparency and risk mitigation. The implication of these trends and drivers is big shifts in the production system that will demand 'more and different' from packaging across the value chain.

8. **Provide an assessment of the required resources and the campus commitment to allocating those resources.** Provide a narrative description and an itemized list in the table below of the resources that currently exist to support the new program, as well as the additional resources that would be needed to added at initiation, after 3 years, and after 5 years.

2016 Academic Plan – New Degree Summary Statement
(2015-16 AY)

	Existing resources	At initiation- new resources	New resources to be added after 3 years	New resources to be added after 5 years
Faculty	9	1	0	1-2
Student allocations	0	0	0	0
Support staff	1	0	1	0
Facilities	None	None	None	None
Equipment	None	None	None	None
Information resources	Student/faculty access to PolyLearn and Zoom, electronic library and learning resources	None	None	None

Narrative:

Faculty: All faculty currently participating in the MS PVC program are full time faculty with expertise in the courses led by them. OCOB has approved a new tenure-track position in the primary area of Packaging Science and Technology with a start date of September 7, 2017. This faculty member will be immediately engaged in the MS PVC program. We expect the same course offering, listed in section 10, for the first 3 years of program implementation. As the program grows, we will take market needs into account to create new electives. This may necessitate recruitment of additional 1-2 faculty after 5 years. The self-support program is expected to generate sufficient revenue to fund these positions.

Student allocations: Student assistants are not required for this fully online program

Support staff: An additional staff member may be required with administration responsibilities related to the program after 3 years. The self-support program is expected to generate sufficient revenue to fund these position.

Facilities & Equipment: The MS PVC program will be offered fully online and no Cal Poly lecture and/or laboratory equipment/space will be required

Information resources: At launch we anticipate the software requirements to primarily be related to student/faculty access to PolyLearn (Moodle LMS) and Zoom (video-conferencing). Access to and support for both of these are provided by Cal Poly's Information Technology Services. With regards to the instructional support (electronic library and learning resources), support is available through Kennedy Library. As the software/support needs of the program evolve, the OCOB has a team of support staff who can provide support when campus-wide resources are unable to.

Note: The Dean's and Provost's signatures below represent the campus commitment to allocating these resources.

9. And, as applicable:

- a. If the projection is a pilot program, please list the academic years during which the program will operate in pilot status.**

2017-18 to 2021-22 (5 years)

- b. For new degree programs that are not already offered in the CSU, please provide a compelling rationale explaining how the proposed subject areas constitutes a coherent, integrated degree program that has potential value to students and meets CSU requirements for an academic program at the undergraduate or graduate level.**

In academia Packaging, as an interdisciplinary field, involves business, design, technology, science, engineering, and the environmental disciplines. Packaging science and technology has become, more than ever, a key to business success because of dramatic economic and technological changes across a range of industrial sectors, particularly the globalization and outsourcing of some portion of nearly all value-added products. Additionally, the public policy environment, both domestic and international, is placing new demands on the packaging industry to improve its environmental footprint, reduce energy consumption, enhance recycling and contribute positively to global sustainability.

There are less than a dozen 4-year degree programs in or related to Packaging in North America. Cal Poly's Packaging Program has developed a national reputation as a significant source of packaging research and education. An increasing number of companies support packaging specific recruitment as well as research & development projects at Cal Poly, resulting in a growing portfolio of returning/new employers as well as larger research projects funded by government and other third-party organizations. The Cal Poly Packaging Program, by most assessments, is considered among the top university-based programs in the United States in Packaging Science and Technology. Located at the Orfalea College of Business, the program is offered as a Major (Industrial Technology), a Concentration (Consumer Packaging Solutions) and a Minor.

The CSU system currently offers no graduate degree programs specifically devoted to the packaging value chain. San Jose State University offers a BS degree in Nutritional Science with a Concentration in Packaging but no standalone packaging specific graduate degree. There are no graduate programs at Cal Poly that offer any curricula related to the proposed MS Packaging Value Chain program.

