

# Instructional Program Review Report

## Sierra College, 2017-18

Department/Program Name: Nutrition and Food Science

Date Submitted: 02/2018

Submitted By: Sonia Klenner

Ideally, the writing of a Program Review Report should be a collaborative process of full-time and part time faculty as well as the appropriate educational administrator, instructional assistants, classified staff members and students who have an interest in the present and future vision of the program at all sites throughout the district. The Program Review Committee needs as much information as possible to evaluate the past and current performance, assessment, and planning of your program.

Please attach your Department Statistics Report (DSR) and your ePAR Report when sending in your Program Review.

**1) Relevancy: This section assesses the program's significance to its students, the college, and the community.**

1a) To provide context for the information that follows, describe the basic functions of your program.

The Nutrition and Food Science Department at Sierra College offers six courses that provide a challenging, exciting, and educationally effective opportunity in the subject area of nutrition. We provide nutrition courses to meet a variety of student goals such as transfer to four-year institutions, meeting general education requirements for all majors, and the acquisition of a basic knowledge about diet and health. Our courses offer relevant preparation for various specialized programs in the health field, such as dietetics, nursing, and kinesiology.

Our four lecture courses (NUTF 05, 10, 13, 14) fulfill CSU transfer requirements for health education/physical education and AS degree requirements. Nutrition 10 satisfies transfer requirements and AS degree requirements for biological sciences and health education/physical education for both the CSU and UC systems. This course meets CSU GE applicability for interdisciplinary social or behavioral science as well as being a prerequisite for the Sierra College Nursing program and other nursing programs around the state. Nutrition 05 and 10 fulfill CSU GE applicability for lifelong understanding and self-development and satisfy requirements for our Nutrition and Dietetic for Transfer (AS-T) degree. Nutrition 05 is currently the only class on campus to utilize the kitchen laboratory and offers students hands-on cooking experience to develop healthy recipes and food preparation techniques. Additionally, the program offers independent study (NUTF 28) and internship (NUTF 95) courses.

The Nutrition and Food Science Department partners with the Kinesiology Department to offer a Nutrition and Fitness Certificate that provides students with the theory and practice needed to succeed as fitness professionals. The 9-course, 21-unit certificate prepares students to pass the American Council

on Exercise (ACE) national certifying exam such that they may become Certified Personal Trainers. Nutrition 10 and 14 play a primary role in the acquisition of the Nutrition and Fitness Certificate.

1b) How does your program support the district mission, as quoted below? Please include an analysis of how your program supports ISLOs (Institutional Student Learning Outcomes): Communication, Technology and Information Competency, Critical and Creative Thinking, and Citizenship?

“Sierra College provides an academic environment that is challenging and supportive for students of diverse backgrounds, needs, abilities, and goals with a focus on access, equity, student-centered learning, and achievement. The college is committed to practicing diversity and inclusion, and recognizes that a diverse and inclusive curriculum and workforce promotes its educational goals and values. Institutional learning outcomes guide the college’s programs and services, encouraging students to identify and expand their potential by developing knowledge, skills, and values to be fully engaged and contributing members of the global community. Sierra prepares students by offering Associate’s and transfer degrees, certificates, career and technical education, foundational skills, as well as lifelong learning and enrichment.”

The Nutrition and Food Science Department serves a diverse student population that includes transfer students preparing for upper division coursework in nutrition, kinesiology, nursing, and related allied health fields. Our program further supports student goals through the inclusion of our Nutrition and Dietetic for Transfer (AS-T) degree and the Nutrition and Fitness Certificate. Regardless of their degree choice and educational goals, we provide students with a diverse, dynamic and scientific learning environment that inspires student achievement, fosters academic excellence, and facilitates lifelong learning. Our curriculum offers a range of courses that provides learning opportunities for all students seeking to expand their understanding of nutrition and the critical role it plays in personal and societal health. We aim to challenge students to examine their personal health behaviors and develop lifelong skills and habits that help them attain high-quality lives free of preventable disease.

Our program supports a diverse and inclusive curriculum with courses that address topics including: food culture and diet; race and genetics; sex, age and weight; and disease risk and prevention. The department’s commitment to scientific inquiry and critical thinking aligns well with the District’s mission to encourage students to identify and expand their potential through the acquisition of nutrition and health related knowledge, skills and values.

Our faculty are committed to academic excellence and service to the community as they consistently provide the most current science-based information in area of diet and health. Together through regular department meetings, the Nutrition and Food Sciences Department maintains its currency, academic rigor and outcomes assessments. We collaborate in the development of curriculum, Student Learning Outcomes (SLO) for courses and program, best practices for both on-ground and online courses, ePar resource requests, and campus events in partnership with other departments and the community.

The Nutrition and Food Science Department sustains ongoing support of Institutional SLOs through the alignment program and course student learning outcomes for both our Nutrition program and Fitness certificate. Regular assessment of course and program outcomes, effective curriculum development and

relevant coursework ensure that students achieve skills in communication, technology and information competency, critical and creative thinking and citizenship. Through interactive lectures, readings, research, laboratory experiences, writing assignments, discussions, and other academic and scholarly activities, nutrition courses promote the acquisition of knowledge, skills and values consistent with a well-rounded education and enable students to function personally and professionally as healthy and socially responsible world-citizens. We appreciate and celebrate the importance of cultural diversity and work efficiently with other departments and the community to facilitate student success.

