PLO 3. Majors will modify their diets to fall within the ADA guidelines for healthy Eating.

Means of Assessment. KNS 040 students will conduct pre/post course nutrition analysis. Eighty percent of the students will fall within the standards established by the ADA.

Assessment Design. The American Dietetic Association (ADA) has established standards for healthy eating practices. The categories are based on percent of Calories and are established as follows: Carbohydrates (45 – 55%), Protein (12 – 15%) and Fats (30% or less). In addition, one should demonstrate day-to-day caloric consumption to be within 10% of each other. It is also recognized that students eat differently during the week than they do on weekends.

In the F 2010 semester, 36 students were evaluated and in the Spring 2011 semester, 41 students were evaluated for a total of 77 students. Early in the semester students performed a computerized nutrition analysis (Food Processor) for one weekday’s eating and one weekend day of eating. Students were asked not to change their eating patterns in this initial effort. Following the lecture series on eating within the ADA guidelines, student replicated the initial two day analysis effort, but with instructions to eat in obedience with the ADA guidelines that were taught.

For both the pre and post analysis, students received from 3 points to 0 points in nine categories: % Carbohydrates, % Protein, % Sugar, and % Fat both for their weekday effort and their weekend effort and whether their total Calories were within 10% of each other (weekday Kcals vs weekend Kcals). If the measured value was within 10% of the ADA guidelines a student received three points. If the measured value was within 11-20% of the ADA guidelines a student received two points and if within 21-30% they received one point. The maximum score a student could receive was 27 points (nine fields of evaluation, three points each).

Results.

Data for both classes and the two classes combined are provided in table _____. The initial average score for the Fall 2010 class was 20.47 (S.D. = +/- 4.00) which was 76% of the established ideal score of 27. The initial average score for the Spring 2011 class was 15.95 (S.D. = +/- 3.84), only 59% of the established ideal score. Following the lectures, the fall 2010 class scored a 17.78 (S.D. = +/- 4.94) and the post lecture scores for the spring 2011 class was 17.71 (S.D. = +/- 4.52). When the two classes were combined, the pre/post scores were 16.56 (S.D. = +/- 3.97) and 17.74 (S.D. = +/- 4.72) respectively. The combined post lecture score of 17.74 was 66% of the ideal score of 27.

The standard established for this PLO was for 80% of the students to fall within the standards established by the ADA. Although students did improve their scores, none of the 77 students demonstrated complete compliance to the established ADA standards. The highest score of all the students surveyed was 26, with only two students scoring 25.
Overall, students improved their scores by 7.4% (from 16.56 to 17.74). Of particular note is the large standard deviations noted in all measurable data points. Even though students were instructed to eat carefully and record all eating as accurately as possible, the project was fraught with multiple intervals where errors in data recording could have occurred. Students had to estimate food and drink volumes, as well as estimate the composition of all foods consumed. Most of the eating was done in the Dining Commons for the week day analysis, but the location of eating on the weekend effort varied considerably.

Next Steps. Clearly, much needs to be done in order to attain the goal of 80% of our students falling within the standards established by the ADA. The first step might be to recalibrate the way in which this PLO is assessed. A more realistic benchmark would be that students demonstrate eating patterns that approach 80% of an ideal eating pattern (a score of 22 out of a possible 27). As the benchmark is currently written, 80% of students would need to attain a perfect eating pattern (score of 27). As previously mentioned, not even one student attained this benchmark let alone 80% of students.

Even with a revised benchmark, the college student is at a clear disadvantage when it comes to establishing healthy eating patterns. First, college students have only limited control of their eating. They are not cooking for themselves and the Dining Commons is under no obligation to feed students in obedience to the ADA guidelines. So students are left with a series of educated guesses as they pursue a healthy eating lifestyle. Second, new software should be investigated and made available. As in all software, programs
that are designed to be simple in execution often suffer in the needed detail. The Food Processor program does not have all the needed food options, nor does it analyze some of the essential categories, such as the type of sugar in a given food.

Human Nutrition (KNS 040) is a core course in our curriculum and students look to this exercise to establish the healthy eating habits they can maintain for the rest of their lives. This PLO has revealed some critical shortcomings in using this computerized nutrition analysis project to train students in the art of healthy eating. Some of the solutions are beyond the reach of this class, but the search for better nutrition software is a worthy effort. The project itself remains a viable exercise and does reveal important insight into their current eating habits.