10. Provide the Learning Objectives for the Program and the curricular requirements

The proposed MS PVC program aims as serving as an exemplar for Cal Poly's learn-by-doing philosophy through graduating students that will be able to:

- a. Specify holistic, efficient and effective solutions in the realm of packaging and its impact across the global value chains
- b. Develop analytical and critical thinking skills towards assessing the value addition proposition of packaging
- c. Analyze and explain local, national, and global ethical issues related to the packaging value chains
- d. Infer the present and anticipated future packaging needs of the global society

**2016 Academic Plan – New Degree Summary Statement
(2015-16 AY)**

- e. Effectively compose written and oral texts for a variety of scholarly, professional, and creative purposes

The table below identifies the core and approved elective course requirement towards the MS PVC degree.



Core Courses		
Course Number	Course Title	Units
GSP 530	Packaging Value Chain	2
GSP 532	Packaging Materials	4
GSP 533	Advanced Packaging Laws & Regulations	3
GSP 535	Packaging Value in Logistics and Supply Chain Management	3
GSP 536	Packaging Design	4
GSP 539	Marketing & Sales for Packaged Product	4
GSP 540	Quantitative Analysis for Packaging	4
GSP 591	Applied Industry Project	5
Core Subtotal		29
Approved Electives		
<i>Select any four</i>		
Course Number	Course Title	Units
GSB 520	Data Management for Business Analytics	4
GSP 541	Corporate Finance for Packaging	4
GSB 534	Lean Operations Management	4
GSB 563	International Business Tour	4
GSP 537	Distribution Packaging for Business Managers	4
GSP 538	Quality Evaluation of Packaged Products	4
Electives Subtotal		16
TOTAL UNITS		45

Specific to the requirements of Section 40510 of Title 5 of the California Code of Regulations, MS PVC students are required to take 5 units of GSP 591 (Applied Industry Project). The purpose of this core course is to engage in an interdisciplinary research activity, allowing for an opportunity to apply knowledge, skills, and competencies to address a significant issue in the field of packaging value chain, preferably in connection with the student's employment.

2016 Academic Plan – New Degree Summary Statement
(2015-16 AY)

11. Signatures

We confirm that the proposed new program fits with the mission and the strategic plan for the college. Additionally, there is a commitment to allocating the resources required by the proposed new program, both in the initiation phase and the future development of the program.

Department Chair/Head	Date
Dr. Eric Olsen 	8/15/16
Dean	Date
Dr. Sanjiv Jaggia 	8/15/16

We confirm that the proposed new program fits with the mission and the strategic plan for the campus.

Academic Program Consultative Committee	Date
Provost	Date

CAL POLY
OFFICE OF THE DEAN
ORFALEA COLLEGE OF BUSINESS

February 8, 2016

To Whom It May Concern,

The new MS Packaging Value Chain program will contribute to the mission of the Orfalea College of Business to produce career ready graduates. Packaging is a strong differential advantage for the College, and is one of two areas that we have identified for global distinction. Delivering the MS Packaging Value Chain program online allows us to reach working professionals across the United States, and potentially the world, thereby building the reputation and reach of the Orfalea College of Business.

In order to ensure the success of MS Packaging Value Chain program, we hired a consultant to collect input about the skills employers desire from graduates, to identify other programs in the market, and to verify the differential advantage we have because of our existing faculty, our packaging labs, our learn by doing ethos, and the polytechnic nature of the University. The new MS builds on a strong undergraduate program and the guidance of an advisory board of leaders from firms such as Pepsi, Walmart, Amgen, and Nestle. This board provided input on the MS curriculum, and will contribute to the program's success by recruiting students from their firms to enroll in the program and hiring graduates. The Deans Advisory Council from OCOB, which includes senior executives from firms such as Apple, Google, Cisco, and NetApp, enthusiastically endorsed the MS Packaging Value Chain program during its May 2015 meeting. In short, we have verified the need for the MS in Packaging Value Chain, and designed the program to meet well defined needs by methodically engaging with industry.

