SJSU Annual Program Assessment Form
Academic Year 2014-2015

Department: Nutrition, Food Science and Packaging
Program: Nutritional Science
College: Applied Sciences and Arts
Website: www.nufs.sjsu.edu; see http://www.nufs.sjsu.edu/plos.htm for how program addresses the University Learning Goals.

Program Accreditation: Accreditation Council Education Nutrition Dietetics (ACEND) of Academy of Nutrition & Dietetics
Contact Person and Email: Lucy McProud – lucymcproud@sjsu.edu

Date of Report: June 8, 2015

Part A:

No changes in 1-5 below since 2013-2014.

1. List of Program Learning Outcomes (PLOs)
2. Map of PLOs to University Learning Goals (ULGs)
3. Alignment – Matrix of PLOs to Courses
4. Planning – Assessment Schedule
5. Student Experience

Part B

6. Graduation Rates for Total, Non-URM and URM students for the Nutritional Science Program

Fall 2008 Cohort: 6-Year Graduation Rate for First-time Freshmen

<table>
<thead>
<tr>
<th></th>
<th>Program Cohort Size</th>
<th>Program Grad Rate</th>
<th>College Average Grad Rate</th>
<th>University Average Grad Rate</th>
<th>University Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>24</td>
<td>54.2%</td>
<td>50.1%</td>
<td>49.7%</td>
<td>51.6%</td>
</tr>
<tr>
<td>URM</td>
<td>6</td>
<td>66.7%</td>
<td>41.0%</td>
<td>40.7%</td>
<td>47.8%</td>
</tr>
<tr>
<td>Non-URM</td>
<td>14</td>
<td>50.0%</td>
<td>52.5%</td>
<td>53.3%</td>
<td>53.2%</td>
</tr>
<tr>
<td>All others</td>
<td>4</td>
<td>50.0%</td>
<td>63.9%</td>
<td>52.9%</td>
<td></td>
</tr>
</tbody>
</table>

Graduation rates for first-time freshmen increased 15% over the past academic year (from 47.1% to 54.2%). Rates were higher than the College and University average graduation rates for all groups (except “all others”). Graduation rates for first-time freshman (54.2%) also exceeded University targets (51.6%).
Fall 2011 Cohort: 3-Year Graduation Rate for Undergraduate Transfer Students

<table>
<thead>
<tr>
<th></th>
<th>Program Cohort Size</th>
<th>Program Grad Rate</th>
<th>College Average Grade Rate</th>
<th>University Average Grad Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>20</td>
<td>50.0%</td>
<td>60.8%</td>
<td>55.3%</td>
</tr>
<tr>
<td>URM</td>
<td>7</td>
<td>42.9%</td>
<td>61.1%</td>
<td>55.2%</td>
</tr>
<tr>
<td>Non-URM</td>
<td>9</td>
<td>55.6%</td>
<td>61.9%</td>
<td>54.9%</td>
</tr>
<tr>
<td>All others</td>
<td>4</td>
<td>50.0%</td>
<td>55.8%</td>
<td>56.9%</td>
</tr>
</tbody>
</table>

Graduation rates for undergraduate transfer students increased 21.4% over the past academic year (from 41.2% to 50.0%). However, total rates were lower than the College and University average graduation rates, and lower for URM. Graduation rates were comparable to the University average rate for non-URM students but lower than the College rate.

NuFS graduation rates may be lower because transfer students often lack important pre-requisites. In some cases, the pre-requisites (offered by other departments) are not available every semester, thereby preventing student progression in the major. Some transfer students are unaware of the rigors of the Dietetics Concentration, and have had to repeat classes required to progress in this concentration. Others have transferred from “nutrition” to “packaging” and thus take longer to graduate.

Fall 2011 Cohort: 3-Year Graduation Rate for First-time Graduate Students

<table>
<thead>
<tr>
<th></th>
<th>Program Cohort Size</th>
<th>Program Grad Rate</th>
<th>College Average Grade Rate</th>
<th>University Average Grad Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>18</td>
<td>55.6%</td>
<td>67.2%</td>
<td>60.8%</td>
</tr>
<tr>
<td>URM</td>
<td>1</td>
<td>100%</td>
<td>69.5%</td>
<td>65.2%</td>
</tr>
<tr>
<td>Non-URM</td>
<td>2</td>
<td>58.3%</td>
<td>66.4%</td>
<td>54.2%</td>
</tr>
<tr>
<td>All others</td>
<td>5</td>
<td>40.0%</td>
<td>66.7%</td>
<td>69.4%</td>
</tr>
</tbody>
</table>

Graduation rates for first-time graduate students significantly increased 250% over the past academic year (from 15.8% to 55.6%). This increase can be attributed to the fact that we implemented new policies regarding MS student admittance. Now, students must complete (and show proficiency in) basic science courses required for reclassification (e.g., general chemistry, microbiology, physiology, and general statistics) prior to admittance.

Despite these changes, total graduation rates were lower than the College and University average graduation rates. This is likely due to the majority of students combining the MS degree with the Didactic Program in Dietetics (DPD) certification. In addition, many MS students are enrolled in a 1-2 semester (1,200 hours) Dietetic Internship prior to graduation. In addition, many graduate students are second career and older; some attend school only part-time as they have other responsibilities (e.g., work and family).

The low number of URM and non-URM students does not allow for meaningful comparison to College and University rates.
7. Headcounts of program majors and new students (per program and degree)

<table>
<thead>
<tr>
<th></th>
<th>FT Admit</th>
<th>New Transfer</th>
<th>Continuing</th>
<th>Retn. Transfer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12</td>
<td>27</td>
<td>315</td>
<td>1</td>
<td>355</td>
</tr>
<tr>
<td>MS</td>
<td>8</td>
<td>36</td>
<td></td>
<td>1</td>
<td>44</td>
</tr>
<tr>
<td>BS</td>
<td>4</td>
<td>27</td>
<td>279</td>
<td>1</td>
<td>311</td>
</tr>
</tbody>
</table>

For undergraduates (BS), the headcount modestly increased 6% (from 294 to 311) indicating continued demand for the major among new and transfer students.

For graduates (MS), the headcount significantly decreased 15% (from 52 to 44). The decrease can be attributed to: 1) a temporary hiatus in the MS Packaging concentration (e.g., no new MS students have been admitted due to severe limitations of our one full-time faculty member); 2) discontinuation of the MS concentration in Food Science and Technology (although there were only a few MS students in this program over the past few years); 3) lack of willingness of full-time faculty to advise large numbers of MS students (as was done in the past); and 4) limitation of Spring 2015 semester admissions.

8. Student-Faculty Ratio (SFR) and Average Section Size (AvSS)

<table>
<thead>
<tr>
<th></th>
<th>Subject SFR</th>
<th>College SFR</th>
<th>University SFR</th>
<th>Subject AvSS</th>
<th>College AvSS</th>
<th>University AvSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Division</td>
<td>41.0</td>
<td>28.3</td>
<td>31.0</td>
<td>41.8</td>
<td>31.9</td>
<td>35.6</td>
</tr>
<tr>
<td>Upper Division</td>
<td>25.5</td>
<td>22.5</td>
<td>25.5</td>
<td>24.0</td>
<td>24.7</td>
<td>28.0</td>
</tr>
<tr>
<td>Graduate Division</td>
<td>11.7</td>
<td>17.8</td>
<td>20.8</td>
<td>4.2</td>
<td>16.6</td>
<td>15.8</td>
</tr>
</tbody>
</table>

The SFR and AvSS were higher in the NUFS department as compared to College and University SFRs for lower-division courses, comparable for upper division courses, and lower for graduate level courses. Two lower division classes had relatively high enrollment: NuFS 008 Introduction to Nutrition and NuFS 31 Professionalism. In Fall 2014, the enrollment in NuFS 008 was 171 and enrollment in NuFS 31 was 54. Enrollment caps in other lower division classes (NuFS 9, 16, 1A and 20 were 45. These high enrollments were likely the reason for the higher SFR and average section size.

From 2013-2014 to 2014-2105, the lower division SFR decreased 24% (from 53.9 to 41.0) and average section size decreased 12% (from 47.6 to 41.8). This decrease could be due to the university’s decision to reduce the number of pre-nursing students allowed, which heavily impacted enrollment in NuFS 008 Nutrition for the Health Professions.

