Meeting of the Academic Senate  
Tuesday, April 21, 2015  
UU 220, 3:10 to 5:00pm

I. Minutes: Approval of March 3 and March 10 Academic Senate minutes: (pp. 2-5).

II. Communication(s) and Announcement(s):

III. Reports:
A. Academic Senate Chair:
B. President’s Office:
C. Provost:
D. Vice President for Student Affairs:
E. Statewide Senate:
F. CFA:
G. ASI:

IV. Consent Agenda:

<table>
<thead>
<tr>
<th>Program Name or Course Number, Title</th>
<th>ASCC recommendation/ Other</th>
<th>Academic Senate</th>
<th>Provost</th>
<th>Term Effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSB 516 Strategic Marketing Analytics (4), 4 lectures</td>
<td>Reviewed 2/26/15; additional information requested from department. Recommended for approval 4/2/15.</td>
<td>On consent agenda for 4/21/15 meeting.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSB 520 Data Management for Business Analytics (4), 4 lectures</td>
<td>Reviewed 2/26/15; additional information requested from department. Recommended for approval 4/2/15.</td>
<td>On consent agenda for 4/21/15 meeting.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSB 530 Data Analytics and Mining for Business (4), 4 lectures</td>
<td>Reviewed 2/26/15; additional information requested from department. Recommended for approval 4/2/15.</td>
<td>On consent agenda for 4/21/15 meeting.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POLS 351 Public Administration (4) 4 lectures</td>
<td>Recommended for approval 2/26/15.</td>
<td>On consent agenda for 4/21/15 meeting.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

V. Business Item(s):
A. Resolution on Changes to the Bylaws of the Academic Senate: Gary Laver, Academic Senate Chair, second reading (pp. 6-10).
B. Resolution on Approving Assessment Process for Courses Meeting Sustainability Learning Objectives: David Braun, chair of Sustainability Committee, second reading (pp. 11-27).
C. Resolution on Information Request About Contract Ratification Votes: Manzar Foroohar, Statewide Senator, second reading (p. 28).
D. Resolution on Changes in Academic Senate Grants Review Committee Membership and Responsibilities: Jeanine Scaramozzino, chair of Grants Review Committee, second reading (pp. 29-31).
E. Resolution on Proposal to Establish a Master of Science in Nutrition: Aydin Nazmi, Food Science and Nutrition Department, first reading (pp. 32-39).
F. Resolution on the New Registration System: Tom Gutierrez, CSM Caucus Chair and Harvey Greenwald, Math Department, first reading (p. 40).

VI. Discussion Item(s):

VII. Adjournment:
I. Minutes: M/S/P to approve the Academic Senate minutes from February 10, 2015.

II. Communication(s) and Announcement(s): none.

III. Reports:
   A. Academic Senate Chair: none.
   B. President’s Office: none.
   C. Provost: none.
   D. Vice President for Student Affairs (Humphrey):
      - The Dean of Students Office has been working with campus and local resources to develop a comprehensive education and party management plan for our Greek organizations. Our student leaders are close to a final document that will be sent to President Armstrong for endorsement.
      - Dr. Tim Archie has been hired as the Director of Assessment and Research for Student Affairs and begins March 23. Dr. Archie’s role will be to help student affairs expand our data driven decision making and to expand our knowledge base surrounding Cal Poly students.
      - The student affairs website, strategic planning section, has an update on where the division stands on goals outlined in the plan, complete with individual progress reports for each goal.
   E. Statewide Senate: none.
   F. CFA Campus President: none.
   G. ASI Representative: none.

II. Special Reports:
   A. University Update: Jeffrey Armstrong, Cal Poly President, reported on a few highlights of Cal Poly’s recent achievements. Armstrong also reported that he has completed his three-year review from last fall.


III. Consent Agenda:
   The following course/program was approved by consensus: Plant Protection Science Concentration, BS Agricultural and Environmental Plant Sciences, RPTA 201 Sociocultural Dimensions of Work and Leisure (4), 4 lectures, GE D3, and the 2015-2017 catalog changes for Interdisciplinary Programs.
IV. Business Item(s):
   A. **Resolution on Exceptions to Scheduling Class Time Conflicts**: Dustin Stegner, chair of Instruction Committee, presented a resolution that develops policy on how the Office of Registrar handles exceptions to scheduling class time conflicts. **M/S/P to approve the Resolution on Exception to Scheduling Class Time Conflicts.**

V. Discussion Item(s): none.

VI. Adjournment: 5:00 pm

Submitted by,

Alex Ye
Academic Senate Student Assistant
I. Minutes: none.

II. Communication(s) and Announcement(s): none.

III. Reports:
   A. Academic Senate Chair (Laver): Laver gave an explanation on the meaning of abstentions during meetings according to Robert's Rules of Order.
   B. President's Office (Kinsley): Cindy Villa of University of Texas, El Paso will be joining Cal Poly as the new Vice President for Administration and Finance beginning on August 1, 2015.
   C. Provost: none.
   D. Vice President for Student Affairs: none.
   E. Statewide Senate: none.
   E. CFA Campus President (Archer): The CFA sent out the “Race to the Bottom” paper that analyzes information regarding salaries in the CSU and the effect it has on faculty and students.
   F. ASI Representative: none.

IV. Consent Agenda:
    The following were approved by consensus: (1) Proposal to decouple the General Engineering Program from the Biomedical Engineering Department and (2) approval of ARCE 476 - Architectural Engineering Building Systems.

V. Business Item(s):
   A. Election of officers for 2015-2016: The following were elected as officers of the Academic Senate by acclamation: Gary Laver (Psychology and Child Development) - Chair & Kris Jankovitz (Kinesiology) - Vice Chair.
   B. Resolution on Changes to the Bylaws of the Academic Senate: Gary Laver, Academic Senate Chair, presented a resolution that updates the Bylaws of the Academic Senate to follow current practices. This item will return as a second reading at the next Academic Senate meeting.
   C. Resolution on Information Request About Contract Ratification Votes: Manzar Foroohar, Statewide Senator, introduced a resolution to request information from CFA regarding votes on the ratification of the contract. This item will return as a second reading at the next Academic Senate meeting.
   D. Resolution on Changes in Academic Senate Grants Review Committee Membership and Responsibilities: Jeanine Scaramuzza, chair of Grants Review Committee, presented a resolution that brings the Grants Review Committee’s Membership and Responsibilities into compliance with
the Chancellor's Office. This item will return as a second reading at the next Academic Senate meeting.

E. **Resolution on Approving Assessment Process for Courses Meeting Sustainability Learning Objectives:** David Braun, chair of the Sustainability Committee, presented a resolution that charges the Sustainability Committee with developing a process to vet sustainability courses for SUSCAT. This item will return as a second reading at the next Academic Senate meeting.

F. **Resolution on Proposed New Degree Program: Bachelor of Science in Marine Sciences:** Nikki Adams, Biological Sciences Department, presented a resolution that proposes a Bachelor of Science in Marine Sciences as a new degree program. **M/S/P to move the resolution to a second reading.**

**M/S/P to approve the Resolution on Proposed New Degree Program: Bachelor of Science in Marine Sciences.**

VI. Discussion Item(s):

- The proposal on making NR 264: Natural Resources Economics count as GE D2 was discussed. Brenda Helmbrecht, chair of the General Education Governance Board, and Rich Thompson, Interim Head of NRES, spoke on behalf of their respective sides of the proposal. The Academic Senate Curriculum Appeals Committee will discuss the information provided and will submit a decision to approve, disapprove, or return the items to committee.

VII. Adjournment: 5:00 pm

Submitted by,

[Signature]

Alex Ye
Academic Senate Student Assistant
RESOLUTION ON CHANGES TO THE
BYLAWS OF THE ACADEMIC SENATE

RESOLVED: That the Bylaws of the Academic Senate be modified as shown on the attached copy.

Proposed by: Academic Senate Executive Committee
Date: December 30, 2014
Revised: January 7, 2015
CHANGES TO THE BYLAWS OF THE ACADEMIC SENATE

1—Page 10
IV. OFFICERS
   A. OFFICER POSITIONS
      3. Secretary
      The Secretary or designee shall record the minutes of all Senate and Executive Committee meetings and shall provide copies of these minutes to all senators in the case of Senate meetings and to all Executive Committee members in the case of Executive Committee meetings. The Secretary or designee shall provide written notice of meetings to the appropriate faculty and shall handle correspondence of the Academic Senate. The Secretary or designee shall create three copies of the minutes of all meetings—one for the Chair, one to be passed to the library, and one to be filed in the Academic Senate office and a digital copy to be filed with DigitalCommons and posted on the Academic Senate website. The Secretary shall have available at each Senate meeting a current file of the actions of the Senate and a copy of the constitution and bylaws.

