

New Degree Proposal
B.S. Nutrition – February 2009

The following proposal was developed by Jamie Erskine, Ph.D., Professor, Dietetics and reviewed by Ellen Meyer Gregg, Ph.D., Director, School of Human Sciences. It was developed using the template provided in the *University of Northern Colorado, New Degree Program Planning Proposal* (Draft, 11-26-08). All components of Phase 1 are included along with selected components of Phase 2 that we believed would be helpful in evaluating the proposal.

Phase 1

1. *Brief Overview of Proposed Degree*

- Dietetics Program
- This program currently offers a B.S. Dietetics. This proposal is to add a B.S. Nutrition option.
- School of Human Sciences/ Dietetics Program
- College of Natural and Health Sciences
- Expected number of students to be enrolled in the program 5 years post-implementation would be approximately 1/3 to ½ of the current on-campus dietetics students which would be 50 – 75 students with additional students who would elect to double major from other programs or use this major as a pre-professional major. It is anticipated that the B.S. Nutrition program would generate 35-50 new enrollments to UNC because there is only one other such degree in the state (CSU) offered through an accredited university and because growth is reported by both of the two major dietetics/nutrition programs in the state, CSU and UNC. It is anticipated that the nutrition area will continue to maintain high interest in Colorado. This is supported by 2008 data from the Commission on Accreditation of Dietetic Education (CADE) of The American Dietetic Association indicating that there has been a steady annual nationwide increase in enrollment in Didactic Programs in Dietetics over the past 5 years representing an overall 63% growth of dietetics students from 2002 - 2007. ([http://www.eatright.org/ada/files/2008_CADE_Annual_Report\(1\).pdf](http://www.eatright.org/ada/files/2008_CADE_Annual_Report(1).pdf) ,p.8) This increased enrollment is specific to dietetics programs and does not directly reflect general nutrition programs. To apply this information for projecting anticipated interest in a B.S. Nutrition program it is helpful to consider the proportion of dietetics majors who do not pursue dietetic registration. CADE reports data from 2002 (latest available data) surveys of dietetic program directors indicating that 47% of DPD graduates were not placed into a supervised practice program. Based on the total number of DPD graduates for 2002 (N = 3394), information provided by DPD directors indicated that 9% of DPD graduates applied and were not matched to a supervised practice program, 3% of DPD graduates did not apply for financial reasons, 15% of the DPD graduates never plan on pursuing registration, and for 20% the reason for not pursuing supervised practice was indicated as Other or Reason unknown. (CADE Home page at www.eatright.org). This would indicate that almost half of the students enrolling in dietetics programs might be better served by enrolling in a general nutrition program. [http://www.eatright.org/ada/files/2008_CADE_Annual_Report\(1\).pdf](http://www.eatright.org/ada/files/2008_CADE_Annual_Report(1).pdf)
- Delivery model: On-campus/Hybrid

2. *Fit with UNC Role and Mission and University's Most Current Strategic Plan*

- There are several objectives of the new degree and for offering a B.S. Nutrition. The main objective of the B.S. Nutrition degree is for students who would like to study nutritional sciences without the goal of becoming a registered dietitian. This degree would be a good match for those wanting to double major in counseling, sport and exercise science, athletic training, education, or nursing. There is flexibility in the degree to tailor it to meeting the needs of students wanting a pre-professional degree to continue their education for medical school, physician assistant school, dental hygiene, preparation for nursing, chiropractic school, graduate school in public health, and other health professions. The degree by itself can be used to obtain employment in public health clinics, food service, nutrition educator positions, dietary assistant positions and other dietetic related positions not requiring licensure or registration.