1c) Program offerings align with which of the following mission categories (check all that apply):

- Transfer     Career Technical Education  
 Basic Skills     Personal Development/Enrichment     Lifelong Learning

1d) Please analyze your department's success in supporting the mission categories marked in 1c above. Please provide evidence in support of this analysis, including data from the dashboard relevant to this evaluation. If any of the following apply to your program, please address them in your analysis.

- Degrees, certificates, and/or licenses your department has generated:
  - The alignment of these awards with the district's mission and/or strategic goals. (See the district "Awards Data File, available from Research and Planning, for your numbers).
- Job placement or labor market information for your program's awards and licenses.
- The contribution your program makes to student transfer.
- Participation in basic skills programs.

The Nutrition and Food Science Department implemented the Associate in Science in Nutrition and Dietetics for Transfer degree (AS-T) in the fall of 2015. This 29-30 unit degree prepares students to transfer into the CSU system to complete a bachelor's degree in Nutrition. Along with two courses in Nutrition (NUTF 05 and 10), required courses for transfer include those from Biology, Chemistry and Psychology. The popularity of the degree has grown significantly. In fall 2015, our department identified seven students within the Nutrition-Dietetics for Transfer major. Currently (spring 2017), there are 139 students pursuing the degree. To date, no students have been awarded with the AS-T degree. We expect these numbers to grow as students complete the required coursework.

The program also makes a significant contribution to student transfer by meeting general education requirements in Biological Sciences, Health Education/Physical Education, Interdisciplinary Social or Behavioral Sciences, and Lifelong Understanding and Self-Development. Fill rates for courses are consistently above District averages demonstrating that the Nutrition and Food Sciences Department plays a critical role in meeting the needs and interest of students transferring from Sierra College to four-year institutions. Our FTES 3-year average is 108 and average fill rates are 93%.

In collaboration with the Kinesiology Department, the Nutrition and Fitness Certificate was established in fall 2006 and currently includes three nutrition courses (NUTF 5, 10, 14), five physical education courses (KIN 3A, 5A, 11, 80, 83) and one business course (BUS 120). The certificate uniquely prepares students for successful entrance into the fitness field as personal trainers, group fitness instructors and advanced fitness specialists. The ACE Personal Trainer Preparation (KIN 80) course equips students for the nationally recognized ACE Certified Personal Trainer certification exam. With the support of CTE, the popularity and success of the Nutrition and Fitness Certificate has steadily grown and developed to

become a high-quality and innovate platform that aims to enhance student learning, responds to compelling student and community needs, and aligns with the changing economy to meet the changing needs of the student and community. Faculty from both the Kinesiology and Nutrition Departments work together to maintain the relevancy, currency and rigor of the certificate through regular meetings with invested faculty and industry leaders. Through the implementation of online distance education for NUTF 10 and 14, our certificate better meets the needs of students in Placer and Nevada Counties and surrounding areas. Certificate awards have remained steady with a 3-year average of 18 certificates per year.

Occupational projections of employment for Dietitians and Nutritionist in California report 20.3% growth within 2014-2024. Median annual wages for 2017 are \$73,953. Fitness Trainers and Aerobics Instructors expect to see 16.8% growth during the same period. Median annual wages for 2017 are \$47,568. These values have increase since our last Program Review in 2015. (<http://www.labormarketinfo.edd.ca.gov>)

Our nutrition courses are specifically designed to promote personal development and lifelong learning. All students, regardless of their chosen major, receive high-quality science-based nutrition education that equips them to apply basic principles concerning diet and health to their lives and allows them to positively influence their family members, friends and the community. The educational experience received from our program enriches the student's personal knowledge of nutrition and provides them the tools and skills needed to continue developing healthy habits. These courses help students better understand themselves through the exploration of their culture, family genetics, and individual needs.

- 1e) Optional Additional Data: Comment on any other relevant contributions of your program to the district mission, goals, outcomes, and values not incorporated in the answers above. Examples include but are not limited to contributions to student equity and success, diversity, campus climate, cultural enrichment, community ties, partnerships and service, etc. Include specific data and examples.

Professors in the Nutrition and Food Sciences Department are actively involved in the support of District mission, goals, outcomes and values. Professors Mukutmoni (currently) and Klenner (fall 2017) have served as Academic Senators and are currently active on the Distance Learning committee. Their contribution to the Distance Learning committee involves development and implementation of the Committee's mission and goals and the regular evaluation of current and potential online courses. Within Distance Learning, Professor Klenner is also involved in the planning and facilitation of Sierra Online Summit, an intensive training workshop for online instructors. Nutrition students regularly support the Sierra College Food Pantry through food donations each fall semester during the ASSC Food Drive. Professor Mukutmoni serves on the ASSC Food Pantry committee as well as the Sabbatical Committee. Professor Klenner currently serves on the Curriculum committee and focuses on helping faculty develop course student learning outcomes. In addition, Professor Klenner participates as a member of the Educational Effectiveness Committee to establish and maintain campus wide SLO assessments. She works closely with 13-14 departments as their SLO Assistant to help department chairs develop and revise program and course SLOs and collect assessment data each semester.

Contributions to campus climate and cultural enrichment include participation in People and Cultures Day, Earth Day and the Health Fair by contributing to planning and organization, hosting a festival booth, and involving students in the preparation and sales of food, and student completion of passport and leaflet brochures. Several faculty employ assignments that encourage students to discover and interact with local farmers and farmer's markets. Beginning in fall 2017, the Nutrition Department has been collaborating with Business, Agriculture, ASSC, and the Food Pantry to create an interdisciplinary pop-up marketplace event this spring. This project is aimed to support the student-led efforts in the areas of business and social entrepreneurship. In spring 2016, students from our Food Preparation for Nutrition and Life Fitness (NUTF 05) course participated in the creation of an 80<sup>th</sup> Anniversary sandwich in collaboration with Mr. Pickles, a local sandwich shop. Among the judges present, were Sciences and Math Associate Dean, Karen Warburton, and Sierra College President Willy Duncan.