Although there was a decrease in MS enrollment and there were fewer 200-level classes offered during 2014-2015 (due to the retirement in 2014 of a senior faculty who taught a required 200-level class), the requirement for MS students to take at least 15 units of 200-level classes for their degree resulted in a 77% increase in the SFR (from 6.6 in 2013-2014 to 11.7 in 2014-2015) (e.g.,
there were more students in each class and fewer students taking 1-3 units of NUFS 298/299 Project/Thesis units). The average section size remained fairly constant (5.4 vs. 4.2). The SFR and AvSS for NuFS are much lower than that of the College and University due to the large number of students enrolled in NuFS 298/299 units (courses that typically enroll 1-2 students each semester) and NuFS 280A (Dietetic Internship) relative to those enrolled in 200-level classes that have higher enrollments.

9. Percentage of tenured/tenure-track instructional faculty (Full-Time Equivalent Faculty)

<table>
<thead>
<tr>
<th></th>
<th>Department FTEF #</th>
<th>Department FTEF %</th>
<th>College FTEF %</th>
<th>University FTEF %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenured/Tenure-track</td>
<td>5.7</td>
<td>29%</td>
<td>35.2%</td>
<td>42.8%</td>
</tr>
<tr>
<td>Not tenure-track</td>
<td>13.8</td>
<td>71%</td>
<td>64.8%</td>
<td>57.2%</td>
</tr>
<tr>
<td>Total</td>
<td>19.5</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Although we hired a new tenure-track faculty member this year, the percentage of T/TT faculty in our department is lower than that of the College and University, while the percentage of non-tenure-track faculty is higher.

The high number of non-tenure-track faculty is due to: 1) the recent retirement of a full-time faculty member in the Food Science concentration (and the need to continue to teach some of these courses to students in the concentration so that they can graduate, and to dietetics students who need these classes as part of the DPD requirement); 2) the need to hire part-time faculty to teach packaging courses since there is only one full-time faculty member who teaches packaging; and 3) the large number of GE classes taught by NUFS part-time faculty.

Part C

10. Closing the Loop/Recommended Actions

Over the past year, we continued the process to phase out the undergraduate (BS) Food Science and Technology Concentration and graduate (MS) Food Science Objective (due to the retirement of our last faculty member with this expertise). We expect that all undergraduate students with this Concentration and the one remaining Food Science MS student will graduate in 2016.

We participated in a strategic planning process that we believe will ultimately make it easier for undergraduate students to transfer between Concentrations and to decrease time to graduation.

With respect to the BS program, there will be four Concentrations:
- Nutrition & Dietetics (the DPD program)
- Applied Nutrition
- Foodservice Management
- Packaging.

We are working on finalizing the core common requirements for all Concentrations, and the core requirements for the three nutrition Concentrations. We worked on consolidating courses (e.g., NuFS 112 and NuFS 113); we will work on consolidating NuFS 190 Nutrition Education with NuFS 191 Nutrition Counseling) and eliminate required courses (e.g., NuFS 101B and NuFS 21)
(although NuFS 21 will still be offered as an elective and will be required for Foodservice Management.)

With respect to the MS program, there will be three Objectives:

- Nutrition & Dietetics
- Applied Nutrition
- Foodservice Administration

The Packaging objective has been put on hold until we have sufficient faculty to support MS students. Revisions to core requirements will include the addition of NuFS 219A (or B) (Advanced Nutrition & Metabolism) in place of NuFS 216 (Advanced Food Chemistry).

We recently (June 2015) received feedback on our Five Year Program Plan and will work to address the Program Planning Committee’s recommendations.

We are continuing to support integration of our new tenure-track faculty member (Dr. Giselle Pignotti) into the department, and to continue to support other new faculty hires (Dr. Mauldin and Dr. LaSalle).

We will continue to monitor student feedback regarding our program and use it to assess whether any changes need to be made. Feedback received this year are provided in the Appendix VI.

11. Assessment Data
We collected the following data in 2014-2015 to address achievement of PLOs #3, 6 and 13 (for the BS degree); PLO #1 (for Packaging); and PLO #1 (for the MS program). See Appendixes for description of assignments and grading rubric (if applicable).

<table>
<thead>
<tr>
<th>PLO</th>
<th>Description</th>
<th>Where, How and Frequency of Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS in Nutritional Science (Dietetics Concentration and all Emphases)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Complete a minimum of 6 case studies and 2 lab reports in at least 5 different courses</td>
<td>NuFS 101A &amp; 108L lab reports; NuFS 106A &amp; 110A/B case studies; (assessed each semester)</td>
</tr>
<tr>
<td>6</td>
<td>Describe nutritional needs in health and disease throughout the life cycle.</td>
<td>NuFS 106A final exam scores (assessed each semester)</td>
</tr>
<tr>
<td>13</td>
<td>Demonstrate knowledge of the scientific basis of nutrition, food science, and foodservice for entry-level professionals</td>
<td>Three content exams given to students applying to dietetic internships (assessed twice a year)</td>
</tr>
<tr>
<td>Packaging Concentration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Assess a package’s functional properties</td>
<td>PKG 107 scores on quizzes throughout semester (assessed once a year)</td>
</tr>
<tr>
<td>MS program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Successfully demonstrate competency through coursework</td>
<td>Advancement to Candidacy form filed with GAPE (assessed once a year)</td>
</tr>
</tbody>
</table>
12. **Analysis**
Achievement of the PLOs described above is on track (as described below).

**PLO #3: Case studies for NuFS 106A (Nutrition Through the Lifespan) (each 25 points)**

NuFS 106A was taught four times: two sessions in fall of 2014 and two sessions in spring 2015. A total of 107 students enrolled in the course. The instructors used the same assignments and grading rubrics to ensure consistency across sessions.

<table>
<thead>
<tr>
<th></th>
<th>Case Study #1</th>
<th>Case Study #2</th>
<th>Case Study #3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall 2014 (Sec 2)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>21.5 (86%)</td>
<td>22.3 (89%)</td>
<td>22.4 (90%)</td>
</tr>
<tr>
<td>Range</td>
<td>15-25</td>
<td>18-25</td>
<td>16-25</td>
</tr>
<tr>
<td><strong>Fall 2014 (Sec 3)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>19.4 (78%)</td>
<td>21.4 (86%)</td>
<td>22.1 (88%)</td>
</tr>
<tr>
<td>Range</td>
<td>14-25</td>
<td>15-25</td>
<td>15-25</td>
</tr>
<tr>
<td><strong>Spring 2015 (Sec 1)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>20.5 (82%)</td>
<td>21.7 (87%)</td>
<td>22.8 (91%)</td>
</tr>
<tr>
<td>Range</td>
<td>11-25</td>
<td>13-25</td>
<td>19-25</td>
</tr>
<tr>
<td><strong>Spring 2015 (Sec 2)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>21.8 (87%)</td>
<td>22.1 (88%)</td>
<td>22.0 (88%)</td>
</tr>
<tr>
<td>Range</td>
<td>18-25</td>
<td>19-25</td>
<td>16-25</td>
</tr>
</tbody>
</table>

The assessment data indicate that students performed well on case study assignments. Generally, scores gradually improved from the first to the last case study (in all but one of the sections), showing the benefits of providing meaningful student feedback.

**PLO #3: Overall Grades for Case Studies for NuFS 110A/B (Medical Nutrition Therapy)**

NuFS 110A was taught in the fall and NuFS 110B is taught in spring. Almost all students who enrolled in NuFS 110A enrolled in NuFS 110B.

<table>
<thead>
<tr>
<th>Topic</th>
<th># of students</th>
<th>Number (%) who scored above 80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastrointestinal</td>
<td>40</td>
<td>37 (93)</td>
</tr>
<tr>
<td>Enteral nutrition</td>
<td>40</td>
<td>38 (95)</td>
</tr>
<tr>
<td>Parenteral nutrition</td>
<td>39</td>
<td>27 (69)</td>
</tr>
<tr>
<td>Diabetes types 1 &amp; 2</td>
<td>39</td>
<td>36 (92)</td>
</tr>
<tr>
<td>Chronic kidney disease</td>
<td>38</td>
<td>32 (84)</td>
</tr>
</tbody>
</table>

Data indicate that for four of the five case studies assessed for this report, over 80% of students scored above 80%, indicating that students performed well on case study assignments.
PLO #3: Overall Grades for Laboratory Report for NuFS 101A (Food Science)

NuFS 101A was taught in both fall and spring. A total of 79 students were enrolled in the course during the 2014-2015 AY.