An objective for offering the degree is to create a place for students wanting to study nutrition and/or foods that is separate from dietetic majors who have a specific goal to become registered dietitians. This would permit B.S. Nutrition students to tailor their degree more specific to their needs. Further, it would allow the curriculum and standards for the B.S. Dietetics degree could be set to result in better outcomes of the Dietetics Program. Accreditation of the Dietetics Program is dependent upon outcomes measures that assume students are on a path leading to dietetic registration such as successful acceptance to dietetic internships, passing the dietetic registration exam upon the first attempt, completing the program within a specified amount of time, and being active in the profession. These outcomes require a GPA higher than what is needed for admission and successful completion of a degree at UNC. Further, since not all current dietetic students desire to become registered dietitians, they are not motivated to fulfill the program outcome measures. This should not be interpreted to mean they are poor students. Rather, it simply means that the B.S. Dietetic degree is not a good fit for their goals. The B.S. Nutrition would better fit their post-graduate career plans.

- The new degree supports the mission of the University by fitting in as a part of a comprehensive baccalaureate program of offerings. The degree would foster a commitment to service, advancement of knowledge, lifelong learning, and an appreciation for research and diverse populations as described in the University Vision statement.
- The new degree supports all aspects of the University Academic Plan from transformational learning to engaging the community. Though the B.S. Nutrition is flexible, the core courses emphasize application of knowledge and skills on the campus community and in the surrounding community. Students will have experiences in several nutrition education venues, food service on campus or with the Weld County School District if they choose a food service/science path, or provide nutrition services in facilities utilized by seniors if gerontology electives are chosen. This major based upon the science of nutrition will be tailored to individual interests of the student without compromising the quality of education provided by the B.S. Dietetics degree.

- The new degree will support the long-term goals of the University by providing another avenue in the ‘comprehensive baccalaureate’ offerings for students. It will support the long-term goal of the Dietetics Program by enabling the program to improve outcomes for accreditation for the B.S. Dietetics degree. The B.S. Nutrition program will enable Dietetics majors who do not desire the specific rigorous program outcomes to study nutrition under a different degree program that is not held to the same accreditation guidelines. This will guarantee survival of the program that is in high demand and continue to bring recognition to the University as one of the few Colorado universities offering an accredited Dietetics Program. Our program currently has an excellent reputation and this will only be maintained if we can improve our program outcomes. Additionally, the accredited Dietetics program supports the accredited UNC Dietetic Internship that is a major revenue generator and one of only four programs in the state. It would also support a long-term collaborative goal to offer an MPH Nutrition degree in conjunction with the Colorado School of Public Health. Either the B.S. Nutrition degree or a strong B.S. Dietetics degree will support graduate candidates for the MPH Nutrition.
- There are several employment opportunities in Colorado for college prepared nutritionists. These are in long-term care facilities, dietary assistants in acute care hospitals, as food service managers, in public school districts, for government health care agencies, as nutrition educators for public health clinics, as food scientists in private business, marketing for food companies, among others. As is true, across the nation and globally, the epidemic of overweight and obesity with associated health problems will continue to require individuals with nutrition knowledge and skills to shape policy and provide public service.

3. *Evidence of Need for the Degree*

- The Dietetics Program has maintained a growth in number of majors over the past 3 years of approximately 130 – 150 on-campus students plus an additional 70 – 75 students in the online Distance Dietetic Program. Prior to this the number of majors was less than 90. Additionally, the number of Nutrition minors has stayed steady at approximately 60 – 65 students. We receive daily inquiries for the Distance Dietetics Program and have not been able to meet the demand for this program since its inception in 2004. This indicates a sustainable trend toward increased demand for nutrition and dietetics degrees.
- The 2008-2009 Edition of the Occupational Outlook Handbook of the Bureau of Labor Statistics (stats.bls.gov/oco/ocos077.htm#outlook) states, “Employment of dietitians and nutritionists is expected to increase 9% during the 2006-16 projection decade. Job growth will result from an increasing emphasis on disease prevention through improved dietary habits. A growing and aging population will boost demand for nutritional counseling and treatment in hospitals, residential care facilities, schools, prisons, community health programs, and home health care agencies. Public interest in nutrition and increased emphasis on health education and prudent lifestyles also will spur demand, especially in food service management. With an increased public awareness of obesity and diabetes, Medicare coverage may be expanded to include medical nutrition therapy for renal and diabetic patients, creating job growth for dietitians and