Our adjunct faculty are also actively involved in the community:

- Professor Barone is a long time participant in the UC Davis Women's Heart Care Forum, provides general nutrition education for the Eureka Union School District, and works closely with dietetic interns seeking to complete their dietetics registration.
- Professor Bergman assists in scoring essay responses for both Home Economics and Health Ed high school teachers aiming to acquire their CSET credential.
- Professor Teh offers her expertise to students by leading a Student Success Workshop titled "Eat for a Sharper Mind: Boost Brain Power With Food." She works part-time at Chapa-De Indian Health, which serves American Indians, as well as low-income families. She also works with faith-based organizations to provide health talks and cooking classes to the community.
- Professor Ransbury host two groups of Japanese dietetic students at Kaiser each year. During their visit, she organizes a hospital tour and educates them about a career in Dietetics.
- Professor Schultz works as a liaison between Deer Creek Elementary and Sierra Harvest in their farm to school educational program. She is currently supervising a student internship at NCC and mentoring a past student her high school senior project. In her free time, she teaches cooking classes and writes nutrition articles for BriarPatch.
- Professor Kessler-Day regularly participates in campus Pride Days by hosting a faith-based booth. Finally, the Department worked together to create our Academic Map (fall 2016) and attended several planning workshops focusing on R4S efforts, including the R4S Isaac Rowlett-Facilitation & Stakeholder Engagement Training (fall 2016).

**2) Currency: This category assesses the currency of program curricula as dictated by Title 5 and the currency of efforts in meeting accreditation standards as well as improving pedagogy and engaging in professional development.**

- 2a) Curriculum: Comment on the currency of your program's curricula, including discussion of any recent or projected changes. Please describe your process for evaluating and revising curriculum, including the use of SLOs. Please describe and analyze any effects of R4S and other developments in curriculum and program planning.

The Nutrition & Food Science Department actively participates in curriculum review every six years as outlined by the College. The last review was completed in fall 2013 and all curricular changes were approved by the Curriculum Committee. During this process, we made changes in NUTF 05 and 10 to reflect C-ID descriptors. In 2014, all courses were updated to reflect the new CSLOs. As such, we are 100% current with the curriculum review process.

Discussion on curricular changes take place during department meetings on Planning and Assessment day of Flex Week. The department regularly discusses the currency of curricula, SLOs, and outcomes assessments. We work collaboratively toward an agreeable outcome that keeps our courses relevant and synchronous with four-year colleges. Looking ahead to our next review (2019), we will continue to make necessary changes to curriculum and regard any updates to the C-ID.

- 2b) Student Learning Outcomes Assessment: Analyze your program's assessment of course outcomes, analysis of results, and improvements/changes made to the program as a result of this assessment. Please provide specific data and analysis in the space provided.

In fall of 2014, each Course Outline of Record for all Nutrition courses was assigned a supplemental Form E (Course Student Learning Outcomes). Currently, all active courses have identified CSLOs and each has undergone regular assessment since fall 2011. While the minimal requirement for assessment is that all courses are assessed at least once in a 3-year cycle, our department agrees that bi-annual assessments are increasingly more meaningful. We adhere to this assessment plan as closely as possible. Each course is assessed through an agreed upon mode which best reflects the structure of the course. NUTF 05 employs a pre- and post- test given at the beginning and end of the semester. NUTF 10 and 13 rely on a standardized exam. Students are initially exposed to questions in chapter/unit exams throughout the semester. The standardized assessment is given in part as the final exam and results from the final assessment are used for reporting. NUTF 14 assesses via a standardized assessment or more recently a capstone project. Similar to NUTF 10, the standardized assessment included select questions from all exams given throughout the semester. The capstone project is a group report that allow students to demonstrate gained knowledge and application. The data collected from assessments has provided invaluable feedback to the department. We have discussed and implemented pedagogical improvements (i.e. subject matter review sessions), edits to assessment questions, and uniform assessment procedures. The department has determined that the standardization of assessments imparts great value and helps to ensure that course section breath, depth, and rigor is matched.

Assessment Summary reports are available for public viewing on the Sierra College Accreditation and SLO webpage (see attached). The majority of our CSLO assessment results report Mastery followed by Proficiency. Academic year 2015-16 results report a small number of Unsatisfactory. Our department defines assessment results as the following: Unsatisfactory - final score 69% or less; Proficiency - final score 70-79%; and Mastery - final score 80% or greater.

Program Student Learning Outcomes (PSLOs) were revised in fall 2014 by faculty to better represent the Nutrition department and the Nutrition & Fitness Certificate. Assessments of PSLOs are completed

indirectly via the regular assessment of CSLOs. All nutrition CSLOs align with at least one PSLOs (see attached Spreadsheet).

Each semester Nutrition faculty gather on Planning & Assessment Day to 1) update SLOs, assessment tools and the assessment schedule; 2) develop or update Program Review; 3) update departmental ePAR; and 4) update curriculum and discuss assessment results. Action plans created as a result of assessment are reported on the Departmental Assessment Analysis form and posted on the Sierra College Accreditation and SLO webpage for public viewing.

<https://www.sierracollege.edu/slo/accreditation/index.php>

In the space below, please describe or attach the cycle you have developed for outcomes assessment.