<table>
<thead>
<tr>
<th></th>
<th>Fall 2014 n=43</th>
<th>Spring 2015 n=36</th>
<th>Average n=79</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>63%</td>
<td>39%</td>
<td>51%</td>
</tr>
<tr>
<td>B</td>
<td>30%</td>
<td>36%</td>
<td>33%</td>
</tr>
<tr>
<td>C</td>
<td>7%</td>
<td>17%</td>
<td>12%</td>
</tr>
<tr>
<td>D, F</td>
<td>0</td>
<td>8%</td>
<td>4%</td>
</tr>
</tbody>
</table>

In fall 2014 all 43 (100%) students received scores above C- (70%) in their overall lab report grades. In spring 2015, 33 of 36 (70%) students received scores above C-. The difference between fall and spring scores is likely due to a larger number of graduate students enrolled in Fall 2014 as compared to spring 2015 (10 vs. two, fall vs. spring, respectively). Over the course of the spring semester, scores improved due to instructor feedback.

PLO #3: Overall Grades for Laboratory Report for NUFS 108L (Nutrition Lab)

A total of 45 students enrolled in the four lab sections taught during this period (two sections in fall 2014 and two in spring 2015).

<table>
<thead>
<tr>
<th></th>
<th>Spring 2015 n=18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average %</td>
<td>87%</td>
</tr>
</tbody>
</table>

The lab report: Glucose Monitoring Part I and Part II was used to assess PLO #3 which aligns with ULG’s #2a (broad integrative knowledge), 3a (intellectual skills), and 4a, 4b, and 4c (applied knowledge). The learning objectives from these lab reports are listed in the Appendix. In spring 2015, the scores averaged 87% and indicated that students performed well on lab reports in this course.

PLO #6: Final exam scores in NUFS 106A (Nutrition Through the Lifespan)

<table>
<thead>
<tr>
<th></th>
<th>Fall 2014</th>
<th>Spring 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Section 2</td>
<td>Section 3</td>
</tr>
<tr>
<td>Average (%)</td>
<td>78</td>
<td>77</td>
</tr>
<tr>
<td>Range</td>
<td>60-95</td>
<td>64-100</td>
</tr>
</tbody>
</table>

The average for the final exam ranged from 77% to 80%. This indicates that most students are able to describe nutritional needs in health and disease through the life cycle.
PLO #13: Passage Rate for Content Exams

BS and MS students who may choose to apply to our internal Dietetic Internship program after graduation are required to take three content exams prior to applying. The number of students who take these exams varies each semester. Students who fail the exam once are allowed to repeat the exam the next time it is offered.

<table>
<thead>
<tr>
<th></th>
<th>Fall 2014 n (%)</th>
<th>Spring 2015 n (%)</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Science</td>
<td>13 (81%)</td>
<td>28 (97%)</td>
<td>89%</td>
</tr>
<tr>
<td>Food Service Management</td>
<td>3 (100%)</td>
<td>15 (79%)</td>
<td>89.5%</td>
</tr>
<tr>
<td>Nutrition</td>
<td>11 (85%)</td>
<td>8 (47%)</td>
<td>66%</td>
</tr>
<tr>
<td>Average (for the semester)</td>
<td>88.6%</td>
<td>74%</td>
<td></td>
</tr>
</tbody>
</table>

In fall, 27 students who took one or more of the exams passed the exam (for an average pass rate of 88.6%); in spring, 51 students took one of more the exams (for an average pass rate of 74%). The majority of students (89%) passed the food science food service management exams; a lower percentage (66%) passed the nutrition content exam, especially in spring 2015. We are examining reasons for the lower pass rate for nutrition, and will continue to assess this outcome (so that the pass rate can be improved.)

Packaging PLO #1: Assess a package’s functional properties

PKG 107 (Principles of Packaging) is taught once each year. Students are given quizzes throughout the semester.
- 3 weeks quiz performance: average score 79%
- 15 weeks cumulative quiz performance: average score 83.7%

Overall, students progressed in their understanding of the packaging functions as demonstrated by the improvement in quantifiable evaluations. This is lower than expected but this course is required for non-packaging students (in the nutrition major). Among some non-packaging students, as compared to packaging students, commitment to learning is likely lower and reflected in lower scores.

MS Program PLO #1: Advancement to Candidacy

Of the currently enrolled 40 MS students, 17 (43%) filed for candidacy during 2014-2015. This indicates that MS students are competent in coursework and are progressing towards graduation.

13. Proposed changes and goals (if any)

We will be wrapping up the strategic planning process and submitting curriculum changes. This will result in consolidating PLO’s and mapping them to courses (and assignments).
Goals for the future include increasing the number of tenure-track faculty. We hope to hire at least two new tenure-track faculty members to start in 2016. We will also be planning for a Chair transition, as our Chair will be retiring in two years.

Continued assessment of the passage rate of the Registration Examination for Dietitians will be important as curriculum changes are implemented. The current 5-year passage rate on the exam is 92% (for first-time attempts as well as re-attempts within one year of first attempt).

We will continue to assess student’s perception of the program after they complete the capstone course (NuFS 192) and use this to inform program changes. (See appendix for student comments.)
Appendix: Evaluation of PLOs

I. Evaluation of PLO 3: Complete a minimum of 6 case studies (from NuFS 106A, NuFS 110A/B) and 2 lab reports (108L, 101A) in at least 5 different courses

A. Example of Case Study from NUFS 106A

<table>
<thead>
<tr>
<th>Purpose:</th>
<th>The purpose of these assignments is to enhance learning by applying nutrition principles to real life scenarios.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directions:</td>
<td>In a 2 ½ - 3-page paper, apply information discussed in class and reading material to each of three case studies. Each case study will present a scenario followed by questions. Based on the details given, answer the questions demonstrating mastery of the English language, using information from lectures and the textbook. Answers are to be in paragraph form with topic sentences, proper grammar, syntax and spelling.</td>
</tr>
<tr>
<td>• See Rubric in Canvas – make sure that you have met expectations for the assignment.</td>
<td></td>
</tr>
<tr>
<td>• Submit to Canvas by class time on designated due date.</td>
<td></td>
</tr>
</tbody>
</table>

Form and Style Guidelines for all Written Assignments

Your paper should:
- Be written in narrative, paragraph format
- Be typed and double spaced
- Be typed in Times New Roman 12 point type
- Be left justified and have 1 inch margins
- Be submitted by the start of class on the due date
- Any citations and references in current APA format

### Case Study Rubric

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Points</strong></td>
<td>15</td>
</tr>
<tr>
<td>Content</td>
<td>Outstanding responses, reasoning, creativity &amp; insight</td>
</tr>
<tr>
<td>Points</td>
<td>5</td>
</tr>
<tr>
<td>Writing</td>
<td>Effortless, readable prose, plus all criteria</td>
</tr>
<tr>
<td>Points</td>
<td>5</td>
</tr>
<tr>
<td>Followed Directions</td>
<td>Flawless execution of assignment</td>
</tr>
<tr>
<td>Points</td>
<td>5</td>
</tr>
</tbody>
</table>
Description:  
Elizabeth’s Story: Gestational Diabetes  
Elizabeth is a 36-year old who entered pregnancy with a BMI of 23.5 kg/m². She began receiving prenatal care at 32 weeks gestation and was screened for gestational diabetes the next day. Her oral glucose tolerance test revealed the following blood glucose levels:
- Fasting: 90 mg/dL
- 1-hour: 195 mg/dL
- 2-hour: 163 mg/dL
Elizabeth’s health care provider advised her to consume a no-sugar, low-carbohydrate diet and to keep her weight gain low throughout the rest of pregnancy. She delivered a large infant (4750 grams) at 39 weeks gestation.

Questions:
1. Did Elizabeth have gestational diabetes?
2. Was she insulin resistant?
3. What’s the most likely reason Elizabeth delivered an abnormally large newborn?
4. What was wrong with the dietary advice Elizabeth was given?
5. List three components of appropriate dietary advice for women with gestational diabetes.