RATIONALE: Wording change to conform Bylaws to present practice.

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VIII. COMMITTEES
   H. COMMITTEES
      2. Curriculum (and its subcommittees: Curriculum Appeals Committee, Graduate Programs Subcommittee, and U.S. Cultural Pluralism Subcommittee)

RATIONALE: Subcommittees were dissolved on 10.29.13 by resolution AS-770-13.

3—Page 16
VIII. COMMITTEES
   I. COMMITTEE DESCRIPTIONS
      1. Budget & Long-Range Planning Committee
         (a) Membership
         Ex officio members shall be the Provost/Vice President for Academic Affairs or designee, the Vice President for Administration and Finance or designee, and an ASI representative.

RATIONALE: Editorial change to conform to unit name.
VIII. COMMITTEES

1. COMMITTEE DESCRIPTIONS

2. Curriculum Committee
   (a) Membership

   College representatives shall be either the current chair or a current member of their college curriculum committee. The Professional Consultative Services representative shall be an academic advisor from one of the colleges. Ex officio members shall be the Provost/Vice President for Academic Affairs, Associate Vice Provost for Academic Programs and Planning or designee, the Dean of Research, Director of Graduate Education or designee, the Vice Provost for Information Services/Chief Information Officer or designee, a representative from the Office of the Registrar, and an ASI representative.

   RATIONALE: Academic Senate Curriculum Committee membership formally includes ex officio graduate representation via the Director of Graduate Education.

(b) Responsibilities

   Graduate Programs Subcommittee

   There will be a standing subcommittee of the Academic Senate Curriculum Committee responsible for the review of proposals for new/revise graduate courses and programs. The Graduate Programs Subcommittee shall not be comprised of a subset of the Curriculum Committee members, but instead, the subcommittee shall include one faculty member from each college with experience in graduate level teaching and supervision, the chair of the Academic Senate Curriculum Committee (or a designee of the chair), and as an ex officio member, the Dean of Research. The Graduate Programs Subcommittee will forward recommendations regarding graduate courses and programs to the Academic Senate Curriculum Committee, which will consider them before making its recommendations to the Academic Senate.

   RATIONALE: Subcommittee was dissolved on 10.29.13 by resolution AS-770-13.

3. Distinguished Scholarship Awards Committee
   (a) Membership

   General Faculty representatives should include former recipients of the Distinguished Scholarship Award. Ex officio members shall be the Dean of Research, one representative, from the Office of Research, appointed by the Provost/Vice President for Academic Affairs and two ASI representatives—one undergraduate and one graduate student.

   RATIONALE: Editorial change to conform to unit name.
VIII. COMMITTEES

I. COMMITTEE DESCRIPTIONS

4. Distinguished Teaching Awards Committee
   (a) Membership
   General Faculty representatives should be former recipients of the Distinguished Teaching Award. If no prior Distinguished Teaching Award recipients from a particular college are available and willing to serve, the Executive Committee in consultation with the Distinguished Teaching Awards Committee chair may appoint a faculty member from that college who has a clear and compelling record of sustained, outstanding instructional performance. Ex officio members shall be the Dean of Research and Graduate Programs and two ASI representatives. These will have at least junior standing and will have completed at least three consecutive quarters and 36-quarter units at Cal Poly with at least a 3.0 grade point average.

RATIONALE: Earlier versions of Bylaws didn't have this position as an ex officio member.

7. General Education Governance Board
   (a) Membership
   (2) The GEGB will also include one representative from the Office of the Registrar (ex officio, nonvoting) and one representative from Academic Programs and Planning (ex officio, nonvoting).

RATIONALE: Editorial change to conform to unit name.

9. Instruction Committee
   (a) Membership
   Ex officio members shall be the Provost/Vice President for Academic Affairs or designee, the Vice Provost for Information Services/Chief Information Officer or designee, a representative from CTLT, a representative from the Office of the Registrar, and an ASI representative.

RATIONALE: With CTLT's move to Academic Programs and Planning, Information Services does not have anyone appropriate to serve on this committee.
VIII. COMMITTEES

I. COMMITTEE DESCRIPTIONS

11. Sustainability Committee

(a) Membership

Ex officio members shall be the Provost/Vice President for Academic Affairs or designee, the Vice President for Administration and Finance or designee, Ex officio members shall be the Associate Vice Provost for Programs and Planning or designee, the Director of Facilities Planning or designee, the Manager Associate Director of Sustainable Energy and Utilities, one academic dean or Associate Dean, and two ASI representatives.

RATIONALE: Editorial change to conform to unit name.

(b) Responsibilities

The Sustainability Committee shall inform and support the activities of other committees who scope encompasses environmental responsibility. The Sustainability Committee shall make recommendations to the Academic Senate, as appropriate, regarding the provisions of the Talloires Declaration (AS-622-04) and the CSU Sustainability Policy.

RATIONALE: Clarification of responsibilities.
WHEREAS, Resolution AS-787-14 “Resolution on Sustainability”, directs the Academic Senate Sustainability Committee to develop a list of classes based on a revised Senate accepted assessment process that meet the Sustainability Learning Objectives; therefore be it

RESOLVED: That the Academic Senate approve the attached document “Draft Process to Vet Sustainability Courses for SUSCAT” as a Senate accepted assessment process.

Proposed by: Sustainability Committee
Date: January 12, 2015
Draft Process to Vet Sustainability Courses for Suscat

AS-787-14 resolved “That the Academic Senate Sustainability Committee be directed to develop a list of classes based on a revised Senate accepted assessment process that meet the Sustainability Learning Objectives.” In responding to this resolution, the Academic Senate Sustainability Committee (ASSC) made progress during Fall quarter 2014 by following a simplified Engineering Design Process Flow. Stated in a somewhat simplified manner, the Engineering Design Process uses the following steps:

1. Identify the process stakeholders
2. Define the stakeholders’ needs
3. Translate the stakeholders’ needs into requirements and specifications
4. Design a process to meet the requirements and specifications
5. Implement and test the Policy.

Figure 1 shows the intended process development and application timeline.

![SUSCAT Assessment Timing](image)

During Fall quarter 2014 and January 2015, the process moved through steps 1, 2, 3, and 4, informed by feedback received from key stakeholders. This document contains the results of steps 1–4.

1. **Identify the process stakeholders**

The process should meet the needs of several stakeholders:

1. Faculty and department heads who teach sustainability courses and want them listed on SUSCAT
2. Students who want to take sustainability courses
3. Faculty and staff who implement the policy by performing the review
4. Faculty and staff who maintain SUSCAT
5. The Academic Senate, Academic Senate Curriculum Committee, and the GE Governance Board
6. Academic Advisors
7. CSU Administrators
8. Faculty and department heads who would like to teach sustainability but don’t know how.
2. Define the stakeholders' needs

Table I identifies stakeholders associated with the assessment process and their needs. The third column indicates a check, if the currently defined process meets those stakeholder needs. The current process does meet almost all needs listed for the stakeholders. Because of strong objections expressed to flagging sustainability courses either in the catalog or on PASS, the currently defined process doesn’t meet those needs. Rather, it describes how to identify courses to list on the SUSCAT website, suscat.calpoly.edu.

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Needs</th>
<th>Met?</th>
</tr>
</thead>
</table>
| Faculty and department heads who teach sustainability courses and want them listed on SUSCAT | 1. Simple and convenient process.  
2. Reproducible process  
3. Can appeal decision. | ✓    |
| Students who want to take sustainability courses                              | 1. Reproducible process.  
2. Process should identify all relevant sustainability courses.  
3. Should see results in catalog and PASS.  
1. Simple and convenient process.  
2. Reproducible process. | ✓    |
| Faculty and staff who implement the policy by performing the review           | 1. Easy to update.  
2. Automatically delist defunct courses.  
3. Automatically become aware of new course.  
1. Reproducible process.  
2. Serves students and faculty.  
3. Serves curricular needs.  
4. Serves course and catalog administrative needs.  
1. Reproducible process.  
2. Process should identify all relevant sustainability courses.  
3. Should see results in catalog and PASS.  
1. Report data on percentage of classes & number of classes meeting each Sustainability Learning Objective [SLO] | ✓    |
| Faculty and staff who maintain SUSCAT                                         | 1. Clear Instructions | ✓    |
| The Academic Senate, Academic Senate Curriculum Committee, and the GE Governance Board | 1. Reproducible process.  
2. Serves students and faculty.  
3. Serves curricular needs.  
4. Serves course and catalog administrative needs.  
1. Reproducible process.  
2. Process should identify all relevant sustainability courses.  
3. Should see results in catalog and PASS.  
1. Report data on percentage of classes & number of classes meeting each Sustainability Learning Objective [SLO] | ✓    |
| Academic Advisors                                                             | 1. Clear Instructions | ✓    |
| CSU Administrators                                                            | 1. Clear Instructions | x    |
| Faculty and department heads who would like to teach sustainability courses but don’t know how. | 1. Clear Instructions | ✓    |
3. Translate the stakeholders' needs into requirements and specifications