OCOB faculty are uniquely equipped to deliver the MS in Packaging Value Chain, which will be offered as a self-support program and will not interfere with the delivery or success of any other existing program in the College, or in any other academic unit at Cal Poly. In fact, experience from delivering this program online will provide an example to other faculty in the College that teaching online can yield important benefits. We will be adding to our cadre of packaging faculty by hiring additional faculty to deliver the program.

We will designate a Director of the MS Packaging Value Chain program to ensure that someone has clear responsibility for recruiting, admitting, advising, and placing graduates. The Orfalea endowment is helping to underwrite the costs of launching this program and ensuring its success.

The current facilities for OCOB have the capacity to house the administration and delivery of the MS in Packaging Value Chain. No new facilities are required.

I am very excited and confident about the future of the new MS in Packaging Value Chain. Please let me know if you have any questions or concerns.

A handwritten signature in black ink, appearing to read "Scott Dawson", with a stylized flourish at the end.

Scott Dawson
Dean

Adopted:

**ACADEMIC SENATE
Of
CALIFORNIA POLYTECHNIC STATE UNIVERSITY
San Luis Obispo, CA**

AS-__-16

**RESOLUTION ON THE REINTRODUCTION OF AS-603-03/IC,CC,GEC
[RESOLUTION ON CREDIT/NO CREDIT GRADING (CR/NC)]**

1 WHEREAS, Resolution AS-603-03/IC,CC,GEC [RESOLUTION ON CREDIT/NO
2 CREDIT GRADING (CR/NC)] was adopted by the Cal Poly Academic
3 Senate on June 3, 2003; and
4

5 WHEREAS, No response concerning Resolution AS-603-03/IC,CC,GEC was
6 received from President Baker; and
7

8 WHEREAS, Resolution AS-603-03/IC,CC,GEC was not implemented; and
9

10 WHEREAS, The above situation was not discovered until winter quarter 2016;
11 and
12

13 WHEREAS, Resolution AS-603-03/IC,CC,GEC would have produced substantive
14 changes to Cal Poly's policies on courses taken credit/no credit; and
15

16 WHEREAS, After thirteen years the Academic Senate should consider its position
17 on the adoption of these policies; therefore be it
18

19 RESOLVED: That the provisions of Resolution AS-603-03/IC,CC,GEC (excluding
20 those associated with subsequently abandoned POWER and CAPTURE
21 processes) be implemented under cover of the present resolution.

Proposed by: Academic Senate Executive
Committee

Date: August 30, 2016

Adopted: June 3, 2003

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

AS-603-03/IC,CC,GEC

**RESOLUTION ON
CREDIT/NO CREDIT GRADING (CR/NC)**

- 1 WHEREAS, This resolution pertains to courses that are normally graded, not to CR/NC-only
2 courses; and
3
4 WHEREAS, This resolution refers to undergraduate students only, not to graduate students; and
5
6 WHEREAS, Students in good standing (not on academic probation) should have the option of
7 taking a limited number of courses CR/NC; and
8
9 WHEREAS, The ability to take courses CR/NC can broaden a student's academic experience,
10 which should be encouraged; and
11
12 WHEREAS, POWER and CAPTURE currently prompt students to select normal grading or the
13 CR/NC option for each course they enroll in during registration; and
14
15 WHEREAS, The current policy, as approved by the Academic Senate in 1997, cannot be fully
16 implemented; therefore be it
17
18 RESOLVED: That undergraduate students be permitted to take up to 12 units of courses CR/NC
19 in accord with the following specifications:
20
21 • CR requires the student earn a C or higher; and
22
23 • The catalog and class schedule provide advice to students to consult with their
24 advisor when considering taking a major course CR/NC; and
25
26 • The method by which students elect the CR/NC option be removed from
27 students' course selection via POWER and CAPTURE and a designated link be
28 added to POWER to serve as the sole vehicle for electing the CR/NC option after
29 initial registration.