nutritionists specializing in those diseases. Employment growth, however, may be constrained if some employers substitute other workers, such as health educators, food service managers, and dietetic technicians, to do work related to nutrition.” This last group of workers describes those who would benefit from the proposed B.S. Nutrition while the current B.S. Dietetics degree is specific for preparing registered dietitians. Employment rates of UNC Dietetic graduates are difficult to track due to poor returns from annual Surveys of Graduates. In reviewing the traditional employment facilities in Colorado for dietitians and nutritionists, UNC graduates are well represented in hospitals around the state, public departments, CSU Extension Services, WIC clinics, among others. UNC Dietetics graduates employed in rural positions that are often difficult to fill such as in Sterling, Montrose, Grand Junction, and Platteville.

4. *Evidence of Student Demand*

- From the data provided in #3 above, of the current 137 on-campus majors, 38% or approximately 52 students have GPAs <2.7. This prevents them from becoming eligible to be successful applicants for dietetic internships and therefore, blocking them from pursuing dietetic registration. We anticipate that these students would transfer to the B.S. Nutrition major and they would be advised to do so. Additionally, it is expected that 15% or more of the Nutrition minors would pursue a double major including the proposed degree. This would add approximately 9 more students. Given these numbers, 61 x 5 years = 305 graduates (not including attrition) would graduate over the next 5 years. Enrollment in FND 250 Principles of Nutrition, a LAC science elective, is always filled to capacity each semester and summer that it is offered. This results in an enrollment of over 450 students per year. It is anticipated that additional students would be recruited to the B.S. Nutrition degree if they knew that the primary goal was not to become a registered dietitian.

A secondary benefit of having students being advised to a major that better fits their needs is that the B.S. Dietetics degree would be able to attain high outcome measures for accreditation and marketed as such. This would increase recognition and enrollment in the accredited UNC Didactic Program in Dietetics.

5. *Duplication/Similar Programs in the State*

- Colorado State University (Fort Collins campus), the only other school in Colorado to offer a similar degree, offers a B.S. Degree in Nutrition and Food Science with concentrations in Dietetics, Nutrition & Fitness, Nutritional Sciences, Gerontology Studies Program, and Interdisciplinary Studies Program in Food Science/Safety. The Dietetics concentration is similar to UNC’s Dietetic Program. The proposed B.S. Nutrition degree could be similar to the remaining concentrations at CSU depending upon the electives students chose. The long history of having similar Dietetics programs, with a growing number of students in the UNC Dietetics Program, indicates that there is room for a nutrition degree at UNC. It should be noted that CSU requires a minimum GPA of 2.8 and grades of C or better in the sciences to enroll in the Dietetics concentration. These are the same criteria we are proposing

for the B.S. Dietetics at UNC and the B.S. Nutrition would provide a major for those students not meeting these criteria as well as those who aspire to medical school and other professional advanced degrees for which nutrition would be a strong base. The UNC and CSU programs have different strengths and limitations. The UNC program's unique strengths would be individual advising, relatively small class sizes, lower cost, and an emphasis on experiential learning opportunities to complement didactic learning.

- The faculty, offices, and administrative support of the Dietetics Program will be shared for the B.S. Dietetics and the proposed B.S. Nutrition degrees. The coordination of these degrees and how they complement each other has been described above, as well as in the B.S. Nutrition Program Package appended to this proposal. In brief, the B.S. Dietetics degree will have admission requirements that are higher than UNC's minimum requirements, while the B.S. Nutrition degree will not. The goal of the B.S. Dietetics degree is to pursue a path to dietetics registration while the B.S. Nutrition degree has flexibility to be tailored to the students' interests as a pre-professional degree or to pursue employment in health and nutrition areas that do not require dietetic registration/licensure.