In order to develop process requirements and specifications from the stakeholder needs, the ASSC relied heavily on lessons learned from its review of GE courses in 2012. For the 2012 review, the ASSC developed a rubric to use to evaluate whether courses achieve at least two of the Sustainability Learning Objectives [SLOs]. Each college representative to the ASSC applied the rubric to the GE courses from their college, obtaining input from the ASSC, as necessary. During the 2012 GE course pilot assessment, the ASSC learned the following lessons:

1. Based on the title and catalog description, many or most courses clearly DO NOT achieve at least two SLOs.
2. Based on the title, catalog description, and course proposal, some courses clearly DO achieve at least two SLOs.
3. Based on the title, catalog description, and course proposal, some courses MAY or MAY NOT achieve at least two SLOs. This is a small group.
4. A relatively small fraction of GE courses achieve at least two SLOs.
5. Only list courses in which students achieve at least two SLOs regardless of the instructor.
6. A two-part rubric covered the above cases. One part used title and catalog description only. The other part relied on a course proposal form, course modification form, ABET or other detailed Syllabus, and/or Expanded Course Outline.

After significant deliberations prior to the 2012 GE course pilot assessment, during a 2012 inter-rater norming exercise, after the 2012 course pilot assessment, during a Fall 2014 inter-rater norming exercise, and during its Fall 2014 and Winter 2015 meetings, the ASSC arrived at the SUSCAT Evaluation Rubric shown in Figure 2. It represents version 10, and it contains elements gleaned from multiple sources. Most notably, two sources informed the rubric creation and evolution:

1. The 2011 University Expository Writing Rubric,
   Available: http://ulo.calpoly.edu/content/writing-proficiency-assessment, and
   Available: http://www.aacu.org/value/rubrics

During the 2012 GE course pilot assessment, the ASSC agreed that a course meeting two or more SLOs met the threshold for listing. Further deliberations during Fall 2014 reveal that the ASSC still agrees with this threshold, but with an important caveat. Just having students learn about two or more SLOs in a minimal fashion does not suffice. Meaningful sustainability learning should take place, and the revised rubric seeks to measure meaningful learning in two ways:

1. Students should achieve multiple SLOs during the course, and
2. Students achieve the SLOs during a meaningful fraction of the course.
Academic Senate Sustainability Committee SUSCAT Evaluation Rubric

<table>
<thead>
<tr>
<th>Course Prefix &amp; Number</th>
<th>Replace this cell with course Prefix &amp; Number, e.g. GEOG301</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Title</td>
<td>Replace this cell with course Title, e.g. Geography of Resource Utilization</td>
</tr>
<tr>
<td>Course Description</td>
<td>Replace this cell with course catalog description, e.g. A multicultural, world view of the interconnections of the following resource systems: food, energy, water, and non-fuel minerals. A pervading theme is the sustainability of these systems. 4 lectures. Prerequisite: Completion of GE Areas A, D3. Recommended: Juniors standing. Fulfills GE D5 except for Social Sciences majors.</td>
</tr>
<tr>
<td>GE Area, if any</td>
<td>Evaluator name: Joe Blow</td>
</tr>
<tr>
<td>Evaluator User Name:</td>
<td><a href="mailto:jblow@calpoly.edu">jblow@calpoly.edu</a></td>
</tr>
</tbody>
</table>

### Initial Assessment Based on Course Title & Description

<table>
<thead>
<tr>
<th>Points Possible</th>
<th>Points Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Eater score 0-2 in cell F10</td>
</tr>
<tr>
<td>1</td>
<td>Eater score 0-3 in cell F17</td>
</tr>
<tr>
<td>0</td>
<td>Eater yes or no in cell F24</td>
</tr>
</tbody>
</table>

Cal Poly defines sustainability as *the ability of natural and social systems to survive and thrive together to meet current and future needs.*

<table>
<thead>
<tr>
<th>Assessment Based on Course Proposal or Syllabus</th>
<th>Minimal Evidence Score = 0</th>
<th>Threshold Evidence Score = 1</th>
<th>Strong Evidence Score = 2</th>
<th>Superior Evidence Score = 3</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLO1: Students define and apply sustainability principles within their academic programs</td>
<td>Syllabus doesn’t mention SLO</td>
<td>Syllabus mentions SLO</td>
<td>Syllabus shows SLO student outcomes</td>
<td>Syllabus has SLO as a major course focus</td>
<td>Enter score 0-3 in cell F17</td>
</tr>
<tr>
<td>SLO2: Students explain how natural, economic, and social systems interact to foster or prevent sustainability</td>
<td>Syllabus doesn’t mention SLO</td>
<td>Syllabus mentions SLO</td>
<td>Syllabus shows SLO student outcomes</td>
<td>Syllabus has SLO as a major course focus</td>
<td>Enter score 0-3 in cell F18</td>
</tr>
<tr>
<td>SLO3: Students analyze and explain local, national, and global sustainability using a multidisciplinary approach</td>
<td>Syllabus doesn’t mention SLO</td>
<td>Syllabus mentions SLO</td>
<td>Syllabus shows SLO student outcomes</td>
<td>Syllabus has SLO as a major course focus</td>
<td>Enter score 0-3 in cell F19</td>
</tr>
<tr>
<td>SLO4: Students consider sustainability principles while developing personal and professional values</td>
<td>Syllabus doesn’t mention SLO</td>
<td>Syllabus mentions SLO</td>
<td>Syllabus shows SLO student outcomes</td>
<td>Syllabus has SLO as a major course focus</td>
<td>Enter score 0-3 in cell F20</td>
</tr>
</tbody>
</table>

Total Score (SLO1 - SLO4) 0

20% or more of the course covers the SLOs. Yes/No Enter yes or no in cell F24

Sustainability Course (Score >=6 AND 20% or more sustainability) No

If course doesn’t address the SLOs, could it? Yes/No

**Suggestion(s) how course might address one or more of the SLOs:**

Other Comments:

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*A score of 2 requires the syllabus to show SLO student outcomes AND mention the SLO.

**A score of 3 requires the syllabus to have the SLO as a major course focus AND show the SLO student outcomes AND mention the SLO.
Since many courses only require reviewing the course title and catalog description, the rubric contains a section titled Initial Assessment Based on Course Title & Description. Since a small fraction of courses requires more detailed review, the rubric contains a section titled Assessment Based on Course Proposal or Syllabus. This section relies on review of at least a course proposal form, course modification form, ABET or other detailed Syllabus, and/or Expanded Course Outline. The SUSCAT Evaluation Rubric uses the term Syllabus generally to refer to the various course descriptions listed in the previous sentence. The rubric does not intend to rely on instructor specific documentation. A possibility exists that such information may prove less easy to access for some courses than for others, so the process leaves reviewers an option to request more information, if desired.

The detailed review examines to what extent the course addresses each SLO based primarily on the evidence provided from the course learning objectives. Figure 3 shows the SLO evaluation scale portion of the rubric. Based how the Syllabus mentions a SLO, shows student outcomes for a SLO, or has a SLO as a major course focus, the scale rates the evidence “Minimal,” “Threshold,” “Strong,” or “Superior” and assigns a corresponding score from 0 to 3 for each SLO. With four SLOs each rated from 0 to 3, the course would receive a score from 0 to 12. The ASSC feels that a total score of 6 represents the minimum score necessary to demonstrate a course achieves multiple SLOs. A course could reach a total score of 6 via several combinations of scores for individual SLOs. For example, two SLOs with superior evidence plus two SLOs showing minimal evidence would give a total score of $2 \times 3 + 2 \times 0 = 6$. Or, three SLOs with strong evidence plus one SLO showing minimal evidence would give a total score of $3 \times 2 + 1 \times 0 = 6$. Similarly, $3 + 2 + 1 + 0$ or $2 + 2 + 1 + 1$ reach the required score of 6.