Proposed by: Academic Senate Instruction,
Curriculum, and General Education Committees
Date: April 29, 2003
Revised: May 14, 2003
Revised: May 28, 2003
Revised: June 3, 2003

Adopted:

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

AS-____-16

RESOLUTION ON RETIRING OBSOLETE ACADEMIC SENATE RESOLUTIONS

1 WHEREAS, A resolution approved by Cal Poly's Academic Senate reflects the concerns and
2 campus organization of the time in which it is adopted; and
3

4 WHEREAS, With the passage of sufficient time an adopted resolution may no longer hold
5 relevance; and
6

7 WHEREAS, Such obsolete resolutions should be identified and formally removed from the set of
8 active resolutions; and
9

10 WHEREAS, No process currently exists for determining the obsolescence of Academic Senate
11 resolutions or for their formal retirement; therefore be it
12

13 RESOLVED: That the *Bylaws of the Academic Senate* be amended as shown on the attached copy to
14 guide the formal retirement of resolutions by the Academic Senate.

Proposed by: Academic Senate Executive Committee
Date: August 25, 2016

V. MEETINGS

E. RETIRING RESOLUTIONS

When an Academic Senate resolution is suspected of being out of date or no longer pertinent, at the Chair's discretion the resolution may be submitted for review as to its current relevance by the Academic Senate committee that originally sponsored it or by an ad hoc committee. The committee's opinion regarding the resolution shall be forwarded to the Academic Senate Executive Committee. If the Executive Committee finds that the resolution in question should be retired, a proposal to this effect shall be placed on the Academic Senate's consent agenda. If no senator pulls the resolution from the consent agenda, the resolution shall be considered retired. If pulled from the consent agenda, the proposal will appear as a business item for debate at the next meeting of the Academic Senate. The President shall be informed of any such action and the Academic Senate shall update its records.

BYLAWS OF THE ACADEMIC SENATE

Fall 2016

II. MEMBERSHIP OF THE ACADEMIC SENATE

B. TERMS OF OFFICE

1. Terms of office for senators: the elected term of office for senators shall be a two-year term or one-year term when the caucus membership changes by more than two representatives. ~~A senator can serve a maximum of two consecutive, elected terms~~ A senator can serve a maximum of four consecutive years and shall not again be eligible for election until one year has elapsed. A senator appointed to fill a temporary vacancy for an elected position shall serve until the completion of that term or until the senator being temporarily replaced returns, whichever occurs first. If this temporary appointment is for one year or less or if the senator is serving a one-year elected term, it shall not be counted as part of the ~~two-term~~ four years maximum for elected senators. The representative for part-time academic employees shall serve a one-year term with a maximum of four consecutive one-year terms.
2. Terms of office for Academic Senate Chair: once a senator is elected to serve as Academic Senate chair, that senator becomes an at-large member of the Academic Senate and the position vacated becomes a college vacancy to be filled by the college caucus. The elected term of office for Academic Senate Chair shall be a maximum of three one-year consecutive terms.

C. REPRESENTATION

1. Colleges and Professional Consultative Services with an even number of senators shall elect one-half of their senators each year. Those with an odd number of senators shall not deviate from electing one-half of their senators each year by more than one senator. All of the senators from each college and Professional Consultative Services shall constitute the appropriate caucus.
2. When a college or Professional Consultative Services with an uneven number of senators gains a new senator due to an increase in faculty in a year when more than one-half of their senators are to be elected, the new Senate position shall be for one year for the first year, then two years thereafter.
3. There shall be no more than one **senator** per department/teaching area elected by any college where applicable until all departments/teaching areas within that college are represented. A department/teaching area shall waive its right to representation by failure to nominate. This bylaw shall have precedence over Article III.B of the *Bylaws of the Academic Senate*.