Annual Assessment Report for 2020-2021 AY

Reports completed on assessment activities carried out during the 2020-21 AY will be due September 30th 2021 and must be e-mailed to the Director of Assessment, Dr. Douglas Fraleigh (douglasf@csufresno.edu).

Provide detailed responses for each of the following questions within this word document. Please do NOT insert an index or add formatting. Furthermore, only report on two or three student learning outcomes even if your external accreditor requires you to evaluate four or more outcomes each year. Also be sure to explain or omit specialized or discipline-specific terms.

Department/Program: Food Science and Nutrition Degree: MS

Assessment Coordinator: Shabnam Pooya, PhD

1. Please list the learning outcomes you assessed this year.

Goal 2: Students will formulate a scientific hypothesis and conduct research to verify the hypothesis using an appropriate experimental design and sampling scheme. In doing so they will be able to:

Outcome 2.2: Identify and analyze collected data using appropriate methodology

2. What assignment or survey did you use to assess the outcomes and what method (criteria or rubric) did you use to evaluate the assignment? **Please describe the assignment and the criteria or rubric used to evaluate the assignment in detail and, if possible, include copies of the assignment and criteria/rubric at the end of this report.**

This year the written group research project in FN 229 (Seminar class – one unit) was used to assess one of our department student learning outcomes for Food Science, Culinology and Nutrition/dietetic students.

In FN 229, students completed a written group research project where they analyzed existing data using multivariate statistical tests. This project was the only assignment students complete to fulfill the course requirement and count as 100% of their final grade.

More specifically, students worked in groups of three and completed an empirical study relating to foodservice and current events. The paper was to be approximately five pages long and contain: (1) Introduction, (2) Method, (3) Results, (4) Discussion, and (5) References cited in APA format. Data was to be obtained from existing sources and analyzed using a combination of descriptive (measures of frequency, measures of central tendency, measures of dispersion or variation, measures of position, etc.) and univariate (regression, ANOVA, t-test, etc.) data analysis techniques.

To address outcome 2.2, students were required to select a topic (and obtain professor approval) and research question (hypothesis) which closely related to current events in foodservice, food science, Culinology, nutrition, and/or dietetics. Each aforesaid section of the paper helped

students to identify and analyze collected data using appropriate methodology of the fields of foodservice, food science, Culinology, nutrition, and/or dietetics.

For success, students needed to follow the following rubric:

Introduction **Hypothesis & Lit Review**	Exceptional (125 Points) Hypothesis is clear and explicitly stated. The organization is complete and logical with a progression of ideas leading to an understanding of why the research is needed and/or why the intervention/design/experiment is likely to work. Discusses relevant research on the research topic. Past work is discussed in an interesting and logical way. Illustrates creative thinking and insight gained from past research.	Good (112 Points) Hypothesis is clear, but not explicitly stated. The reader must search for the hypothesis. There is a logical progression with occasional breaks in flow of content and a lack of transitions. Reader is convinced that idea for project is important. Relevant research is discussed in a logical way.	Fair (100 Points) The hypothesis is alluded to, but never clearly stated. Logical progression is minimal with disconnected ideas. Reader has difficulty following the development of the topic and seeing why the project will work. Relevant research is barely discussed and only at the surface level.	Unacceptable (87 Points) There is no hypothesis identifiable. There is no logical progression in the development of the topic and ideas are disconnected and may confuse the reader. There is no rationale for why this project will be effective and there is no literature review.
Methods Section **Subjects, Materials & Methods, Procedure**	Exceptional (125 Points) Project is described in sufficient Detail so that the reader could replicate the study. Subjects (number, type), Materials & Measures, and Procedure are all described well. Statistical Approach is thoughtful and correct.	Good (112 Points) Details on Subjects, Measures and Materials, and Procedure are all described in sufficient detail with one or two details lacking. Statistical Approach is present but may be vague.	Fair (100 Points) Some details are missing from the Subjects, Materials & Methods, or Procedure section such that the design of the study may be confusing or vague. Statistical approach is incorrect or missing analyses.	Unacceptable (87 Points) Methods section is absent or missing entire sections on details of how the study was run.
Results **Findings, Data and Analyses**	Exceptional (125 Points) Results from the study are clearly described including descriptive data and at least one figure or chart that are properly labeled. Analyses are correct and clearly and completely described. Figures and charts are described in the text.	Good (112 Points) Results are described sufficiently with data presented. Data analysis or descriptive technique is correct and generally is clearly and completely described although there may be some absent details. At least one pictoral presentation of the data is used (figure, graph,	Fair (100 Points) Data analysis and/or discussion has some errors or is incomplete. Clarity of report needs improvement. Incorrect or absent figure/chart.	Unacceptable (87 Points) Data is analyzed and discussed incorrectly. Report is incomplete and is not clear. No pictoral display of findings is present.

		chart) and explained in the paper.		
Discussion	Exceptional (125 Points) Results are discussed in terms of hypotheses, interpretation, practical implications, and future research. Discussion is logical. Interpretation includes discussion of limitations, possible confounds, and whether causality can be inferred.	Good (112 Points) Most results are discussed in terms of most of the following: hypotheses, interpretation, practical implications, and future research. Discussion is usually logical. Some limitations of the project are addressed.	Fair (100 Points) Some results are discussed in terms of some of the following: hypotheses, interpretations, practical implications, and future research. Discussion often lacks logic and does not discuss future directions. Limitations are discussed superficially or are absent.	Unacceptable (87 Points) Few results are discussed in terms of any of the following: hypotheses, interpretations, practical implications, and future research. Discussion lacks logic and thought on future research. Limitations are absent.

3. What did you learn from your analysis of the data? Please include sample size (how many students were evaluated) and indicate how many students (number or percentage instead of a median or mean) were designated as proficient.

The total number of students enrolled in the class (FN229) was 13. Two students were master's students while eleven were dietetic interns (Certificate of advance study).

The assignment was a useful tool to give students an introduction into research and each student performed "exceptionally" This was, in part, because students completed their study in stages:

Introduction - October 26
Method - November 2
Results - November 16
Discussion - December 7
Complete Paper – December 7

After each stage, groups discussed their output with the professor and received constructive feedback. For example, in their respective introduction sections, the professor met with each group to ensure that they were (1) presenting their material starting with broad topics before becoming more specific, (2) demonstrating gaps in the literature, (3) demonstrating a need for their research, and (4) developing actionable research questions which would be tested via univariate statistical techniques. Thus, by the time they completed their final draft, the professor had seen several revisions of their papers.

4. What changes, if any, do you recommend based on the assessment data?

Based on assessment data, we intend to continue offering a similar assignment for FN 229. For this course and outcome 2.2, the instructor aimed set a benchmark of having 75% of students achieving a grade of B (80%) or better. Overall, this course contained 13 students and each student received an 'A' on the assignment and for the course. As such, 100% of students were proficient in Outcomes 2.2. Since each section of the paper contributed to Outcomes 2.2, students' results for each of those sections will be presented below.

	Exceptional / A	Good / B	Fair / C	Unacceptable / D	Percent who met or Exceeded Benchmarks
Introduction	13				100%
Methods	13				100%
Results	13				100%
Discussion	13				100%

5. If you recommended any changes in your response to Question 4 in last year's assessment report, what progress have you made in implementing these changes? If you did not recommend making any changes in last year's report please write N/A as your answer to this question.

   N/A

6. What assessment activities will you be conducting during the next academic year?

   FN 230: Advanced Nutrition Counseling Method 1: Written Assignment.

7. Identify and discuss any major issues identified during your last Program Review and in what ways these issues have or have not been addressed.

   N/A