Additionally, to measure whether SLOs reach a meaningful fraction of the course, the rubric asks whether at least 20% of the course covers the SLOs. The 20% threshold arose from multiple discussions at ASSC meetings before, during, and after the Fall 2014 inter-rater norming exercise. The ASSC reached a consensus that having at least two weeks of a course addressing the SLOs meets its threshold. Combining these goals of meeting multiple SLOs over at least two weeks in the course leads to the rubric’s threshold for listing a course on SUSCAT: The total score equals or exceeds 6, and at least 20% of the course covers the SLOs.

<table>
<thead>
<tr>
<th>Minimal Evidence</th>
<th>Threshold Evidence</th>
<th>Strong Evidence</th>
<th>Superior Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score = 0</td>
<td>Score = 1</td>
<td>Score = 2</td>
<td>Score = 3</td>
</tr>
<tr>
<td>Syllabus doesn't mention SLO</td>
<td>Syllabus mentions SLO</td>
<td>Syllabus shows SLO student outcomes</td>
<td>Syllabus has SLO as a major course focus</td>
</tr>
</tbody>
</table>

Figure 3 SLO Evaluation Scale from SUSCAT Evaluation Rubric

Table II contains and justifies the process specifications as derived from the stakeholder needs and the marketing requirements. In summary, the process expects the ASSC to consider all courses in the catalog for listing on the SUSCAT website, starting with the GE courses and giving expedited reviews as requested for specific courses. The process relies on a variety of course documentation and iterative reviews as necessary to assure quality control and inter-rater reliability. The currently proposed process meets all but two of the marketing requirements.
<table>
<thead>
<tr>
<th>Marketing Requirements</th>
<th>Specifications</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>SUSCAT contains any course achieving at least two SLOs (Rubric score &gt;=6 AND at least 20% of course covers SLOs).</td>
<td>Policy approved by ASSC in 2012 and revised in 2014.</td>
</tr>
<tr>
<td>1, 2, 4</td>
<td>The ASSC reviews all GE courses.</td>
<td>Per 2014-2015 ASSC charges.</td>
</tr>
<tr>
<td>2, 4, 8, 9, 10, 11</td>
<td>The ASSC must review additional courses.</td>
<td>Policy approved by ASSC in 2014.</td>
</tr>
<tr>
<td>1, 2, 3, 4, 6</td>
<td>Faculty may submit SUSCAT review requests for specific courses to the ASSC.</td>
<td>To prevent overlooking a course belonging in SUSCAT.</td>
</tr>
<tr>
<td>1, 2, 3, 4, 9</td>
<td>A process exists to handle faculty appeals of initial SUSCAT review decisions.</td>
<td>Provides checks and balances. Encourages inter-rater reliability.</td>
</tr>
<tr>
<td>1, 2, 3, 4, 9, 10</td>
<td>The review process may require additional information such as course proposal forms, course modification form, ABET or other detailed Syllabus, and/or Expanded Course Outline.</td>
<td>Title and course description alone may not suffice to identify whether a course meets any of the SLOs.</td>
</tr>
<tr>
<td>1, 2, 3, 4, 9, 10, 11, 11</td>
<td>Applicants may justify how a course meets SUSCAT approval criteria.</td>
<td>In case course documentation supplied for SUSCAT review didn’t suffice for an accurate review, applicants may submit additional documentation.</td>
</tr>
<tr>
<td>4, 8, 9, 10, 11</td>
<td>The ASSC reviews new courses approved by the ASCC.</td>
<td>To maintain currency.</td>
</tr>
<tr>
<td>9, 10, 11</td>
<td>The SUSCAT list appears online.</td>
<td>To make list easily available to all stakeholders.</td>
</tr>
<tr>
<td>4, 9, 10</td>
<td>The ASSC communicates decisions to faculty and department heads.</td>
<td>Requested by several stakeholders.</td>
</tr>
</tbody>
</table>

**Marketing Requirements**
1. Simple and convenient process.
2. Reproducible process.
3. Can appeal decision.
4. Process should identify all relevant sustainability courses.
5. Should see results in catalog and PASS. Not specified yet.
6. Easy to update.
7. Automatically delist defunct courses.
8. Automatically become aware of new course.
9. Serves students and faculty.
10. Serves curricular needs.
11. Serves course and catalog administrative needs.
12. Report data on percentage of classes & number of classes meeting each SLO. Not specified yet.
4. Design a process to meet the requirements and specifications

**SUSCAT Course Assessment Process Draft V4**

- **Initial review**
  - Yes → List
  - Maybe → Further Review
  - No → Don't List

- **Assess by ASSC rep.**
  - Yes → List
  - Maybe → Further Review
  - No → Don't List

- **Initial review**
  - Yes → List
  - Maybe → Further Review
  - No → Don't List

---

*1 The ASSC representative reviews course number, title, and catalog descriptions in their college to determine a list of maybe and no courses.

*2 Further review in case of “Maybe” means the ASSC has three other ASSC faculty members evaluate the application in detail. Two or more yeses → yes. One yes and two maybes → yes. Other combinations → no. The ASSC may request more info. if desired.

*3 The review request contains the course number, title, catalog description and an explanation how the course meets at least two SLOs, accompanied by sufficient documentation (course proposal form, course modification form, ABET or other detailed Syllabus, and or Expanded Course Outline) to support the case.

Figure 4 SUSCAT Course Assessment Process Draft V4
SUSCAT Course Appeals Process

A faculty member may appeal a yes or no assessment decision to the ASSC by sending an email with their reasoning to the ASSC Chair. The Chair assigns five ASSC faculty members to assess the course in detail. Three or more yeses → yes.

Figure 5 SUSCAT Course Appeals Process

Listing SUSCAT GE Courses on GE Website – Details

1. Obtain permission from GE Chair, Brenda Helmbrecht, to tag courses on GE web site
2. Communicate with Department Chair/Faculty about sustainability courses to list on GE web site (Draft letter available)
3. Advise Curriculum Committee
4. Advise Academic Senate/Executive Committee
5. Communicate to campus/students

Listing SUSCAT Courses on SUSCAT – Details

1. ASSC updates the SUSCAT course list quarterly.
2. ASSC sends updated list to Miles Clark quarterly.
3. Miles Clark updates http://suscat.calpoly.edu/
SUSCAT Assessment Timing

Define Process
- Fall 2014 - Winter 2015

AS Approves Process
- Winter 2015

Assess GE Courses
- Winter 2015 - Spring 2015

Assess Catalog Courses
- Spring 2015 - Spring 2017
The ASSC representative reviews course number, title, and catalog descriptions in their college to determine a list of maybe and no courses.

Further review in case of “Maybe” means the ASSC has three other ASSC faculty members evaluate the application in detail.

Two or more yeses ➔ yes. One yes and two maybes ➔ yes. Other combinations ➔ no. The ASSC may request more info, if desired.

The review request contains the course number, title, catalog description and an explanation how the course meets at least two SLOs, accompanied by sufficient documentation (course proposal form, course modification form, ABET or other detailed Syllabus, and/or Expanded Course Outline) to support the case.
SUSCAT Course Appeals Process

A faculty member may appeal a yes or no assessment decision to the ASSC by sending an email with their reasoning to the ASSC Chair. The Chair assigns five ASSC faculty members to assess the course in detail. Three or more yeses → yes.

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1. ASSC updates the SUSCAT course list quarterly.
2. ASSC sends updated list to Miles Clark quarterly.
3. Miles Clark updates http://suscat.calpoly.edu/
ACADEMIC SENATE
of
CALIFORNIA POLYTECHNIC STATE UNIVERSITY
San Luis Obispo, CA
AS-787-14

RESOLUTION ON SUSTAINABILITY

WHEREAS, In May 2003, the Academic Senate endorsed the Talloires Declaration; and

WHEREAS, In August 2003, President Warren Baker signed the Talloires Declaration; and

WHEREAS, Provisions 3 and 4 of the Talloires Declaration focus on educating for environmentally responsible citizenship and on fostering environmental literacy; and

WHEREAS, The University has as one of its University Learning Objectives that graduates of Cal Poly should “Make reasoned decisions based on an understanding of ethics, a respect for diversity, and an awareness of issues related to sustainability”; and

WHEREAS, The University defined the term sustainability, as part of its Sustainability Learning Objectives, as being “the ability of the natural and social systems to survive and thrive together to meet current and future needs”; and

WHEREAS, The University’s Sustainability Learning Objectives state that students should be able to “Define and apply sustainability principles within their academic programs”; and

WHEREAS, Some Cal Poly students graduate without satisfying the sustainability element of the University Learning Objectives nor the Sustainability Learning Objectives; and

WHEREAS, Cal Poly has a responsibility to ensure that its graduates meet the sustainability element of the University Learning Objectives and the Sustainability Learning Objectives; and

WHEREAS, Some Cal Poly students will be employed in jobs requiring an understanding of sustainability; and