			F 2013	S 2014	F 2014	S 2015	F 2015	S 2016	F 2016	S 2017	F 2017	S 2018	F 2018	S 2019
<b>NU TF 5 - Food Preparation for Nutrition and Life Fitness</b>			C - Completed, P- Planned											
CSLO 1	Create recipe modifications to meet dietary guidelines with regard to family, ethnic, and cultural environments and disease prevention and management.	A, C, D	C	C	C	C	C	C		C	C	P	P	P
CSLO 2	Evaluate the nutrient value of foods through the use of product food labels and recipes.	A	C	C	C	C	C		C	C	P	P	P	
CSLO 3	Demonstrate knowledge of basic cooking techniques which prevent foodborne illness by exhibiting personal and workspace cleanliness.	C	C	C	C	C	C		C	C	P	P	P	
CSLO 4	Distinguish the effects of external variables and cooking techniques on food taste, texture, aroma, appearance and nutrient content.	C	C	C	C	C	C		C	C	P	P	P	
CSLO 5	Describe how food preparation supports energy balance, metabolism and physical activity.	B, C	C	C	C	C	C		C	C	P	P	P	
<b>NU TF 10 - Principles of Nutrition</b>														
CSLO 1	Analyze the structures and functions of the six essential nutrients as they relate to the human body through the life cycle.	B, D	C	C	C	C	C	C	C	C	C	P	P	P
CSLO 2	Evaluate the components of a healthy diet through the use of product food labels, the Dietary Guidelines for Americans, the USDA food guide and the Dietary Reference Intakes.	A	C	C	C	C	C	C	C	C	P	P	P	
CSLO 3	Critique personal nutrient and energy needs through the use of a computerized diet analysis program.	A	C	C	C	C	C	C	C	C	P	P	P	
CSLO 4	Identify dietary and lifestyle modifications for improving health throughout the life cycle.	D	C	C	C	C	C	C	C	C	P	P	P	
<b>NU TF 13 - Nutrition Throughout the Life Cycle</b>														
CSLO 1	Assess the impact of external variables on nutrient intake throughout the life cycle.	C, D	C	C	C	C	C	C	C	C	C	P	P	P
CSLO 2	Identify nutrient requirements for each stage in the life cycle.	D	C	C	C	C	C	C	C	C	C	P	P	P
CSLO 3	Evaluate diets for adequacy using current dietary assessment tools.	A	C	C	C	C	C	C	C	C	P	P	P	
CSLO 4	Demonstrate methods of communication for the nutrition professional in promoting nutrition and health for a given population.	D	C	C	C	C	C	C	C	C	P	P	P	
<b>NU TF 14 - Nutrition for Physical Performance</b>														
CSLO 1	Identify dietary changes which influence health, energy metabolism and physical performance.	B, D		C			C				C	P	P	P
CSLO 2	Identify nutrient requirements and energy needs on body weight, body composition, and physical performance.	B		C			C				C	P	P	P
CSLO 3	Evaluate the role of food and dietary supplements on body weight, body composition and physical performance.	B		C			C				C	P	P	P
CSLO 4	Critique personal nutrient and energy needs through the use of current dietary assessment tools.	A		C			C				C	P	P	P

2c) Professional development: Please describe how your department’s individual and group activities and professional development efforts serve to improve teaching, learning and scholarship.

The members of our department engage in a variety of professional development opportunities that serve to enhance and augment teaching, learning and scholarship. Through the offerings from Staff Development, faculty regularly participate in flex workshops focusing on new teaching strategies/tools. Many faculty have participated in Canvas trainings for web-enhanced and online courses. We invite various publishing companies periodically to provide a demonstration of their products and textbooks. Through CTE, faculty are offered the opportunity to participate in local externships that contribute to

subject matter content. Additionally, we have regular department meetings each semester where we discuss and update pedagogy and create program goals. All faculty members actively contribute to resolving departmental issues concerning curriculum, SLOs and assessments, program updates including degrees, certificates and mapping, and faculty, supplies and facility requests.

The Nutrition & Food Science faculty are outstanding concerning their educational achievements and their involvement in the local community. Many faculty exceed the minimum qualifications for employment and many are actively working outside the classroom as Registered Dietitians, Certified Diabetes Educators, and Personal Nutrition Counselors. Nutrition faculty continue to expand their knowledge of the subject by remaining active in the fields of nutrition and higher education.

- Professor Bergman is a member of the Institute of Food Technologists and volunteers her time to the Interfaith Food Bank in Grass Valley. She recently attended the American Cheese Society national conference and competition where she prepared over 2000 cheese samples from national, local, and boutique creameries. Additionally, Professor Bergman attended the UC Davis Viticulture and Enology seminar.
- Professor Barone has received her certification as a Certified Diabetes Educator (CDE) and a Certified Specialist in Obesity and Weight Management (CSOWM) alongside her certification as a Registered Dietitian. She maintains her certifications with continuing education credits and attendance of annual association meetings.
- Similarly, Professor Ransbury maintains her certifications as a Registered Dietician and Certified Diabetes Educator with yearly course work in the field. Most recently, she has completed coursework in UCSF's Diabetes Update and Advances in Endocrinology and Metabolism, issues related to tube-feedings, Advances and Controversies in Clinical Nutrition, Managing Feeding and Swallowing Problems, Modern Management of Type 1 and Type 2 Diabetes, and several other topics.
- Professor Teh is also a Registered Dietitian and Certified Diabetes Educator. She maintains her credentials through continuing education, which most recently includes the UC Davis Diabetes and Endocrinology Symposium, Indian Health Service Diabetes Day, and Institute for Natural Resources (INR) Brain Health seminar. She was recently been approved to attend the International Congress on Vegetarian Nutrition.
- Professor Shultz is also active in the maintenance of her certification as a Registered Dietician. She has completed continuing education in topics such as The Feed for Speed and Power (Sports Nutrition Guidelines and Updates), The Vegan Advantage for Athletes, The Role of Plant-based Diets in Diabetes, and Immunity, Inflammation and Gut Microbiota.
- Professor Kessler-Day is a Registered Dietitian and participates in many educational opportunities aimed to maintain her registration and augment her teaching. Most recently, she attended the virtual meeting of the Online Teaching Conference, finished a course in AAD 85 (web design) and completed a short seminar in social media for dietetics. Her other continuing education hours included a broad range of nutrition-related subjects from pediatric and geriatric nutrition to sustainability of the food supply and the impact of climate change.