Phase 2

6. Student Body

- It is anticipated that 38% (52 students) from the B.S. Dietetics degree would transfer to the B.S. Nutrition degree during the first year. We would also expect that a handful of pre-professional students or pre-nursing majors would select the B.S. Nutrition degree during the first year. It is assumed that the number of majors would either remain stable or grow similar to the B.S. Dietetics degree.
- Because several of the courses would be shared with the B.S. Dietetics students, the minimum number of students to sustain the B.S. Nutrition degree would be small. If the program were not sustainable, the B.S. Dietetics degree would be reviewed in terms of meeting outcome measures targets for accreditation to determine if B.S. Nutrition students could be accommodated within the B.S. Dietetics degree.

7. Admission Requirements

- No. The admission requirements would be the same as those required by the University.

8. Course of Study

- Please see the B.S. Nutrition Program Package. Options are provided for those desiring an emphasis in Community Health, Food Science, or Gerontology.

9. Curriculum –courses and total structure

- The curriculum is clearly delineated in the B.S. Nutrition Program Package on the page indicating proposed changes for the University Catalog. There are 120 total credits required with 20 hours of Required Credits composed of Dietetics (FND) core courses and 17 hours of Required Supporting Credits. Of the Required Supporting credits, eight are in biology. The student must choose 9 credit hours from a selection of 9 courses (29 credit hours). This flexibility permits students to tailor their degree toward different areas of emphasis in nutrition. Alternatively they may elect to take

more chemistry and math for pre-professional preparation. The remainder of the credits includes 26 Required Specific LAC credits, 14 elective LAC credits, and 43 electives.

10. Assessment of Student Learning/Outcomes Evaluation

The program goals and objectives (outcomes) will be as described.

Goal 1. The program will prepare students with a nutrition knowledge base applicable for entry level career positions and/or in preparation for health care professions requiring advanced degrees

Outcome 1.1 Students will receive support and flexibility to apply nutrition science concepts for a variety of educational areas.

Goal 2. The program will prepare students with an adequate background to critically evaluate scientific principles related to nutrition.

Outcome 2.1 Students will critically evaluate science based literature.

Outcome 2.2 Students will demonstrate critically thinking and problem solving for nutrition assessment, applying an evidence-based approach to nutritional recommendations, and the application of nutrition concepts to various populations.

Goal 3. Graduates will value diversity of populations in terms of lifespan, ethnicities, beliefs, socioeconomic, cultural, and physiological differences.

Outcome 3.1 Students will recognize differences in nutrient needs among a variety of populations and be able to make appropriate recommendations.

Outcome 3.2 Students will evaluate the effect of lifestyles, cultures, and access to food on nutrition learning needs and health care.

The sciences (including those listed under LAC credits) and the electives are support courses for the core foods and nutrition (FND) courses. Thus, all of the required courses support the learning outcomes. Course evaluations, exams, and assignments will be used to determine learning outcome competence. Included with the many courses are laboratory sessions in which students will demonstrate their abilities. A senior exit survey and a survey of graduates will also be used to obtain feedback regarding students' perceptions of their competence. A survey of graduates' employers and placement in related employment and graduate programs will be conducted one year following graduation. Recruitment and retention data will also be kept just as it is for the Dietetics degree.

Resources

With the addition of a full-time tenure-track position remaining extra resources for the B.S. Nutrition degree would be minimal. Many of the courses would be shared with the existing B.S. Dietetics degree as would faculty. Because the Dietetics program is already experiencing students in excess of caps for some courses and the current state funded faculty-to-student ratio for on-campus Dietetics majors is 1:68, additional sections of courses will be needed as well as faculty support for advising and student mentoring. The following courses are currently required for the Dietetics degree and would be required for the B.S. Nutrition.