WHEREAS, There is a need to refine and develop more classes to help students meet the sustainability element of the University Learning Objectives and to meet the Sustainability Learning Objectives; and

WHEREAS, There is not currently an established system that designates and communicates whether a class meets the Sustainability Learning Objectives; and
WHEREAS, A list of University sustainability classes would be helpful to students and faculty; and
WHEREAS, A list of University sustainability classes would be helpful for programs wanting to
incorporate sustainability into their curricula; and
WHEREAS, Other CSU campuses currently have lists of sustainability classes and catalog tags for
these classes; and
WHEREAS, The Academic Senate Sustainability Committee has developed and tested a procedure to
determine whether a class meets the Sustainability Learning Objectives; therefore be it
RESOLVED: That the Academic Senate Sustainability Committee be directed to develop a list of
classes based on a revised Senate accepted assessment process that meet the
Sustainability Learning Objectives and, by extension, the relevant portion of the
University Learning Objectives; and be it further
RESOLVED: That faculty should be encouraged to develop new sustainability classes and to modify
existing courses by including sustainability, especially interdisciplinary courses as well
as courses satisfying General Education requirements; and be it further
RESOLVED: That the Academic Senate Sustainability Committee in conjunction with the Center for
Teaching, Learning and Technology shall provide support for faculty seeking to teach
classes involving sustainability; and be it further
RESOLVED: That the Academic Senate Sustainability Committee be directed to work with student
and campus organizations, as well as Facilities, to identify opportunities to promote
alternative approaches to sustainability education on campus that would further
facilitate students explicitly meeting the learning objectives addressing sustainability.

Proposed by: Sustainability Committee and Josh
Machamer, Chair of the GE
Governance Board
Date:        April 15, 2014
Revised:     May 28, 2014
Revised:     June 3, 2014
Assessment of Courses as Potentially Satisfying the Sustainability Learning Objectives: The Procedure Used to Assess GE Courses (2012)

The foundation of the sustainability assessment is the Cal Poly Sustainability Learning Objectives (SLOs).1 Cal Poly defines sustainability as the ability of the natural and social systems to survive and thrive together to meet current and future needs. In order to consider sustainability when making reasoned decisions, all graduating students should be able to:

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

To assess the courses, two members of the Academic Senate Sustainability Committee (ASSC) read through the course learning objectives of a particular GE course found in the GE course proposal form. Those readers determined to what degree those learning objectives addressed each of the four sustainability learning objectives (SLOs). This was done using the following scoring:

The scoring range was as follows:
- 3: Course directly addresses the given SLO with one or more course learning objective or course topic;
- 2: Course probably addresses the given SLO;
- 1: Course might indirectly address the given SLO; and,
- 0: The course doesn’t seem to address the given SLO.

After scoring the relevance of each SLO, a summary score was calculated based on the scores for each of the SLOs. Specifically, the score is calculated as follows:
- Summary score of 2 means that the course very likely achieves at least two of the four SLOs;2
- Summary score of 1 means that the course might achieve one or more SLOs;3 and,
- Summary score of 0 means that the course doesn’t seem to address the SLOs.4

---

1 Academic Senate Resolution 688-09 approved by President Baker June 22, 2009; www.academicprograms.calpoly.edu/content/academicpolicies/sustainability_lo
2 A final score of 2 is given if in the SLO scores there are at least two 3's or one 3 and two or three 2's (e.g. SLO1 = 3, SLO2 = 3, SLO3 = 0, SLO4 = 0 or SLO1 = 3, SLO2 = 2, SLO3 = 2, SLO4 = 1).
3 A final score of 1 is given if the final evaluation does not result in a 2 or 0.
4 A final score of 0 is given if there are no SLO scores of 2 or 3.
**Res_SustainabilityAssessmentProcedure_GE_2012.docx**

**Academic Senate Sustainability Committee SLOs Evaluation Rubric**

<table>
<thead>
<tr>
<th>Course Prefix &amp; Number</th>
<th>Replace this cell with course Prefix &amp; Number, e.g. GEUG 301</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Title</td>
<td>Replace the cell with name of course, e.g. Geography of Resource Utilization</td>
</tr>
</tbody>
</table>

| Course Description | Replace this cell with course catalog description, e.g. Anthropology, world views of the interconnections of the following resource systems: food, energy, water and non-renewable minerals. A recurring theme is the sustainability of these systems. It features: Preparatory completion of GE Areas A, D3, Social Studies Foundation-Pathway. Grades GE 0-D except for Social Sciences majors. |

<table>
<thead>
<tr>
<th>GE Area, if any</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluator Name</td>
<td></td>
</tr>
</tbody>
</table>

**Cal Poly defines sustainability as:**

- the ability of the natural and social systems to survive and thrive together to meet current and future needs.

<table>
<thead>
<tr>
<th>Initial Assessment Based on Course Title/Description</th>
<th>Points Possible</th>
<th>Points Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, the course very likely achieves at least two of the four SLOs</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Maybe, the course might achieve one or more SLOs</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>No, the course doesn't seem to address the SLOs</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assessment Based on Course Proposal or Syllabus</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>0</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL01: Define and apply sustainability principles within their academic programs</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SL02: Explain how natural, economic, and social systems interact to foster or prevent sustainability</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>SL03: Analyze and explain local, national, and global sustainability using a multidisciplinary approach</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>SL04: Consider sustainability principles while developing personal and professional values</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Summary Assessment Based on Course Proposal or Syllabus**

<table>
<thead>
<tr>
<th>Possible</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, the course very likely achieves at least two of the four SLOs</td>
<td>3</td>
</tr>
<tr>
<td>Maybe, the course might achieve one or more SLOs</td>
<td>1</td>
</tr>
<tr>
<td>No, the course doesn't seem to address the SLOs</td>
<td>0</td>
</tr>
</tbody>
</table>

**Other Comments:**

**For office use only:**

- First course
- Second course
- Average

**Code**
State of California
Memorandum

To: Gary Laver
Chair, Academic Senate

Date: August 18, 2014

From: Jeffrey D. Armstrong
President

Copies: K. Enz Finken
M. Pedersen

Subject: Response to Academic Senate Resolution AS-787-14
Resolution on Sustainability

This memo formally acknowledges receipt of the above-entitled Academic Senate resolution.
RESOLUTION ON INFORMATION REQUEST ABOUT CONTRACT RATIFICATION VOTES

WHEREAS, The Academic Senate and the California Faculty Association (CFA) are the two main representatives of the CSU faculty; and

WHEREAS, As faculty, we always stand for, and teach our students the value of transparency and democracy; and

WHEREAS, The CFA statewide leadership has refused to respond to repeated requests from the faculty to share information on the recent ratification vote of the new contract; therefore be it

RESOLVED: That the Cal Poly Academic Senate urge the statewide CFA leadership to respond to the faculty requests for detailed information on voting results (i.e., breakdown of votes for each campus and by different categories of faculty such as tenured/tenure track vs. non-tenure); and be it further

RESOLVED: That the Academic Senate urge CFA statewide leadership to commit to the principles of transparency and meaningful consultation with union members in future negotiations and in the overall management of union affairs; and be it further

RESOLVED: That this resolution be distributed to the ASCSU Executive Committee, campus Senate chairs, CFA statewide Board of Directors, and CFA chapter presidents.

Proposed by: Academic Senate Executive Committee
Date: January 30, 2015
RESOLUTION ON CHANGES IN ACADEMIC SENATE
GRANTS REVIEW COMMITTEE MEMBERSHIP AND RESPONSIBILITIES

Background:
During fall quarter 2014, the Academic Senate asked the Grants Review Committee to review the Bylaws of the Academic Senate to reflect any revisions or changes to campus policies surrounding the committee and provide any recommendations for change to the Senate office by spring 2015. In response to this charge, the Academic Senate Grants Review Committee has recommended the following modifications in the selection of its membership, the members of the committee, and its responsibilities.