B. Example of Case Study for NUFS 110A/B:

Rubric
A. Pathophysiology of patient’s disease or condition
- List current resources used to investigate information regarding the patient’s disease or condition
- State the biological processes within the body that result in the signs and symptoms of the patient’s disease or condition generally, and for this patient specifically
- Other body systems affected by this disease or condition generally, and specifically for this patient
- State how this disease or condition is generally diagnosed and treated, and for this patient specifically
- Patient’s stage or phase of this condition or disease (if applicable)
- Prognosis of this disease or condition generally, and for this patient specifically
- Relevance of nutrition and diet as a possible cause or treatment of this disease or condition generally, and for this patient specifically

B. Nutrition care process
Step 1: nutrition assessment
- Food and nutrition intake history
  - Current appetite; nausea/vomiting/diarrhea/constipation; last bowel movement; issues chewing or swallowing; previous diet; current diet; tolerance to diet
- Food preferences
  - Allergies; medication and herbal supplement use, including reason for use, drug/nutrient interactions, and possible GI disturbances; knowledge/beliefs/attitudes related to diet and nutrition; behavior related to diet and nutrition; factors affecting access to food and food/nutrition-related supplies; physical activity and function; patient’s perception of their own nutrition intervention
- Anthropometric measurements
  - Height; weight; growth pattern indices/percentile ranks
  - Weight history (including recent weight changes)
  - Body mass index (BMI) and Ideal body weight (IBW)
  - Nutrition needs calculations: calorie needs; protein needs; fluid needs
• Biochemical data, medical tests, and procedures: analyze patient’s status using results from laboratory and medical tests and procedures
  o Na, K, Cl, BUN, Cr, Glucose, HGBA1c, CA, PO4, Mg, Alb, AST, ALT; Hgb; Hct, WBC, PT, INR; Other lab values; Tests (e.g., gastric emptying, resting metabolic rate)
  o Other tests and procedures
• Nutrition focused physical findings
  o Body systems; muscle and subcutaneous fat wasting; oral health; suck/swallow/breathing ability; appetite; affect; other findings
• Nutrition focused physical assessment
  o General: overall appearance; vitals; anthropometrics; skin; nails; head; eyes; nose; mouth; neck; cardiopulmonary: chest; abdomen; musculoskeletal: arms and legs; neurological
• Subjective global assessment rating
  o A – Nourished; B – Moderately nourished or at risk of malnourished; C – Severely malnourished
• Patient history
  o Health history; social history; employment; social support; housing; physical activity; food availability and preparation; other (including drug or alcohol use)
• Patient/caregiver interview: assess needs and readiness for education, counseling, and support using techniques such as active listening
  o Determine the patient’s and/or caregiver’s readiness for change using the Stages of Change assessment or other model; determine the patient’s and/or caregiver’s readiness for education and support; determine the patient’s and/or caregiver’s ability to understand education materials and instructions; determine the patient’s and/or caregiver’s tolerance for meals and foods; determine the patient’s and/or caregiver’s support system; list the factors that impact the patient’s and/or caregiver’s ability to comprehend the diet, education, and counseling related to reading ability, educational level, vision, hearing, culture, disabilities, and other aspects

Step 2: Nutrition Diagnosis
• Analyze, evaluate, and summarize assessment to identify nutrition problems
  o Intake domain – problems related to intake of energy, nutrients, fluids, or bioactive substances through oral or nutrition support
  o Clinical domain – nutritional findings and problems identified as related to medical or physical conditions
  o Behavioral/environmental domain – nutritional findings and problems that related to knowledge; attitudes and beliefs; physical environment; access to food, water or nutrition related supplies; and food safety
• Diagnose nutrition problems and create a problem, etiology, and signs and symptoms (PES) statement according to facility’s procedures. Example: (Problem) related to (etiology) as evidenced by (signs/symptoms): P – Problem; E – Etiology; S – Signs/Symptoms

Step 3: Nutrition Intervention
• Address the etiology and signs and symptoms of the PES statement. Plan and implement nutrition interventions to include prioritizing nutrition diagnoses, formulating a nutrition prescription, establishing goals, and selecting and managing interventions (food and/or nutrient delivery; nutrition education; nutrition counseling)
• Coordination of nutrition care
• Refer clients and patients to other professionals and services when needs are beyond individual scope of practice
• Use effective education & counseling skills to facilitate behavior change in patient and/or provide education and/or counseling at a pace and with language appropriate for the patient and/or caregiver; provide education brochures and materials appropriate for the patient and/or caregiver

Step 4: Nutrition Monitoring and Evaluation: Evaluate whether the nutrition intervention strategy is working to resolve the nutrition diagnosis, its etiology, signs, and symptoms
• Define the nutrition care indicators and outcomes specific to the patient’s nutrition care (Food/nutrition related history; biochemical data, medical tests, and procedures; anthropometric measurements; nutrition-focused physical findings)
- Monitor patient’s food and/or nutrient intake
- Evaluate the problems, etiologies, signs and symptoms and the impact of interventions on the Medical Record Documentation Notes
- Document the nutrition assessment, diagnosis, intervention, and monitoring/evaluation plans
- Summarize pertinent anthropometric, biochemical, clinical and dietary data to identify nutrition problems in concise PES statements
- Demonstrate professional writing skills
- Write organized, clear, and concise statements
- Use correct spelling and grammar

**Case Description**

Case 28 Pediatric TBI: Metabolic Stress with Nutrition Support (13 points)

1) Complete an ADIME note for your initial assessment of Chelsea. Include a separate sheet with calculations and justifications.

2) Write your follow-up nutrition note for 5/3

Case 29 Metabolic Stress and Trauma (14 points)

3) Calculate energy and protein requirements for Mr. Perez. Use at least two methods (including the Penn State) to estimate his energy needs. Explain your rationale for using each one. For the Penn State calculation, the minute ventilation is 3.5 L/minute and the maximum temperature is 39.2.

4) Compare his current nutrition support order to his measured energy requirements obtained by the metabolic cart on day 4. Based on the metabolic cart results, what changes would you recommend be made to the PN regimen, if any? What are the limitations that prevent the health care team from making significant changes to the nutrition support regimen?

5) The RD recommended that trickle feeds be initiated. What is this and what is the rationale? The RD recommended the formula Pivot 1.5 for these trickle feeds. What type of formula is this, and what would be the rationale for choosing this formula?

6) Identify the nutrition diagnosis you would use in your follow-up note. Complete the PES statement, establish an ideal goal (based on the signs and symptoms) and provide an appropriate intervention (based on the etiology).

Case 30 – Nutrition Support for Burn Injury (13 points)

7) List all medications that Mr. Angelo is receiving. Identify the action of each medication and any drug-nutrient interactions that you should monitor.

8) Write an ADIME note that provides your nutrition assessment and enteral feeding recommendations and/or evaluation of the current enteral feeding orders. (What additional micronutrients will need supplementation in burn therapy? What dosages are recommended?) Include a separate sheet with calculations and justifications.

Case 31 – Nutrition Support in Sepsis and Morbid Obesity (10 points)

9) Write an ADIME note for your initial inpatient nutrition assessment (with nutrition support recommendations). Include a separate sheet with calculations and justifications.
C. Description of Lab Reports for 101A Food Science

<table>
<thead>
<tr>
<th>Purpose:</th>
<th>to provide hands-on experience in research methodology for food preparation and production. The lab experiments offer students the opportunity to observe and understand the chemical and physical nature of food systems and how it influences food preparation and production for human consumption. After each experiment is performed, students are required to write and submit a lab report. Students complete a total of 12 lab reports submitted weekly throughout the semester.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructions:</td>
<td>You are required to write a report describing the results of experiments performed in each lab period and providing a conclusion based on those results. Reports are due one week after the lab is completed and must be written individually. The top ten lab report scores will be considered for your final grade.</td>
</tr>
<tr>
<td>Lab notebook:</td>
<td>Students are required to keep a lab notebook to document all data and information obtained from lab experiments. The notebook must be permanently bound; no loose-leafs or spiral notebooks will be accepted. All data must be recorded with permanent ink pens (no pencils). The notebooks are due on the last day of lab instruction.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rubric: Total possible points = 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction (6 pts):</td>
</tr>
<tr>
<td>Materials (2 pts):</td>
</tr>
<tr>
<td>Methods (2 pts):</td>
</tr>
<tr>
<td>Results (10 pts):</td>
</tr>
<tr>
<td>Conclusion (6 pts):</td>
</tr>
<tr>
<td>Discussion (10 pts):</td>
</tr>
<tr>
<td>References (2 pts):</td>
</tr>
<tr>
<td>Writing style (2 pts):</td>
</tr>
</tbody>
</table>
D. Description of Lab Report for NUFS 108L Nutrition Lab

| Glucose Monitoring Part I and Part II was used to assess PLO #3. Students will be able to properly use laboratory equipment and perform scientific procedures related to nutritional research, including analytical techniques. |
|---|---|
|   | 1. Student will be able to record, analyze, and report experimental data, in a clear, concise, and objective manner. |
|   | 2. Students will be able to perform metabolic studies (including collection of data and blood samples) on themselves while undergoing voluntary dietary interventions. |
|   | 3. Students will be able to explain and apply metabolic rationale used to justify the usage of specific biochemical tests and to discuss the results in terms of their nutritional significance. |
|   | 4. Students will be able develop outcome measures, use informatics principles and technology to collect and analyze data for assessment and evaluate data to use in decision-making. |
II. Evaluation of PLO 6: Describe nutritional needs in health and disease throughout the life cycle (NuFS 106A Nutrition Through the Lifespan)

Sample final exam questions [Final exam is 100 cumulative: preconception to older adult nutrition. Five short case studies with short answer responses (50 points) and 50 multiple-choice questions (50 points.)]