- Professor Klenner has attended several conferences over the years including the RP Group Research & Planning Conference, InstructureCon, the Food & Nutrition Conference & Expo, and the Online Teaching Conference.

As is evidenced by the summary above, our department is rich in personal development. The depth and breadth of knowledge within our department aid in improving teaching, learning and scholarship.

2d) Optional Additional Data: Enter additional data here that you believe to be an indicator of your program’s effectiveness and explain why.

**3) Effectiveness: This section assesses the effectiveness of the program in light of traditional measurements.**

3a) Retention and Success: Identify and explain the three-year trends in your program’s data contained in the DSR and analyze any relevant information found in the data dashboard related to retention and success. Address separately the data for on ground and on-line course. Evaluate the significance of the trends, including any challenges experienced by the program and any relevant data/analysis from your course and program outcomes assessments. Please analyze any significant trends related to student equity and success. If you determine that you need to improve the program’s performance, please describe how you plan to achieve this goal. Please include the results of your outcomes assessments, as appropriate.

For the past 3 years, our program has closely met or exceeded the District’s success and retention. We experienced an unusual dip in rates during spring 2016; prior to and since then our rates are greater. Spring 2016 does not show any changes to enrollment, course offerings, or staffing. No apparent factors were found regarding this phenomenon. The average departmental retention rate is 87% (85% low, 89% high), slightly above the district at 85%. The average departmental success rate is 72% (69% low, 74% high), as compared to 73% for the district. Average retention rates have remained consistent and average success rates have increased by 2% since our last program review. Our average retention and success rates for online courses are 82% and 67%, respectively. This is an exciting increase from 77% and 61%. We are seeing growth in the area of online education and will continue to implement best practices for online instruction. Seven of our faculty have successfully completed the online review process and are qualified to teach online courses. While specific course data do not differential between online and on-ground courses, we do recognize the uniqueness of each and attempt to address each appropriately. Departmental conversations on topics such as the use of Starfish, mixed media usage, student emails and announcements, clarity of written instruction, ADA compliance and student-student interaction are all areas in which faculty members have analyzed, discussed and experimented concerning online courses. In contrast, conversations surrounding on-ground courses focus on incorporating group activities, encouraging consistent attendance, review sessions, mixed media usage, and use of props and models. We hope these continued conversations and implementation of new techniques will continue to translate to better retention and success rates across courses and modes.

NUTF	Fall 14	Spring 15	Fall 15	Spring 16	Fall 16	Spring 17	3 Yr Avg
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Department Retention	86%	86%	89%	85%	88%	89%	87%
Department Success	73%	72%	74%	69%	73%	74%	72%
Online Retention	84%	78%	82%	77%	85%	85%	82%
Online Success	71%	68%	66%	60%	71%	69%	67%

Our program strives to be successful in both retaining students, providing curriculum of appropriate rigor and create an environment for success regardless of age, sex, or ethnicity. Our department data shows greatest retention rates among American Indian/Alaskan Natives, Asian and Filipino populations (91%). In contrast, we see the lowest retention rates among African Americans, Pacific Islander and Unknown/Declined (79%-81%). In a recent department meeting, we discussed how to engage these populations of students to increase retention. Building meaningful and respectful relationships with students, encouraging students to interact with other classmates, and providing a safe learning environment proved to be highlights of the conversation. Success rates continue to show declines for African American, Pacific Islander, Hispanic/Latino, and Unknown/Decline students (49%-67%). Highest success rates are seen for Asian, Filipino and White students (75-79%). Departmental success rates for all disparate populations is 60%, well below the District average for all students. While this information is not new or unique, our department will continue to address the disparity by looking at other departments and colleges who have been successful in changing retention and success rates for populations of concern. A few areas in which our department sees opportunities for growth are to engage in diverse hiring practices, engage students on campus outside of class, and further incorporate culture and ethnicity into lecture topics and related media.

Retention/Success by Ethnicity	Fall 14		Spring 15		Fall 15		Spring 16		Fall 16		Spring 17		3 Yr Avg
	Enr.	%	Enr.	%	Enr.	%	Enr.	%	Enr.	%	Enr.	%	
African American Ret.	30	73%	28	93%	36	81%	40	68%	48	83%	52	81%	79%
African American Succ.		53%		57%		42%		43%		50%		52%	49%
Pacific Islander Ret.	2	100%	2	100%	4	75%	4	75%	8	75%	6	83%	81%
Pacific Islander Succ.		50%		50%		50%		50%		50%		67%	54%

3b) Enrollment Trends: Identify and explain the three-year enrollment trends in your program’s DSR data. In addition, analyze any relevant information found in the data dashboard related to these trends. Address separately the data for on ground and on-line, as well as the data at the various centers in which your program may operate. Evaluate the significance of the trends including any challenges experienced by the program. Please analyze any significant trends related to student equity and success. If you determine that you need to improve the program’s performance in any way, please describe how you plan to achieve this goal.