WHEREAS, The Chancellor's Office guidelines for their Research, Scholarship, and Creative Activity funds state, that the majority of the committee membership, developing the plan for the distribution of funding "shall be elected faculty members elected by the probationary and tenured faculty or who shall be members of an existing elected committee." Current practice does not conflict with this statement; and

WHEREAS, The Grants Review Committee is the only committee that is listed as following Bylaws section III Voting and Election Procedures for the election of committee members. The current practice on campus is the appointment of committee members, like all other standing committees, as outlined in Bylaws section VIII.B: "During spring quarter, each caucus shall convene to nominate candidates from that college or Professional Consultative Services to fill committee vacancies occurring for the next academic year. These nominations shall be taken to a meeting of the Executive Committee before the June regular meeting of the Senate. The Executive Committee shall appoint members to standing committee vacancies from these lists." Additionally, the current practice of the membership since 2008 [AS-671-08] is that the Grants Review Committee shall include one voting General Faculty representative from each college and Professional Consultative Services, and a graduate student ASI representative and the Dean of Research or designee as ex officio members; and

WHEREAS, The responsibilities have been reworded to allow for the regularly evolving nature of grant programs, grant funding, and the like, and to reflect additional responsibilities that have been given to the committee but are not reflected in the current Bylaws of the Academic Senate, therefore be it

RESOLVED: That to accurately reflect the practices of the Academic Senate we suggest: The removal of the mention of the Grants Review Committee from Bylaws of the Academic Senate I.B.8.C, III, and IX.A.4, and the rewording of VIII.1.8.a Membership and VIII.1.8.b. Responsibilities AS INDICATED IN THE ATTACHMENT.

Proposed by: Grants Review Committee
Date: February 19, 2015
ATTACHMENT TO
RESOLUTION ON CHANGE IN ACADEMIC SENATE
GRANTS REVIEW COMMITTEE MEMBERSHIP

I. INTRODUCTION

B. DEFINITIONS

8. Voter Eligibility
   Voting members of the General Faculty as specified in Article I of the constitution are eligible to vote for:
   (a) senators from colleges or Professional Consultative Services.
   (b) CSU academic senators.
   (c) members to the Grants Review Committee.
   (d) consultative committees as needed.

III. VOTING AND ELECTION PROCEDURES
   Elections shall be held for membership to the Academic Senate, Senate offices, Academic Senate CSU, Grants Review Committee, appropriate recall elections for the preceding as per Section IX of these bylaws, and ad hoc committees created to search for such university positions as president, provost, vice presidents, college deans, and similar type administrative positions.

IX. RECALL OF ELECTED REPRESENTATIVES
   A. APPLICATION
   The procedures for recall shall apply to:
   1. Elected members of the Academic Senate, California Polytechnic State University;
   2. Officers of the Academic Senate, California Polytechnic State University;
   3. Elected representatives to the Academic Senate, California State University;
   and
   4. Members to the Grants Review Committee.
VIII. COMMITTEES

1. COMMITTEE DESCRIPTIONS

8. Grants Review

(a) Membership

(1) Pursuant to the Chancellor’s Office guidelines for the State Faculty Support Grants (SFSG), [AA 2006-25], a majority of the membership shall consist of elected faculty members elected by the probationary and tenured faculty. Pursuant to AS-XXX-15, Resolution on Change in Academic Senate Grants Review Committee Membership Election (Bylaws section VIII.1.8.(a)(1) the Academic Senate Executive Committee appoints the voting members of the committee.

(2) Ex officio members shall be the Dean of Research or designee and an ASI representative. The ASI representative must be a graduate student.

(3) No member of the Grants Review Committee is eligible to apply for any grant, leave, or award program administered by the committee while serving on the committee.

(b) Responsibilities

(1) In coordination with the Research, Scholarship and Creative Activities Committee, the Grants Review Committee shall develop and recommend policies and procedures for the review of grant proposals referred to it, including the State Faculty Support Grants (SFSG).

(2) Receive and evaluate requests for State Faculty Support Grants and make recommendations for funding, when appropriate, to the Dean for Research.

(3) Make recommendations concerning the funding of other internal grants when appropriate.

(4) Evaluate requests for special leaves for research or creative activity and, when appropriate, rank order them for consideration and transmit this ranking through the Academic Senate Chair to the President.

(1) The Grants Review Committee will develop policies and procedures for the review of grant proposals referred to it, including but not limited to those funded through the Chancellor’s Research, Scholarship, and Creative Activity allocations.

(2) The Grants Review Committee will make recommendations to the Dean of Research concerning the funding of other internal grants subject to review by the source of funding.

(3) The Grants Review Committee will develop policies and procedures for the selection of Cal Poly State University student delegates to the system-wide CSU Student Research Competition.

(4) The Grants Review Committee will evaluate both the oral and written presentations of students and select the delegates for the system-wide CSU Student Research Competition.
WHEREAS, There is a demonstrated state and national-level need for individuals with advanced training in the nutrition sciences, and

WHEREAS, The existing Master of Science in Agriculture with Specialization in Food Science & Nutrition is in high demand but does not contain a nutrition-specific core of courses and the distinguished status of a stand-alone MS Nutrition, and

WHEREAS, The proposed Cal Poly Graduate Group in Nutrition was developed in partnership with and will create interdisciplinary collaborative opportunities for faculty and students across at least nine academic departments, and

WHEREAS, The Academic Senate Curriculum Committee has evaluated and recommended the program for approval, and

WHEREAS, A summary of the program is attached to this resolution with the full proposal available in the Academic Senate office, therefore be it

RESOLVED: That the proposal for the Master of Science in Nutrition be approved by the Academic Senate of Cal Poly.

Proposed by: The Food Science and Nutrition Department

Date: March 4, 2015
Summary statement of the proposed MS Nutrition degree for review by the Academic Senate

1. Title of the new program:
   Master of Science in Nutrition

2. Program overview and rationale:
   Purpose
   This program is designed to produce graduates with advanced knowledge and skills in nutrition. Content knowledge will include training to develop student expertise in nutrition themes ranging from molecular nutrition to public health, a “cells to society” approach. The program will also prepare graduates for advancement, specialization, and leadership in nutrition or healthcare careers and further education in dietetic internships, professional schools, allied health professions, the food industry, or doctoral studies. Within the program, students will be able to select one of three suggested emphasis areas, which are Molecular Nutrition, Public Health Nutrition, or Health and Wellness.

   Strengths
   Three areas of emphasis will be offered to strategically align with demands in society and the job market. Program strengths include 1) the strategic alignment of the three program emphasis areas established to support the demanding job market and societal needs for professionals in these areas and 2) an existing on-campus network of faculty experts in human and animal nutrition that will provide the structure for the unique graduate group model. This model builds on the teacher-scholar model and emphasizes interdisciplinary collaboration from several academic units across campus.

   Justification for Offering the Program at This Time
   One of the key factors that make this proposal justified at this time is the economic burden of healthcare in the United States, which is unsustainable at national and individual levels. This will become increasingly salient as the population ages and periods of economic recession occur. As the focus on healthcare necessarily shifts to preventive care, both for cost and quality of life reasons, there will be increasing demand for nutritionists with advanced training. For example, Registered Dietitians increasingly need a Master of Science (MS) degree for special medical applications of nutrition science, students with MS degrees are more competitive for the dwindling number of competitive Accreditation Council for Education in Nutrition and Dietetics-approved Dietetic Internships nationwide; and by 2020, the entry level requirements for dietitians will include completion of a master's degree. Moreover, PhD programs will be seeking students with rigorous MS training in nutrition to enter a wide range of research environments in human
and animal nutrition. Graduates with master’s level training in Nutrition who pursue additional advanced training in key academic areas including medicine and the clinical sciences, business, animal science, dairy science, or biology will be more competitive in today’s global marketplace and interdisciplinary research environments. Cal Poly is well positioned to provide such graduates.

Summary

The proposed MS degree program will be strategically aligned with departments across campus, capitalizing on Cal Poly’s many academic strengths and promoting a unique graduate with an integrated understanding of nutrition, from cells to society. To build alliances and promote collaboration, a “Graduate Group in Nutrition” will be facilitated by the Food Science and Nutrition (FSN) Department, which will serve as the academic home for the degree. Qualified faculty from FSN, Kinesiology, Animal Science, Dairy Science, the Social Sciences, and elsewhere on campus will be able to serve as thesis committee chairs and will be invited to work together on the governance of the MS program (for example, deciding on prerequisites for entry into the program; development of by-laws; refinement of thesis expectations; and so on). This approach stimulates interdisciplinary activity and encourages the use of shared resources and facilities for sustainability. It also stimulates the Cal Poly teacher-scholar model by improving faculty research profiles, generating external research funds, and building a strong graduate student body. Moreover, courses will more frequently be team-taught and cross-listed to ensure a broad range of participation from all academic units involved.

3. Anticipated student demand:

Evidence of student demand is highlighted below, beginning with an analysis of Cal Poly data that suggest a strong interest in the current specialization model MS. Data from the College of Agriculture, Food & Environmental Sciences at Cal Poly indicate that the currently offered MS in Agriculture with specialization in Food Science and Nutrition is in high demand. From 2008-2013 (Table 1), the existing MS in Ag with specialization was in high demand, as evidenced by a 6-38% selection rate. Students selected to the program tend to matriculate into the program (80% mean matriculation rate of those selected).