Sample Case Study questions:

Pregnancy:
1. What was Monica’s BMI pre-pregnancy? ___________________
2. What was her weight status based on this BMI? __________________
3. What is the recommended pregnancy weight gain for a woman with BMI in this range? __________________
4. What are 3 of Monica’s risk factors for gestational diabetes?

School age child:
1. Plot Josh’s BMIs on the growth chart for Boys 2 to 20 years at the end of this packet. What is Josh’s current (age 6) weight classification? __________________
2. What would you say about the timing of Josh’s adiposity rebound, and what might this indicate? __________________

Adult:
1. Metabolic syndrome is associated with increased risk for what 3 conditions?
   a. __________________
   b. __________________
   c. __________________
2. Bob’s BMI ___________ What category is this? ______________
3. Susan’s BMI ___________ What category is this? ______________
4. Calculate their maintenance calorie needs using the Mifflin St-Jeor equation and make a recommendation for calorie level to achieve a weight loss of ½ pound/week in the table below

Older Adult:
1. You would like June to increase her intake to 1100 kcals/day to help to restore her lost weight. How many grams of protein and how many mL of fluid does June need each day?
   _______________ g protein  (Use goal wt to compute; give a range)
   _______________ mL fluid
Sample Multiple Choice questions:
The recommended first line of treatment for an underweight woman with amenorrhea who wants to conceive is to _____.
   a. start exercising
   b. gain weight
   c. see a doctor for fertility treatment
   d. none of the above

The recommended daily intake of folate and folic acid combined for ALL women who may become pregnant is:
   a. 40 mcg.
   b. 200 mcg.
   c. 600 mcg.
   d. 800 mcg.

Recommendations for introducing a baby to food on a spoon include all of the following EXCEPT:
   a. time the first spoon-feeding experiences for when the baby is not overly tired
   b. **offer tastes of several different foods to find out what the baby likes**
   c. give the baby time to open his or her mouth and extend the tongue towards food
   d. place the bowl of the spoon on the tongue with slight downward pressure
   e. keep the spoon level and do not scrape food into the baby’s mouth

The most significant predictor of childhood obesity has been found to be: low family income
   a. food insecurity
   b. parental obesity
   c. lower cognitive stimulation
   d. use of formula instead of breastfeeding

The physical activity recommendation for adolescents is to engage in daily or almost daily sessions lasting ______ minutes or more.
   a. 30
   b. 45
   c. 90
   d. none of the above

Seven signs and symptoms have been strongly related to dehydration in older adults. Which of the following would NOT be one of these?
   a. Hearing difficulty
   a. Confusion
   b. Dry tongue
   c. Sunken appearance of eyes
   d. Upper body weakness
**III. Evaluation of PLO 13:** Demonstrate knowledge of the scientific basis of nutrition, food science, and foodservice for entry-level professionals (Content exams)

<table>
<thead>
<tr>
<th>Sample questions covering the nutrition component.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A growing child who is consuming adequate protein but only 50% of his or her energy needs, will likely be in</td>
</tr>
</tbody>
</table>
| a. nitrogen equilibrium  
| b. positive nitrogen balance  
| c. negative nitrogen balance  
| d. depends on how tall the child is |

Judy's dietary intake provides 90 grams of protein. Her total energy intake is 2000 kcal. Approximately what percentage of her energy comes from protein?

| a. 8%  
| b. 11%  
| c. 18%  
| d. 28% |

An example of two incomplete protein foods eaten together to produce a complete protein meal are:

| a. bread and butter  
| b. red beans and rice  
| c. cereal and milk  
| d. hamburger on bun |

A process involved in the synthesis of nonessential amino acids is called

| a. ketogenesis  
| b. hydrogenation  
| c. transamination  
| d. supplementation |

Excess protein intake can result in

| a. diabetes  
| b. iron deficiency  
| c. loss of calcium  
| d. excess fiber intake |

A woman ate 1/2 of a pita bread sandwich filled with tuna salad. The entire sandwich contained 20 grams carbohydrate, 8 grams protein, and 5 grams fat. Approximately how many calories did she obtain?

| a. 80  
| b. 130  
| c. 150  
| d. 160 |

Fat cells produce all of the following hormones that may interfere with reproductive processes EXCEPT

| a. estrogen  
| b. testosterone  
| c. leptin  
| d. insulin |

Which of the following statements reflects the most accurate assessment measurement?

| a. An older adult weighing herself at home  
| b. A new breastfeeding mom recording what she ate over the past 24 hours  
| c. A dietitian interviewing a mom with a 5-year-old toddler about what he ate over the past 24 hours and then asking her to record what the toddler ate over the next 2 days  
| d. A physician asking the height of an 80-year-old male patient |

During pregnancy, as the dose of iron _____ the amount of iron absorbed from supplements _____.

| a. decreases/increases  
| b. increases/decreases  
| c. doubles/triples  
| d. triples/doubles |
Jane and her husband are interested in having a child, but she has had a hard time conceiving. She has met with her OB-GYN to have a physical, labs drawn, and a prenatal check-up in order to determine what the problem is. Lab work and other relevant data for Jane are as follows:

- Age: 36;
- Blood pressure 110/70 mm Hg;
- Fasting blood glucose 130 mg/dL;
- HDL cholesterol 35 mg/dL;
- Blood triglycerides 175 mg/dL;
- Waist circumference = 36”;
- Current weight 150#; Height 5’3”

Based on the data above, Jane will likely be diagnosed with:

a. gestational diabetes
b. metabolic syndrome
c. celiac disease
d. hypothalamic amenorrhea

Jane Smith (and her husband) sought medical care for persistent nausea and vomiting throughout the day. Following a pregnancy test and medical examination, the doctor determined that she was in the 5th week of pregnancy. Following this report, Jane’s husband remarked, “You will have to stop eating potato chips and eat more healthy foods.” What is the best response the doctor could make?

a. “I agree—it is important to eat high-fiber foods.”
b. “I agree—drink lots of water with meals.”
c. “I recommend that you continue to eat foods that you can tolerate and that will help you gain weight.”
d. “I suggest you eat a very small amount of chips to reduce your salt intake and prevent high blood pressure problems.”

The major class of protein found in mature human milk is:

a. whey  b. casein  c. lactose  d. maltose

The recommendation for very low-birth-weight or extremely low-birth-weight infants who are breastfeeding but have limited pancreatic enzyme production is to supplement them with _____.

a. long-chain fatty acids
b. medium-chain fatty acids
c. short-chain fatty acids
d. high-calorie formulas

Which of the following foods would NOT be appropriate for a baby with galactosemia?

Sample questions covering the food science component.

Food dehydration is mostly done by:
   a. Sublimation and evaporation
   b. Any physical phase transition
   c. Purification and evaporation
   d. Distillation and crystallization
   e. Lyophilization and distillation

The thermal preservation method commonly applied to fruits and vegetables to enhance color and lower microbial load is:
   a. Blanching
   b. Pasteurization
   c. Hot filling
   d. Retorting
   e. Aseptic processing

The formation of a starch paste (sol) due to an increase in temperature and solubility of the starch molecules in an aqueous system is called:
   a. Gelation
   b. Gelatinization
   c. Retrogradation
   d. Syneresis
   e. Dextrinization

A gluten-free baked product will lack:
   a. Plasticity
   b. Browning
   c. Sweetness
   d. Tenderness
   e. Elasticity

The formation of a green-gray ring around the egg yolk is favored by:
   a. Acidic environment
   b. Alkaline environment
   c. Increase in carbon dioxide
   d. Lower temperatures
   e. Enzymatic browning
Sample questions covering the foodservice component.