- FND 250 Principles of Nutrition (3 credit hours)
- FND 252 Nutrition through the Life Cycle (3 credit hours)
- FND 370 Nutrition Education and Application Strategies (3 credit hours)

- FND 451 Advanced Nutrition (3 credit hours)
- FND 452 Community Nutrition (3 credit hours)
- FND 220 Introduction to Foods (4 credit hours) {currently FND 342}

These courses are consistently filled to capacity or over-capacity and additional sections are sometimes offered in order to permit students to graduate on time. It is anticipated that an additional section of each of these courses would be needed each year. It is possible that an additional section of FND 455 Nutrition for Fitness and Athletic Performance (3 credit hours) might be needed if the popularity of this course continues to increase. This is a total of 19 - 22 additional credit hours annually. If we conservatively estimate 20 new students enrolling as B.S. Nutrition majors during the first year, the additional faculty FTE would bring the faculty-to-student ratio to 1:55. This position would also play a key role in making it possible to expand the Distance Dietetic Program (there are committed students waiting to enroll that would double the size of the existing program) and to propose a MPH Nutrition degree for which there is great interest and the degree is not offered in Colorado.

With respect to courses offered outside of the current Dietetics Program the following changes might occur:

- Increase in FND 420 enrollment and this can most likely be handled with the existing section.
- Slight increase in BIO 246 which is not a concern for Biology.
- A slight increase in FND 430 and FND 446 which could be handled by an additional lab section for each of these courses.
- A slight increase in HUSR 209, HUSR 236, HUSR 342 which would probably be a welcome addition. Dr. Susan Collins indicated that this would not be a problem.
- A slight decrease in BAMK 260 and BAMG 350 courses which should not be significant given the demand for these courses. By 'slight' I would estimate a handful of students less per semester.

Marketing

Because nutrition is a popular major nationwide and there is data from the Dietetic Educators of Practitioners and The American Dietetic Association accrediting agency (CADE) that nutrition programs are growing, it is unlikely that extensive marketing will be needed. Informing public health departments and school districts around the state of the new major and announcing the new major on the UNC web site, at University recruiting activities, and across campus especially throughout the Colleges of NHS and Education would probably be adequate.

NUTRITION B.S.

Degree Requirements - 120 Credits

See "Nutrition B.S." on page ____

Required Major Credits - 20 hours

FND 210 Medical Terminology (2)
FND 252 Nutrition in the Life Cycle (3)
FND 370 Nutrition Education and Application Strategies (3)
FND 420 Maternal and Child Nutrition (3)
FND 451 Advanced Nutrition (3)
FND 452 Community Nutrition (3)
FND 455 Nutrition for Fitness and Athletic Performance (3)

Required Supporting Credits - 17 hours

Sciences (8 hours)

BIO 245 Introduction to Human Anatomy and Physiology (4)
BIO 246 Advanced Human Anatomy and Physiology (4)
Other (choose at least 9 credits from below courses)
BAMG 350 Management of Organizations (3)
BAMK 260 Introduction to Marketing (3)
FND 220 Introduction to Foods (4)
FND 320 Nutrition Applications in Foodservice (3)
FND 430 Nutrition Assessment and Intervention
FND 446 Foodservice Systems Management (4)
HUSR 209 Foundation of Health Promotion/Health Education (3)
HUSR 236 Health Issues in Aging (3)
HUSR 342 Modern Concepts of Health and Disease (3)

Required Specific LAC Credits - 26 Hours

LAC area 1b. Intermediate Composition

SCI 291 Scientific Writing (3)

LAC area 2. Mathematics

STAT 150 Statistics for Health Sciences (3)

LAC area 5. Social and Behavioral Sciences

GERO 205 Introduction to Gerontology (3) **OR**

PSY 120 Principles of Psychology (3)

LAC area 6. Physical and Life Sciences

BIO 110 Principles of Biology (4)

CHEM 111 Principles of Chemistry (5)

CHEM 281 Fundamentals of Biochemistry (5)

FND 250 Principles of Nutrition (3)

Elective LAC Credits - 14 hours

Note(s): Students need to select a course from Area 8 that also counts for Areas 3 or 4.

Elective University-Wide Credits - 43 hours

← Notes(s): Students can not double major in both Dietetics and Nutrition. Nutrition majors can not minor in Nutrition.