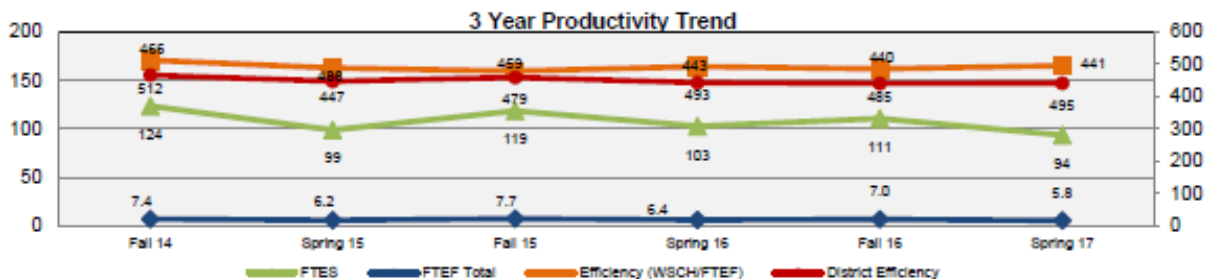
Enrollment data for the Nutrition & Food Science Department continues to be very strong. Our average fill rate is 93%, slightly higher than the District average of 91%. With average class sizes of 30 and 34 sections, we serve over 1000 students each semester. Greatest enrollments are seen each year at the Rocklin Campus (710), particularly during the fall semester, followed by the Nevada County Campus (54) and Tahoe Truckee (22). We are seeing a trend toward lower enrollments since 2014. This may be attributed to changes in the economy, increased tuition and textbook rates, and the availability of course offerings. We have seen an increase in demand for online classes making it second only to enrollment on the Rocklin Campus with an average of 250 students each semester. To address this growth, we have increased the number of online instructors and expanded our online course offerings for fall, spring, and summer. While the growth in online instruction is promising, we have experienced the cannibalization of some on-ground courses particularly those at NCC. For example, offering an online section of NUTF 14 regularly leads to the cancellation of an on-ground section at NCC due to low

enrollment. Our department goal is to offer equivalent programs at NCC and TT to facilitate completion of general education courses, attainment of the Nutrition and Fitness Certificate, or transfer to a university with our Nutrition AS-T degree. To manage and overcome these barriers our department works closely with each campus in the construction of class offerings and collaborates with the Kinesiology department to support certificate students.

Enrollment by Location	Fall 14	Spring 15	Fall 15	Spring 16	Fall 16	Spring 17	3 Yr Avg
Department Total	1,168	937	1,121	977	1,049	892	1,024
Roseville Gateway							#DIV/0!
Rocklin Campus	889	662	786	661	738	542	710
Tahoe Truckee	24		21		21		22
Nevada County Campus	62	50	62	69	30	48	54
Distance Learning	213	225	252	247	260	302	250

3c) Productivity: Comment on how the program contributes to overall district productivity. Evaluate the significance of the trends including any challenges experienced by the program. If you believe the statistical trends need improvement, and can be affected by your actions, if you determine that you need to improve the program’s performance in any way, please describe how you plan to achieve this goal.

Our Department experiences strong productivity as is evidenced by our efficiency numbers. We consistently remain above the district efficiency numbers at 492 as compared to 449. Productivity has seen an overall decline in both the District and our Department; nonetheless, we remain a highly stable program serving students and positively influencing the district numbers. Our FTES and FTEF numbers continue to be strong with an average of 108 and 6.8, respectively. Our faculty work effectively to serve students within budgetary and resource constraints.



3d) Analysis and Planning: Referring to your ePAR Report of Goals, Strategies, Actions, and outcomes assessment cycle and relevant assessments/evaluations, please describe your program’s plans to maintain or increase its effectiveness and analyze and evaluate your efforts to achieve these goals. Please describe and analyze the impact of any R4S initiatives on your program and incorporate any relevant information in the data dashboard related to student success, equity, and other measures of success including any relevant information addressed in sections 2 and 3.

The Nutrition and Food Science Department regularly takes time to reflect on its accomplishments and analyze areas of growth and change. We believe that continual evaluation and strategizing allow our program to adapt to student needs and maintain our relevance and effectiveness. Below are a few of the recent goals we identified during our outcomes assessment cycle and relevant assessments/evaluations:

- Create and promote our new Associate in Science in Nutrition and Dietetics for Transfer degree and work with R4S efforts in the development of a related educational map. While this main goal was achieved during 2015-16, we plan to further these efforts by increasing student awareness with the use of posters, fliers, and informational meetings, as well as, working closely with academic counselors. Alongside these efforts, we also plan to address time to award completion. Currently, we stand at almost 4 years for both degree and certificate.
- Increase course offerings with the development of Food Safety & Sanitation, Cultural Foods, and Community Nutrition courses. We anticipate that these courses will help students complete general education requirements, provide necessary coursework within the nutrition and food science field, and create a program aimed to celebrate cultural diversity.
- Improve success and retention rates overall, but specifically in the context of disparate and under-represented populations. As a department we are working together to engage students in the classroom through group discussion and assignments, a variety of media and activities, development of student-instructor rapport, engagement in campus activities, encouraged use of Starfish, and promotion of student resources.
- Continue to examine and re-evaluate the Nutrition and Fitness Trainer Certificate in regards to required courses and course relevance. With the Kinesiology Department, we have worked to make extensive changes to certificate requirements and individual courses aimed to increase rigor and success. We plan to fully implement these changes in the next year and monitor their progress.