Cross-contamination refers to:
- a. The transfer of the bacteria or other microorganisms from one food to another.
- b. The transfer of microorganisms from animals to humans only
- c. The prohibition of microorganisms movement
- d. The intentional movement of a microorganism to a person

Which of the following would be considered a *critical error* regarding accuracy of patient meal trays in hospitals?
- a. Spillage on tray
- b. Incorrect positioning of menu items on tray
- c. Sugar packet on diabetic tray
- d. No flatware provided on tray
- e. Portion size too large on regular diet tray

How would you devise a *supervision system* or *control system* for the activity of monitoring temperature of refrigeration equipment?
- a. Use a thermometer for measurement
- b. Check to see if temperature meets the standard – e.g., 41°F
- c. If temperature does not meet standard, check for overloading of refrigerator, or other problems, etc. in order to correct situation.
- d. a, b and c
- e. None of these

According to the *Hazard Analysis Critical Control Point System* (HACCP), which of the following procedures for a cook/chill system would be wrong?
- a. Prepare food at room temperature for a minimal amount of time.
- b. Cool food in the refrigerator from 135°F to 40°F within 7 hours.
- c. Heat food in the oven from 41°F to 135°F within one hour.
- d. Cook food initially to 135°F or greater before chilling for storage.
- e. None of these.

Cooking a potentially hazardous food to an internal temperature of 165° to 170°F is lethal to:
- a. Viable salmonellae
- b. Spores and staphylococcal enterotoxin
- c. a and b
- d. None of these
IV. Evaluation of Packaging PLO 1: Assess a package’s functional properties (Pkg 107)

**Sample Questions**

1. What are a package’s three basic functions
2. Why are plastic packages considered compromised packages
3. Why is packaging waste considered a lifestyle issue?
4. What are stresses found in a distribution system that a package needs to protect against?

Data for this course assessment will be generated by the responses to a series of technical questions answered throughout the course. The questions will be in response to material given in lecturers throughout the semester and the change in performance will indicate if goals have been met.

V. Evaluation of MS program PLO 1: Successfully demonstrate competency through coursework (Filing of the Advancement to Candidacy form with GAPE)

Nothing is graded; number of candidacy forms counted for 2014-2015 semesters.
Appendix VI. Overall Degree Program Outcomes Survey
Fall 2014

Number of respondents: 44
Number of Outstanding (3 rating): 33
Number of Satisfactory (2 rating): 11
Number of Improvement Needed (1 rating): 0
Mean overall score out of 3: 2.75

Outstanding comments:
- Classes were informational, detailed, thorough, enjoyable
- Given all the courses required, I feel that I will sufficiently be able to work with the public. I feel confident in my skill acquired during my time here.
- Learned so much about the food industry. Thanks for the PFC for a great experience.
- Managed to be exposed to all areas of nutrition in one-way or another.
- I greatly benefitted from being a part of this field experience class. I gained valuable knowledge and experience in the health care setting.
- I think the program was helpful in gearing up for the real world.
- After completing my field experience, I gained knowledge in nutrition, food science, food service, and packaging. I believe that I am ready for an entry-level job in this field.
- Each class helped provide information that built off the information provided from the classes taken before. The hands on work/case studies were very helpful so that you would have already had experience doing meal plans and making sure the person would be getting all the nutrients needed.
- Challenging degree with an approachable department staff.
- This class helps me on the presentation skill and research topic review.
- Great overall view of the Nutritional Service field.
- I feel confident in my abilities to demonstrate knowledge of the scientific basis of nutrition, food science, food service, and packaging for an entry level professional.
- The professors at SJSU NuFS are exceptional and have provided me with an amazing amount of knowledge of nutrition. I feel confident that I will succeed upon graduation.
- The NuFS department staff is extremely knowledgeable, and usually extremely helpful and supportive of their students. Field experience and volunteer requirements provide students with hands-on experience, and make us better prepared in our careers overall.
- I learned a lot about how different markets in the food industry works. The PFC internship showed us the behind the scenes of different parts of the food industry.
- I feel that the department curriculum, staff, and experiences have provided us with sufficient knowledge and opportunity to succeed after graduation.
- Excellent program: helped understand job in work force. Learned about multiple areas for future job! Very helpful!
- Faculty is outstanding and their knowledge in the field enhanced my drive to learn.
- The department offers strong and a variety of courses/experiences in food science.
- Having finished all courses for my Bachelor’s degree, I feel very prepared to begin my career as a professional in the nutrition/food science field.

Packaging specific comments:
- Hope to see more packaging related classes to be offered in the future.
- SJSU Packaging students are well trained. We need to market the program nationally so companies come here to recruit interns and employees.
- From my experience at Learning Pathways, I have gained many skills in business. This is important in Packaging because many jobs require project management skills. Determining cost efficiency of the company helped me see the larger picture of running a business.
- I am very proud of my degree. I feel that I am equipped with the knowledge and practice to succeed in the world of packaging. The classes I’ve taken are all relevant. The labs and exercises in class are also very useful. I do use what I have learned in my classes at work. Being able to use packaging equipment during class/labs was a huge help in gaining experience.

Satisfactory comments:
- I say satisfactory because I think the curriculum needs to include an introductory nutrition course, and maybe a course on pathophysiology.
- Content offered by classes in the program helped me in attaining this objective.
- I enjoyed my experience at SJSU but do not feel as prepared for a career as I would like to be (maybe it’s just nerves!)
- I apply the theory to practical professional. I also know what I need to prepare in order to put my first step in Food Science Career.
- I enjoyed the program and professors as well…
- There should be more experience for students prior to entering the field.
- More staff support.
- I believe I came out of the program with a foundation of education that will help me start my career. But I would have benefitted more from a program that focuses more on packaging and less on nutrition/food science.
- I feel that once I have the opportunity to apply my knowledge, it will feel like I learned more. It is all theoretical at this point.

What enhancements could be made to the Program to increase achievement of overall Program Learning Outcomes?
- Offering more class times/availability.
- At times, it can be really hard to get the classes needed to graduate in a timely manner, but I know that is a budget issue. Maybe if there were two sections of a class, this would not be a problem. Overall, my experience as a nutrition major was excellent, and I loved a majority of the professors.
- More courses should be available and more seats should be available in classes. However, I understand the program is currently being changed, so I still rated it as outstanding. For the most part, professors are friendly and helpful. I feel that I have developed a strong background in science and dietetics so far.
- I believe that in order to increase the achievement of overall Program Learning Outcomes that the department must create more activities in the classroom to demonstrate those important concepts and information. Improvements would be to increase the number of small group activities in the classroom where students and collaborate in a safe space and could be facilitated by a professor.
- Not really much, I feel it has a good balance on the areas and can relate to each field in any way.
- I wish that there was a little more structure to the work experience requirements. I also wish that there was more guidance when it came to choosing a service site. It would be way more beneficial and helpful if a professional matched students to their right field of work. Other than that, it was a fairly good program.
- Students need more guidance since the beginning of their academic careers. Appoint a few peer advisors to meet with new students or students in 106A to look over the dietetics program curriculum. Create a worksheet that shows all the steps involved and ensure all dietetic students view it (maybe in the office). Professors in dietetics should be more encouraging of our potential and our ability to get accepted into an internal internship. Needs more of a relationship between concentration, education, food science, dietetics, and sports nutrition can all learn from one another. “Current issues in nutrition” should be recommended for all dietetic majors. Improves ability to understand research.
- Everything was outlined well and expectations were clear. I enjoyed the self-motivating aspect of the program. Maybe add a collaboration check-up appointment half way through the semester? Overall, I have no complaints. Thanks for the opportunity!
- Most classes built off the previous information, however not all of them. So I would make sure all classes that had information needed to be learned from another class were required before being able to take the class. Another enhancement would be to make sure all teachers are improving on the things the students from the semester before had commented on that needed to change. Because with some teachers it’s the same problems over and over again. Getting guidance with the classes needed for each major whatever that may be, especially for the transfer students and for the student who changes their major.
- I would like to see units of a class more accurately reflect the course load.
- Adding a computer aided design class such as Solid Works and/or Artios would make the students more employable because a lot of jobs have that software listed under the expected requirements.
- I think the program is running very well, helps students expand and stick with their careers. All we need to do is to have more staff coming to get more classes.
- I would love to see more emphasis on jobs available for non-dietician positions. Most of the jobs in the nutrition field focuses more on RD position, and I would just like to see opportunities outside of an RD. I’m graduating with Nutritional Science with an emphasis in Sports Nutrition, but I am definitely taking into consideration to pursue becoming an RD.
- To increase achievement of overall Program Learning Outcomes I would recommend that there be a lot more hands on work. I felt that most of the classes were lecture based which made it hard to really get involved. In addition, instead of students overall grade be based on a few exams, I think it would be better to have more small projects due more frequently in addition to the exams. This way students are more engaged with their courses. In regards to NuFS 192, I think it would be very beneficial if the nutrition department had a few “set” locations for students to complete their field experience hours. I know a lot of students found it difficult to find sites to volunteer at, so if there were a few “set” locations it might help out.
- There needs to be more classes offered in sections with huge waiting lists. At times, I have been on a waiting list of 20+ people. And I have been on some sort of waiting list every semester that I have been at SJSU. In addition, there needs to be a counselor/advisor for NUFS that is an actual professor or NUFS professional. I didn’t feel that I receive the proper guidance for my program. I ended up doing most of my information gathering and footwork myself.