The expected number of majors in the year of initiation and three years and five years thereafter and the expected number of graduates in the year of initiation, three years, and five years thereafter is highlighted in Table 2.
Table 1. Data for the MS in Agriculture with specialization in Food Science and Nutrition from 2008-2012.

<table>
<thead>
<tr>
<th></th>
<th>Applicants</th>
<th>Selected</th>
<th>% Selected</th>
<th>Newly admitted</th>
<th>Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2008</td>
<td>14</td>
<td>4</td>
<td>28.6%</td>
<td>3</td>
<td>75.0%</td>
</tr>
<tr>
<td>Fall 2009</td>
<td>17</td>
<td>1</td>
<td>5.9%</td>
<td>1</td>
<td>100.0%</td>
</tr>
<tr>
<td>Fall 2010</td>
<td>16</td>
<td>6</td>
<td>37.5%</td>
<td>5</td>
<td>83.3%</td>
</tr>
<tr>
<td>Fall 2011</td>
<td>22</td>
<td>7</td>
<td>31.8%</td>
<td>3</td>
<td>42.9%</td>
</tr>
<tr>
<td>Fall 2012</td>
<td>27</td>
<td>4</td>
<td>14.8%</td>
<td>3</td>
<td>75.0%</td>
</tr>
<tr>
<td>Fall 2013</td>
<td>24</td>
<td>4</td>
<td>16.7%</td>
<td>4</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 2. Expected numbers of majors and graduates at three time points.

<table>
<thead>
<tr>
<th>Number of Students</th>
<th>At initiation</th>
<th>3 years after initiation</th>
<th>5 years after initiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Majors</td>
<td>8</td>
<td>10-15</td>
<td>15-20</td>
</tr>
<tr>
<td>Number of Graduates</td>
<td>0</td>
<td>8-10</td>
<td>20</td>
</tr>
</tbody>
</table>

4. Curriculum:

All degree requirements, including catalog number, course title, and number of units are shown in Table 3 (all existing and approved courses). Course selections from existing courses taught at Cal Poly that would be appropriate choices for three suggested emphasis areas for the MS Nutrition degree are shown in Table 4.

Table 3. Required Courses (24 units)

<table>
<thead>
<tr>
<th>Catalog number</th>
<th>Course title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSN 599\textsuperscript{1}</td>
<td>Thesis</td>
<td>1-6 (6 total required)</td>
</tr>
<tr>
<td>STAT 512</td>
<td>Statistical Methods</td>
<td>4</td>
</tr>
<tr>
<td>FSN 516</td>
<td>Population Health and Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>FSN 528</td>
<td>Biochemical and Molecular Aspects of Human Macronutrient Metabolism</td>
<td>4</td>
</tr>
<tr>
<td>FSN 529</td>
<td>Metabolic and Molecular Aspects of Vitamins</td>
<td>2</td>
</tr>
<tr>
<td>FSN 530</td>
<td>Metabolic and Molecular Aspects of Minerals</td>
<td>2</td>
</tr>
<tr>
<td>FSN 581</td>
<td>Nutrition Research Seminar (to be taken 3 times during program)</td>
<td>1 (3 total required)</td>
</tr>
</tbody>
</table>

**Total required coursework** 24

<table>
<thead>
<tr>
<th>Catalog number</th>
<th>Course title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor-approved electives</td>
<td>Varies by emphasis area: Molecular Nutrition, Public Health Nutrition, or Health and Wellness.</td>
<td>21</td>
</tr>
</tbody>
</table>

**Total units needed for graduation** 45

\textsuperscript{1} FSN 599 or XXX 599 depending on the thesis committee chair home department, the Thesis (599) units may have a different prefix (e.g., a student with a committee chair from Animal Science may sign up for ASCI 599).
Table 4. Course selections from existing courses taught at Cal Poly that would be appropriate choices for three suggested emphasis areas for the MS Nutrition degree (21 units total required).

<table>
<thead>
<tr>
<th>Course number</th>
<th>Course title</th>
<th>Units</th>
<th>Pre-requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Molecular Nutrition emphasis area</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASCI 403</td>
<td>Applied Biotechnology in Animal Science</td>
<td>5</td>
<td>BIO 161, BIO 162, upper division genetics course (BIO 302 or BIO 303 or BIO 351 or ASCI 304) or consent of instructor</td>
</tr>
<tr>
<td>ASCI 420</td>
<td>Animal Metabolism and Nutrition</td>
<td>3</td>
<td>ASCI 220; ASCI 320 or CHEM 313 or CHEM 371.</td>
</tr>
<tr>
<td>ASCI 503</td>
<td>Advanced Molecular Techniques in Animal Science</td>
<td>4</td>
<td>ASCI 403 or equivalent course</td>
</tr>
<tr>
<td>BIO/CHEM 441</td>
<td>Bioinformatics Applications</td>
<td>4</td>
<td>Junior standing: BIO 161 or BIO 303. Recommended: BIO 302 or BIO 303 or BIO 351 or CHEM 373</td>
</tr>
<tr>
<td>BIO/CHEM 475</td>
<td>Molecular Biology</td>
<td>3</td>
<td>BIO 161, and grade of C- or better in BIO 351 or CHEM 373 or consent of instructor</td>
</tr>
<tr>
<td>BIO/CHEM 476</td>
<td>Gene Expression Laboratory</td>
<td>2</td>
<td>BIO/CHEM 475; CHEM 313 or CHEM 371, or graduate standing in Biological Sciences</td>
</tr>
<tr>
<td>BIO 501</td>
<td>Molecular and Cellular Biology</td>
<td>4</td>
<td>Graduate standing in Biological Sciences or consent of instructor</td>
</tr>
<tr>
<td>CHEM 474</td>
<td>Protein Techniques Laboratory</td>
<td>2</td>
<td>CHEM 371 or consent of instructor</td>
</tr>
<tr>
<td>CHEM 528</td>
<td>Nutritional Biochemistry</td>
<td>3</td>
<td>CHEM 313 or CHEM 372 or consent of instructor</td>
</tr>
<tr>
<td>KINE 454</td>
<td>Exercise Metabolism</td>
<td>3</td>
<td>KINE 303 and CHEM 312 and CHEM 313. Recommended: KINE 304</td>
</tr>
<tr>
<td>STAT 523</td>
<td>Design and Analysis of Experiments</td>
<td>4</td>
<td>STAT 513 or STAT 542</td>
</tr>
<tr>
<td><strong>Public Health Nutrition emphasis area</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGB 543</td>
<td>Agribusiness Policy and Program Analysis</td>
<td>4</td>
<td>Graduate standing or consent of instructor</td>
</tr>
<tr>
<td>AGB 554</td>
<td>Food System Marketing</td>
<td>4</td>
<td>Graduate standing or consent of instructor</td>
</tr>
<tr>
<td>BIO 542</td>
<td>Multivariate Biometry</td>
<td>4</td>
<td>Two courses in statistics or consent of instructor</td>
</tr>
<tr>
<td>FSN 480</td>
<td>Policy Arguments in Nutrition</td>
<td>2</td>
<td>Junior standing and consent of instructor</td>
</tr>
<tr>
<td>KINE 503</td>
<td>Current Health Issues</td>
<td>3</td>
<td>KINE 517, graduate standing, and consent of instructor</td>
</tr>
<tr>
<td>KINE 510</td>
<td>Health Behavior Change</td>
<td>3</td>
<td>KINE 250 or KINE 255 or KINE 260 and KINE 503 or KINE 504 and graduate standing</td>
</tr>
<tr>
<td>STAT 417</td>
<td>Survival Analysis Methods</td>
<td>4</td>
<td>STAT 302</td>
</tr>
<tr>
<td>STAT 419</td>
<td>Applied Multivariate Statistics</td>
<td>4</td>
<td>Two courses in statistics.</td>
</tr>
<tr>
<td>Course</td>
<td>Title</td>
<td>Units</td>
<td>Notes</td>
</tr>
<tr>
<td>--------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>STAT 421</td>
<td>Survey Sampling and Methodology</td>
<td>4</td>
<td>Recommended: MATH 206</td>
</tr>
<tr>
<td>STAT 524</td>
<td>Applied Regression Analysis</td>
<td>4</td>
<td>One of the following: STAT 252, STAT 302, STAT 313, STAT 512, or STAT 513</td>
</tr>
<tr>
<td>STAT 530</td>
<td>Statistical Computing I: SAS</td>
<td>4</td>
<td>STAT 513 or STAT 542</td>
</tr>
</tbody>
</table>