3e) Optional Additional Data: Enter additional data here that you believe to be an indicator of your program's effectiveness and explain why.

Below are other indicators of our program's effectiveness:

- Demand for online courses have continued to increase and our department has responded with an increase in online instructors. Success and retention rates are experiencing positive change.
- Faculty regularly participate in CTE activities including advisory meetings, certificate meetings with Kinesiology, campus in-reach career fairs and in class promotion. The number of students working toward and receiving a certificate award has continued to increase.
- Professors Mukutmoni and Klenner also provide letters of recommendation and career advice for students who are transferring and those pursuing a degree in Nutrition and Food Science.
- In and out of the classroom, faculty work with students to address and overcome academic and personal challenges. Through the use of office hours, online communication, before and after class conversations and referral to campus resources, our faculty provide students with the necessary tools, resources, support and encouragement to continue in their educational goals.

**4) Resources: This category assesses the adequacy of current resources available to the program and describes and justifies the resources required to achieve planning goals by relating program needs to the assessments above.**

4a) Please describe the future direction and goals of your program for the next three years in terms of sustaining or improving program effectiveness, relevance, and currency; include any analysis of R4S initiatives in the development of these goals and plans. Please incorporate analysis of any relevant outcome or other data in this description, including any data from the dashboard.

In the next three years, the Nutrition & Food Science Department is looking forward to expanding the program and making it even more robust and closely aligned with the Sierra College mission. We anticipate a change in our enrollments and course demands as our courses begin to appear on many academic maps. To achieve these goals we anticipate the following:

- Continue to provide high-quality science-based nutrition education aimed to prepare students for transfer to four-year institutions, meet general education requirements for all majors, and equip students with life skills concerning diet and health.
- Increase success rates for online courses with the use of best practices, including compliance with ADA standards to better serve our disabled students.
- Further our use of SLO assessment data and dashboard data to improve instruction and increase success for all courses on-ground and online by addressing barriers to learning, identifying under-represented and disparate populations, and modifying pedagogy.
- Exhibit our presence on campus by actively participating in campus and community events, collaborating with other departments, and developing partnerships with the community for internships.
- Widen the breath of our course offerings by developing additional courses (Food Safety & Sanitation, Cultural Foods, Community Nutrition) to assist in general education requirements, provide necessary coursework within the nutrition and food science field, and create a program aimed to celebrate cultural diversity.
- Advance our work with R4S by participating in the onboarding process, promoting our academic map, supporting our interest group area, collaborating with fellow departments, providing educational and academic counsel, and decreasing time to award completion.
- Increase the number of students who are awarded the Nutrition and Fitness Certificate and Nutrition and Dietetic for Transfer AS-T degree across all campuses. Address needed changes within certificate and degree patterns to meet student and community needs.
- Expand our course offerings at NCC and Truckee campuses in order to offer equivalent programs that facilitate completion of general education courses, attainment of the Nutrition and Fitness Certificate, or transfer to a university with our Nutrition AS-T degree.

4b) Equipment and Technology: Comment on the adequacy of the program's equipment and technology funding level for the District as well as for specific sites, including a projection of equipment and technology needs for the next three years. Please provide a justification for these needs, incorporating relevant assessments of the data above in this explanation.

As a department that holds a CTE supported certificate program, we benefit from the funding available each year. We have successfully been able to supply our program with the needed equipment, media, and supplies needed to provide a high-quality and innovative program which serves to enhance student learning, respond to compelling student and community needs, and align with the changing economy. Without the financial support from CTE, our program would not experience its current success.

In the next three years, the Nutrition & Food Science Department is looking to gain the financial resources to fulfill the following equipment and technology needs:

- Replace unsafe and purchase new kitchen equipment that is necessary for safe execution of our NUTF 5 Food Preparation for Nutrition and Life Fitness courses.
- Replace unsafe and purchase new fitness equipment that supports the maintenance and expansion of the Nutrition & Fitness Certificate.
- Replace unreliable and purchase new nutrition and food related models that augment pedagogy, enhance student learning, and increase success.
- Funding for guest speakers to provide expertise in specialized areas of nutrition and fitness not already provided by current faculty.
- Funding for classroom technology (e.g. tablets, clickers) to enhance student participation, engagement and learning.
- Funding for professional development in the areas of nutrition, exercise physiology, food science and technology, environment and sustainability, disease development, online instruction, technology, best practices, equity and diversity, ADA compliance, etc.

4c) Staffing: Comment on the adequacy of your program's faculty, classified, and student help staffing levels for the overall District as well as specific sites, including a projection of staffing needs for the next three years. Please provide a justification for these needs, incorporating relevant assessments of the data above in this explanation.