- I believe another class focusing on medical nutrition therapy would be beneficial – there is an overwhelming amount of necessary information packed into 2 semesters. Perhaps a class focusing on the assessment of patients/recording of information (ADIME, SOAP, etc.) that is separate from the etiology and treatment of diseases with nutrition would be beneficial. Offering more class sections overall, would really encourage and support students in the program. The lack of availability of classes can be discouraging, making the program hard to get through.

- Include a tour of a company that focus on the nutrition aspect of food because we did not get an exposure to that during our internship. It would be interesting to see how nutrition contents are determined or who creates the food labels.

- For dietetics students, I feel that some changes should be made to the curriculum. NuFS 116 and 111L could be taken out, and replaced with a pharmacology course. It might also be beneficial to have a pathophysiology course. The majority of dietetics students would like to work in the clinical field, and you should cater to that.

- I think that it should be emphasized more that the field experience location should be found the semester before. I had a difficult time finding something so last minute and I had a fear that I would have to stay a semester after I graduated to complete my field experience. Luckily, I found a perfect fit and it showcased my emphasis, nutrition education. The overall nutrition program is a really awesome program, and I would not make any other changes. The changes I would make are to the university as a whole, and the issue with lack of classes which made it nearly impossible to get all the classes I needed.

- Better awareness of class conflicts. Every semester I was up against classes within this department that overlapped, causing me to drop certain classes and extend my graduation date. While I understand this is not entirely the department’s fault, greater attention should be put forth to help eliminate this issue.

- I would rate the Nutrition program as outstanding, due to the wide range of knowledge taught and gained in these years at studying at San Jose State University. The amount of classes offered are enough to allow each student an opportunity to learn beyond what they are looking for. I know for my experience, I learned much more than just to manage sports and athlete’s nutrition. I think that covering many science classes along with the nutrition classes were more than enough to challenge me during my time at San Jose State. The times when I did feel overwhelmed, as when multiple classes were piling on schoolwork. Teachers did a good job understanding what we are in multiple classes that have high demand of work, and were able to accommodate spreading out the exams and projects for us. Being well rounded with knowledge for packaging, health and safety, and dietetics will help me more than just knowing about sports nutrition. Some of the classes I felt were unhelpful to me were some of the more science-based classes that were mandatory to take. I felt like my microbiology experience was overwhelming due to the lack of flexibility for the class times, and also the material was significantly more than I
had anticipated. Taking a mandatory computer class was also something I questioned. I understand that computer skills are very important in life, but the equivalent to my NuFS 101B had no relation to nutrition. Overall, I am happy with the nutrition program. The staff and my classmates were very influential and helpful for me to enjoy my experience. I hope to represent San Jose State University well with what I choose to do in the future.

- The schedule needs to be worked out so that classes do not overlap. Also, the classes that are crucial to move forward in the major, especially dietetics, needs to have more offerings because they are always full and impacts students progress negatively.
- For food science, I think the classes of food science are all great and useful with the food science faculty and they are extremely supportive of it. If the classes will involve lots of hands-on activities, such as tours of regional food companies that would be perfect. Also includes product development, and students will do a big project related food product development that will cover the business side and give some insight about how we run things, and we will consider different start-up factors.
- There isn’t anything that I can think of to improve the program. The classes and instructors were all great, and I especially enjoyed the hands-on learning in the lab and in the kitchens, as well as the field experience work and volunteering.
- I think offering a more introductory medical nutrition therapy course (if possible) would be beneficial to students before thy take NuFS 110A/B. the class moves very fast and it can be very overwhelming, so I think having that background knowledge about introductory concepts would help a lot.
- Allowing NuFS students to practice clinical as well as counseling skills in a lab setting (just as nursing students have access to) would enhance the overall Program Learning Outcomes.
- Offer more hands on activities in classes. Provide more sections of classes so students are able to graduate on time.
- For nutrition education students, I feel it would be best to take more science classes, ie learning about medical nutrition therapy & metabolism, as well as anatomy and physiology. In my opinion, these classes are fundamental for nutritional knowledge and all nutrition students (regardless of emphasis or concentration) should be well versed in these topics. I do not feel I am adequately prepared for pursuing my nutrition career without having taken the Medical Nutrition Therapy class, as well as not having taken the metabolism class(es?). My fellow colleagues studying dietetics have said these classes were difficult but extremely informational and beneficial.
- The Department can help students find the internship that is suitable to student’s major.
- Some enhancements that can be made are the internship opportunities. I believe that if internships were already set up as clinicals throughout the semesters, then students would benefit more. Not only would students benefit more but they would be more experienced when looking for a job. Every internship would meet every objective of the program and prepare students for hands on experience. I believe that one semester or 90 hours is not enough. Other than that I have enjoyed every other part of the program.
- For people in the Nutrition Education emphasis, there should be less classes in cooking and more on Nutrition Knowledge and experience. I would have liked to take classes that taught me more on how to counsel on nutrition concepts.
- I think this program could be more effective if it were structured better. The hardest part of going through this program was overcoming the hurdles. I constantly felt like I was
missing information or confused about requirements. I think NuFS 31 should be tailored to each emphasis required at the state of the program and do a better job informing students of requirements. I also would have liked to have MNT earlier in the program so everything else made more sense clinically. However, I really enjoyed my classes and professors and felt that I learned a lot from them.

- That’ll be better if program can help students with getting an internship opportunity.

Packaging Specific Comments

- I feel that the program would benefit from more packaging and design-related courses rather than nutrition courses. While nutrition courses may be beneficial for students who choose to specialize in food packaging, that is accommodating a rather small proportion of students. The packaging industry is so broad and large that we need to be exposed to more versatile skills and information, such as SolidWorks or AutoCad or graphic design courses. I also feel that the program could be strengthened with a stronger foundation in math and physics, given that many of us aspire to be packaging engineers, not just salespeople. I learned the most from PKG 158, PKG 159, and NUFS 155. PKG 169, PKG 146, and PKG 141A/B were also useful but could have incorporated more laboratory experience. If the packaging department had more faculty to teach lectures and labs, we would be better prepared for careers in packaging.

- More staff or professionals in specifically the packaging department would help tremendously. Having only Fritz Yambrach is overwhelming for him to handle in my opinion. Right now he does an amazing job with what resources he is given.

- Need better lab equipment for the NuFS classes and the packaging lab. Also offer classes such as SolidWorks or AutoCAD as tech electives for the packaging program.

- Packaging needs more instructors! I understand money is obviously an issue, but as packaging is expanding, instructors are needed too!

- My learning experience in the NuFS and Packaging has been great. I enjoyed taking all of the packaging class and they have helped me prepare for an exciting career in the packaging industry. Enhancements that could be improved upon are increased funding for the packaging program, would be great to have more courses offered in design and various aspects of packaging not currently taught. Packaging is so broad and many career paths available. More teachers in packaging program would be very beneficial for the students, that any new course can be added to the program.