### Health and Wellness emphasis area

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMS 418</td>
<td>Health Communication</td>
<td>4</td>
<td>Completion of GE Area A and junior standing</td>
</tr>
<tr>
<td>KINE 408</td>
<td>Exercise and Health Gerontology</td>
<td>4</td>
<td>KINE 250, KINE 255 or KINE 260; and KINE 227, KINE 228, KINE 231 (formerly KINE 220) or KINE 311 (formerly KINE 219)</td>
</tr>
<tr>
<td>KINE 434</td>
<td>Health Promotion Program Planning</td>
<td>4</td>
<td>KINE 250 or KINE 255 or KINE 260, KINE 265, and junior standing</td>
</tr>
<tr>
<td>KINE 450</td>
<td>Worksite Health Promotion Programs</td>
<td>3</td>
<td>KINE 250 or KINE 255 or KINE 260, and senior standing</td>
</tr>
<tr>
<td>KINE 503</td>
<td>Current Health Issues</td>
<td>3</td>
<td>KINE 250 or KINE 255 or KINE 260 and graduate standing</td>
</tr>
<tr>
<td>KINE 504</td>
<td>Advanced Pathophysiology and Exercise</td>
<td>3</td>
<td>KINE 303 or equivalent, and graduate standing</td>
</tr>
<tr>
<td>KINE 510</td>
<td>Health Behavior Change</td>
<td>3</td>
<td>KINE 250 or KINE 255 or KINE 260 and KINE 503 or KINE 504 and graduate standing</td>
</tr>
<tr>
<td>KINE 522</td>
<td>Advanced Biomechanics</td>
<td>3</td>
<td>KINE 302 or equivalent</td>
</tr>
<tr>
<td>KINE 525</td>
<td>Advanced Motor Learning and Control</td>
<td>3</td>
<td>KINE 402 or equivalent</td>
</tr>
<tr>
<td>KINE 526</td>
<td>Sport and Exercise Psychology</td>
<td>3</td>
<td>Graduate standing</td>
</tr>
<tr>
<td>KINE 530</td>
<td>Advanced Physiology of Exercise</td>
<td>4</td>
<td>KINE 303 and graduate standing</td>
</tr>
<tr>
<td>KINE 534</td>
<td>Advanced Health Promotion Program Planning</td>
<td>4</td>
<td>KINE 503 or KINE 504 or KINE 510; graduate standing</td>
</tr>
<tr>
<td>PSY 465</td>
<td>Cross-Cultural Issues in Psychology</td>
<td>4</td>
<td>PSY 201 or PSY 202 and junior standing</td>
</tr>
</tbody>
</table>

### Applicable to all emphasis areas

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSN 420</td>
<td>Critical Evaluation of Nutrition Research</td>
<td>4</td>
<td>STAT 218; and senior standing. Corequisite: FSN 329</td>
</tr>
<tr>
<td>FSN* 500</td>
<td>Individual Study</td>
<td>1-6</td>
<td>Graduate standing, consent of supervising faculty member and graduate advisor</td>
</tr>
<tr>
<td>STAT 513</td>
<td>Applied Experimental Design/Regression Models</td>
<td>4</td>
<td>Graduate standing and one of the following: STAT 512, STAT 542, STAT 217, STAT 218, STAT 252, STAT 312, or equivalent</td>
</tr>
</tbody>
</table>

Or other electives approved by the GGN Executive Committee
5. Student Learning Outcomes:

Graduates of the MS Nutrition program will achieve the following

1) Apply fundamental principles of nutrition science in research and required coursework
2) Explain, analyze, and interpret fundamental scientific concepts in the specific area of thesis research
   a. Suggested technical emphasis areas are: Molecular Nutrition, Public Health Nutrition, and Health and Wellness
3) Apply the scientific method to nutrition research through the design, conduct, and defense of a thesis research project
4) Apply critical thinking skills to the analysis of published research literature and the design/interpretation of a thesis research project
5) Show independent and creative thinking skills in the formulation, design, conduct, and interpretation of nutrition research
6) Demonstrate strong written and oral communication skills
7) Work productively, respectfully, and professionally as part of a research team and in other group settings
8) Exhibit leadership, ethical conduct, and community values

6. Workforce demand:

One of the key recommendations from the Accreditation Council for Education in Nutrition and Dietetics (ACEND), the accrediting agency for Academy of Nutrition and Dietetics (AND), dated February 2015 and entitled Rationale for Future Education Preparation of Nutrition and Dietetics Practitioners is “Master’s level preparation for entry level, generalist, registered dietitian nutritionists.” Specifically, by 2020, students wishing to become Registered Dietitians will be required to complete six years of study including advanced preparation such as that in a master’s degree. Therefore, the demand for Nutrition master’s degree programs will grow rapidly to meet this new requirement.

The Bureau of Labor Statistics (BLS) estimates that jobs for human and animal health professions including nutrition will increase faster than average, including a 9% increase in the employment of Registered Dietitians and Dietetics Practitioners. Further, BLS estimated that from 2010 to 2020, there would be a 20% increase in the employment of Registered Dietitians and Nutritionists, which is a faster growth than the average for all occupations. Results from the American Dietetic Association (AND) Integral Survey, a critical assessment of the future of the profession, revealed that Dietitians in particular are concerned that they may not have the skills or education to manage new challenges. Some of the new challenges include the aging population, the growth of obesity and diversity and even shifting educational needs for the dietetics profession.

The BLS also estimated that employment of health educators is expected to grow by 37% from 2010-2020, which is much faster than the average. The BLS further reported that jobs for animal nutrition scientists are expected to grow by 13% from 2008-2018, faster than the average, as concerns including food safety and
sustainability are being increasingly emphasized in the public and private sectors in the context of integrated animal-human health. All these professions could draw from graduates from the proposed MS degree.

The American Society for Nutrition recently outlined six priority research areas: 1) variability in individual responses to diet and foods; 2) healthy growth, development, and reproduction; 3) health maintenance; 4) medical management; 5) nutrition-related behaviors; and 6) food supply/environment. They also noted that “the multidisciplinary nature of nutrition research requires collaboration among research scientists with differing areas of expertise, many different stakeholders, and multifaceted approaches to develop the knowledge base required for establishing the evidence-based nutrition guidance and policies that will lead to better health and well-being of world populations”. A graduate program employing the multidisciplinary graduate group approach will be best poised to meet this challenge.

6. Professional uses of the proposed degree program:
Numerous opportunities exist for professional uses of the proposed degree program. The principal anticipated career paths are listed below:

- **Public Health/Community Nutrition/Government Jobs**
  - Women, Infants and Children (WIC) Dietitian
  - Health Educator
  - Epidemiologist
  - Local, state and federal opportunities
    - Nutrition legislation
    - Nutrition programming and evaluation
- **Research Scientist**
- **Clinical Nutrition**
  - Managers
  - Specialist
- **Foodservice & Management**
  - Schools
  - Hospitals
- **Animal Nutritionist**
- **Food Industry**
  - Nutrition labeling and regulatory affairs
  - Product claims validation and research
  - Product development
  - Dietary supplements
- **Postsecondary Educators**
  - Junior Colleges
  - Lecturers at Universities
- **MS as preparation for PhD in a broad range of areas**
- **MS as preparation for clinical science field**
  - Human: Medicine, nursing, allied health professions including physical and occupational therapy
  - Animal: Veterinary science and associated clinical settings
WHEREAS, The registration system is changing as of Summer 2015 ("New Registration System"); and

WHEREAS, Faculty are generally optimistic that the New Registration System is intended to improve the efficacy of the registration experience for the Cal Poly community; and

WHEREAS, Any registration system has elements that are inexorably linked to various aspects of faculty and student workflow that fall within the purview of the faculty including: advising practices, student academic success, course logistics, and instruction; and

WHEREAS, Shared governance encourages potential changes in such elements be done in consultation with the Academic Senate as well as other affected groups; and

WHEREAS, There has been no Academic Senate consultation in advance of implementing the New Registration System nor has it been vetted by the Academic Senate for possible impacts on the aforementioned faculty and student workflow; and

WHEREAS, The faculty currently lack data-driven metrics regarding the New Registration System; therefore be it

RESOLVED: That the faculty strongly recommend the Registrar develop a transparent strategy and timeline for clearly assessing the effectiveness of the New Registration System: and be it further

RESOLVED: That the results of the assessment are shared with the Academic Senate roughly one year after the implementation, during the Fall of 2016; and be it further

RESOLVED: That future substantial changes to the registration system be implemented only after consultation with the Academic Senate.

Proposed by: Tom Gutierrez, CSM Caucus Chair and Harvey Greenwald, Math Department

Date: April 8, 2015