As is evident from our FT/PT faculty ratio (31%) and FTEF (6.8), the Nutrition & Food Science Department continues to have a heavy reliance on adjunct faculty. Our Department has two full-time faculty members and twelve active part-time faculty members. We often have trouble staffing course sections during traditional working hours and recruiting qualified part-time instructors. In the past years, we have experienced adjunct turnover due to retirements, moves, new full-time work, educational pursuits, and illness. We anticipate that the expansion of our certificate and AS-T degree and the growth of the R4S efforts will only increase the demand for another full-time faculty member. Despite these limitations, we remain a high efficient and effective department with a productivity rating of 492, an average retention

rate of 87%, and a 72% success rate over the past 3 years. On average, we offer 34 courses serving 1024 students across all campuses. We currently do not have classified or student help in our department. NUTF 5 Food Preparation for Nutrition and Life Fitness is a very popular class and is an integral part of our Nutrition & Fitness Certificate and Nutrition & Dietetics AS-T Degree. Currently, we only offer two sections of this course due to faculty and scheduling constraints. Aside from facilitating the food preparation laboratory, faculty are responsible for planning menus, purchasing, transporting, storing and preparing food items, collecting and submitting receipts for refund, and maintaining kitchen facilities. This requires a deep level of commitment and time, all without help or additional pay. Support for faculty in the form of student help will relieve faculty the uncompensated burden of purchasing groceries and preparing laboratory stations for all sections on a weekly basis.

Instructional FTEF by Load Type	Fall 14	Spring 15	Fall 15	Spring 16	Fall 16	Spring 17	3 Yr Avg
FT	2.00	2.00	2.00	2.00	2.00	2.00	2.00
PT	5.08	3.87	5.07	4.05	4.46	3.47	4.33
OV	0.40	0.40	0.61	0.40	0.60	0.40	0.47
<b>Total FTEF</b>	<b>7.48</b>	<b>6.27</b>	<b>7.68</b>	<b>6.45</b>	<b>7.06</b>	<b>5.87</b>	<b>6.80</b>

FT/PT Ratio (FT%)	Fall 14	Spring 15	Fall 15	Spring 16	Fall 16	Spring 17	3 Yr Avg
Dept	28%	34%	28%	33%	28%	34%	31%
Rocklin	32%	39%	32%	36%	32%	33%	34%
NCC	0%	0%	0%	0%	0%	0%	0%
RG							#DIV/0!
TT	0%		0%		0%		0%
DL	40%	33%	33%	40%	25%	44%	36%

- 4d) Facilities: Comment on the program’s fill rate and the adequacy of the facilities for the District as well as specific sites, including a projection of facility needs for the next three years. Please provide a justification for these needs, incorporating relevant assessments of the data above in this explanation.

At 93%, the Nutrition & Food Science Department has exceeded the District’s fill rates consistently over the past three years. The Rocklin campus experiences the greatest challenges in facilities. We currently teach in four classrooms in I and F-buildings. The only acceptable classroom is I-1, the other classrooms are inadequate for lecture due to size and orientation.

I-11 is shared with the Agriculture Department and is a laboratory classroom. I-10 is lacking adequate seating and limited accessible whiteboard space. Additionally, the shared spaces with the Agriculture Department in the I-building do not allow for permanent storage of subject specific tools and models. F-11 is an L-shaped room that limits student and instructor interaction. Like I-10, the whiteboard space is limited and inaccessible. Excepting NUTF 5, classroom capacity for NUTF 10, 13, and 14 are limited 35 students. Rooms I-10, I-11, and F-11 are only able to hold 30 students, this greatly limits our ability to provide necessary education each semester. Furthermore, we are looking to increase the number of courses available during peak instructional hours but are unable to due to lack of adequate facilities.

- 4e) Please check the appropriate boxes in the chart below indicating the general reasons for the resource requests described above (please check all that apply):

Function/Role	Maintenance	Development	Growth	Safety	Outcomes	Other success measures	No Requests
	√	√	√	√	√		

## 5) Summary/Closing

5a) Based on the analysis above, briefly summarize your program's strengths, weaknesses, opportunities, and challenges.

The Nutrition & Food Science Department's strength resides in the fact that we have a very educationally and organizationally effective program that aligns with the Sierra College mission. Our faculty are highly educated and dedicated and consistently strive for excellence. We provide a very consistent, current, innovative and stimulating learning environment for students who choose to study nutrition as a future career, to meet general education requirements, or for personal enrichment. Department faculty are passionate, engaged and take pride in working collaboratively with fellow faculty across departments and community organizations and members. Our popularity with students is high as is evidenced by the number of students we serve each year and our success and retention rates. The department has also actively participated in the assessment process since fall 2011. Each semester, we have been able to identify areas of improvement and have created an action plan to achieve these goals. We continue to follow through with our action plans despite barriers in resources.

The weaknesses in our department lie in our ability to expand our program. Plans include developing more robust course, program and degree offerings. We currently offer four core nutrition courses and seek to expand the variety of courses and increase current course offerings. These additional courses would boost our ability to serve a greater student population and allow students to more effectively achieve their educational goals. Lastly, adequate facilities and staffing are essential to the success of the student, the program and our future plans.

Overall, the Nutrition and Food Science Department contributes positively to the college, the students, and the community through our offering of courses for transfer, personal enrichment and lifelong learning. Professors in the Department engage in teaching, learning, and scholarship through active involvement in our community, regularly contributing to campus climate, and commitment to professional development. Our curriculum is current and meaningful, and along with our highly qualified faculty, we provide students with excellent instruction to help them achieve their educational and career goals.

5b) How has the author of this report integrated the views and perspectives of stakeholders in the program?

Discussions surrounding the interests in the future of the program were completed during departmental meetings where both full-time and part-time faculty were able to offer ideas and goals. In addition, several emails were involved in gathering input from faculty. The Research Department was consulted for additional departmental data not available on the Sierra College dashboard. The draft was prepared by the chair, Sonia Klenner, and sent to department faculty members for review and discussion before submission to the Program Review Committee and deans.