- A much needed enhancement to the Packaging Program at SJSU is the requirement of AutoCAD or SolidWorks class. Currently, SJSU packaging students cannot take SolidWorks at SJSU – that class is currently locked in the Industrial Design major. This needs to change. SOlidWOrks/AutoCAD is a must for packaging students. Almost all jobs require SolidWorks skill. It is an elective for Packaging students at this time but making this a core requirement and allowing packaging students to take this class at SJSU would be very beneficial!
Overall Degree Program Outcomes Survey  
Spring 2015

Number of Respondents: 33  
Number of Outstanding (3 rating): 29  
Number of Satisfactory (2 rating): 4  
Number of Improvement Needed (1 rating): 0  
Mean overall score out of 3: 2.79

Outstanding Comments:

- Learned many things and I feel very comfortable with applying what I have learned
- Learned and applied concepts – Re: educational outreach, constructs of behavior change, learned how to influence behavior change, program assessment and planning counseling
- Facility advisors were helpful in regards to activities done on site. Having the 192 packet before starting was helpful to determine objectives
- Education and work required effectively prepares students for positions in entry-level nutrition
- I learned so much in all the nutrition courses from the nutrition department. 192 has a great way to gain experience and learn more about what we can do with our degrees
- The courses offered at SJSU cover all of the requirements needed for an entry level job. Each course focused on each aspect of what a professional job would include. The professional meetings we had available to us were also, very helpful. The NuFS department gave students plenty of options for classes/electives. All of the courses I took had an impact on my overall knowledge of the field and I feel confident in my education.
- I was able to use by knowledge learned from previous classes to help those understand the value of nutrition by implementing it into a field experience course
- I was able to put what I have learned about Nutrition out in the community and I feel the field experience helped me do that
- I enjoyed my overall nutrition, food science, and packaging service learning experience. I like that the course was a little more flexible and easy going in that we got to choose our hours, choose where we got to intern, and were able to create our own objectives and what we wanted to accomplish at our jobs/internships based on our interests and what we wanted to accomplish after graduation. I also liked that there was not a particular class and time we had to meet for, or too much written work or testing because it gave us more time to work and gain experience in our desired industry and line of work. Overall, I think this is an excellent course for not just NuFS students, but for all students to take because it gives us the work experience needed when we start applying for jobs and building out careers. It lets us determine what type of field or work we want to accomplish after graduation.
- The courses are very thorough and the instructors were are approachable for assistance
- I was able to transfer my knowledge learned from my nutrition classes to help others understand what healthy eating is really all about and how nutrition is a very important part of one’s life and well being
- There were many classes that I truly enjoyed
- The NuFS department has offered me the opportunity to expand my knowledge about nutrition and it has improved and prepared me with the skills and confidence to use in the workforce of healthcare
Packaging Specific Comments

- I had an excellent experience with Pkg department programs

Satisfactory Comments:

- Need more food service and food science classes
- A wide variety of topics were covered, but distribution of courses could be improved
- Some of the classes were very interesting and I learned a lot that will apply in my career

What enhancements could be made to the Program to increase achievement of overall NuFS/Pkg Department Program Learning Outcomes for your degree?

- Class availability was limited at times, classes were impacted and difficult to enroll, so having more open classes would help students complete the program at a steady pace. Also, have clarity on advisor information, contact and hours, allows students to access accurate information from the correct advisor. Lastly, have professors that are compassionate for their students and care for them.
- Availability of classes
- Required advisement/better guidance
- Overall I feel prepared for work as a degree nutritionist and I owe my first job to NuFS 192 Field Experience for helping me network with local organizations
- The only enhancement that I can think of for the department is that the nutrition department should have more department activities. So it makes it easier to meet other nutrition students and make friends
- I believe that required courses for our degree should be more readily available during every semester
- Somehow, office hours for professors should be longer so that students have greater interactions with them
- For department activities, NuFS should think of ideas for activities that can relate to every emphasis/concentration (Sports nutrition, Nutrition education…)
  o This way NuFS students become more familiarized with each other
  o This would also allow for hands-on experience for each student
- The major enhancement I would recommend is class offerings. Some classes are very impacted or only offered F/S semesters at the same time as other major courses. Another enhancement I would make is more marketing and knowledge of the NuFS Club. I think it is a great idea, but I never heard much about it; more exposure and information would be very beneficial. Lastly, continue to offer professional meetings; they show what it is like to work in our field and they are very informative. Overall, I have enjoyed my time in the NuFS Department and I’m eager to use/share the knowledge I’ve gained.
- Mandatory volunteer hours
- Hands-on experience relating to the major
- More classes offered more than once a semester
- More classes offered during different semesters
- Find more areas for my emphasis or reach out to more counties/private companies to help other students looking for internships for environmental health specialists
- Possibly more check-ups throughout the semester to check on progress
- In the future, the program needs more class availability. The courses themselves are excellent, but the length of time it takes to complete the program is dependent on class availability
- I don’t think enhancements are necessary for this program. Overall, I had a great learning experience and was glad I was given this opportunity to help out at such a great organization. In addition to my field experience, I was glad I was able to discuss my experience with others and promote Second Harvest Food Bank
- To increase achievement of overall learning outcomes there should be an increase in classes made available to nutrition students. It is common for students to be on waitlists or unable to enroll in classes needed
- I enjoyed my field experience and feel that multiple field experiences throughout the course of the program would be beneficial. Although we are free to volunteer on our own time, including experience as part of a class allows us to fit it into our schedule as coursework
- Having more sections during the semester
- Having a hands on experience class that prepares students for the real world
- Having more classes toward the other emphasis because I feel like it is mostly geared toward the Dietetics major
- None, the department already provides enough requirements and outcomes for students to be successful
- I think that changes should be made to allow other emphasis in nutrition to be considered DPD acceptable. Sports Nutrition and Dietetics varies by only 5-6 classes. These 5-6 classes should not determine if I am worthy of becoming a RD. I am not fully knowledge and worked just as hard as dietetics students have.
- Newer equipment for labs
- The program has been nothing but good to me. The classes that were offered for Nutritional Science emphasis in education has prepared and extended my professional development experiences with in-class group projects, volunteering, outreach and professional meetings that I have and will continue to apply once I graduate; however, I do believe that there’s always room for improvement. The list of locations offered for NuFS 192 should be updated every semester; a few of locations I reached out to the numbers were no longer valid or did no longer need the help of volunteers. Another enhancement to increase achievement would be to meet with our NuFS 192 supervisor in-person, at least for the first meeting. I believe that having that interaction with our superior could expand our knowledge and as well will help building a stronger relationship
- Most courses are taught well. The most challenging and frustrating part about the program is not being able to get in to the required classes. When this happens graduation is often delayed, or we are forced to take expensive summer classes
just to catch up. Delaying graduation costs students more money. The NuFS program does its best within the parameters it is given; however there are still unnecessary challenges that students are forced to put up with. The university needs to lift the class-size caps so we can reduce the amount of anxiety that comes with enrollment each semester

- I think we should have more classes available for students to take so they can graduate on time. We should have more classes about the different types of diets
- NuFS 110 course was really fast paced, consider making it a three semester course instead of only two
- NuFS 111 lab doesn’t seem necessary since student learn and become familiar with the kitchen in NuFS 21
- Finding a location was difficult, especially for my emphasis. The only enhancement to the program that I would consider to be beneficial would be to have a little more helping providing a location
- Change the structure of some of the classes for example; NuFS 105 is not structured in a way that is helpful. I felt I was in NuFS 100W, I was really looking forward to learn about “current Nutrition”. I didn’t learn much; it was more reading research papers and articles. The class was boring. In addition, I am glad NuFS 112 and NuFS 113 is combined because it was pointless taking them separate since the material is very similar. Moreover, the department should also consider that there is more emphasis and concentrations other than Dietetics. I felt my whole experience here at SJSU was concentrated and catered to the Dietetics students, which are unfair for the rest of us. So the NuFS department should have guest speakers and opportunities for everyone and not just dietetics students.

Packaging Specific Comments

- There could be more guest speakers and interaction in the packaging field
- An improvement I would make to the program is for the department head and packaging instructor to work together and find more internships, projects, and even work together to find volunteer opportunities for packaging students to apply for. As the packaging program starts to grow, I think it is only fair to create a list for packaging students to look at when deciding where to intern/work at. It took me 3 months to find my internship and my friend who is a nutrition education major found her 192 field experience in only 2 weeks. A list of opportunities for packaging students should be made
- More funding to allow more classes and recognition of Packaging program at SJSU