

INTRODUCTION

I. Program Description and Relationship to System-Level Goals

- A. Briefly describe within a few paragraphs the degree program under consideration, including (a) level; (b) emphases, including concentrations, tracks, or specializations; (c) total number of credit hours; and (d) overall purpose, including examples of employment or education opportunities that may be available to program graduates.

Clinical nutrition practitioners integrate and apply the principles derived from the sciences of nutrition, biochemistry, food, physiology, and management and the behavioral and social sciences to promote, achieve and maintain a person's health throughout the person's life. Clinical nutrition is an integral part of preventive, diagnostic, curative, and restorative health care of individuals, groups, and it includes assessing nutrition needs and status using appropriate data; recommending appropriate dietary regimens, nutrition support, and nutrient intake; improving health status through nutrition research, counseling, and education; and developing, implementing, and managing nutrition care systems. This includes, but is not limited to, evaluating, modifying, and maintaining appropriate standards of high quality in food and nutrition care services in clinical health care, public health, and a variety of other settings. (adapted from the Florida Statutes 468.503, Definitions) The Doctorate in Clinical Nutrition is an advanced practice doctorate which is defined by the Academy of Nutrition and Dietetics as follows: The practitioner demonstrates a high level of skills, knowledge and behaviors. The individual exhibits a set of characteristics that include leadership and vision and demonstrates effectiveness in planning, evaluating and communicating targeted outcomes. Advanced Practice Doctoral-level programs are designed to prepare already credentialed or licensed individuals to practice with competencies above and beyond those expected of entry-level professionals. The master's level degree will become the entry level requirement for the nutrition and dietetics profession in 2024 and the doctoral degree will become the advanced level degree. These advanced level practitioners are clinical scholars skilled in outcomes based research.

Level: Doctorate in Clinical Nutrition (DCN)

Concentration: Chronic disease prevention and treatment through clinical nutrition

Total Credit hours: 54

Overall purpose: The purpose of the proposed program is to prepare advanced level nutrition and dietetics practitioners who will assume leadership positions in health care organizations to conduct outcomes based research, improve quality of care and reduce health care costs. Most graduates of the proposed program will work in clinical and community settings demonstrating advanced knowledge and competence related to nutrition and health and a minimal number may be employed in higher education, primarily as directors or faculty teaching in the entry level master's practitioner programs. Outcomes research will focus on the establishment of evidence-based nutrition practice in a variety of settings.

Example of employment opportunities available to program graduates:

According to the Academy of Nutrition and Dietetics, "... in addition to clinical, a large number of practitioners work in community and public health settings as well as in academia and research." This is expected to continue but the doctorate prepared practitioners will be positioned to readily move to leadership, policy and other positions that perform outcome measures and establish evidence-based protocols and practices. The goal of our DCN is to provide the advanced practice needed to meet market and professional needs and continue the high standards and national recognition established for our

current programs. The proposed DCN will have an emphasis on the application of evidence to practice, critical thinking, and the production of evidence-based clinical data that impacts health practice and policy. This represents a potential market of students both from within and outside the state. Within Florida, there are over 3000 Registered Dietitians and 40% have a master's degree. Their practice profile closely aligns with the national data that follows. Nationally there are 80,000 Registered Dietitians, in the primary and emerging areas of acute inpatient care (32%), ambulatory care (17%), food and nutrition management (12%), community nutrition (11%), long term care (8%), consultation and business (8%) and education and research (6%). This represents approximately 59 core position descriptions and 93% of dietetics employment situations (AND Compensation and Benefits Survey 2013; p 29). Graduates of this program will assume leadership positions in all of these areas providing a mechanism for career laddering.

The employment opportunities that will be available to program graduates are extensive, varied, and stem from two areas: 1) current and emerging new practice areas related to the Affordable Care Act with an emphasis on prevention of chronic disease, 2) management of chronic disease, and 3) the demographic dynamics of current practitioners. Demographically, a large number of practitioners are aging with 29% of dietetics and nutrition practitioners 55 or older with a median age of 46 years (in the 2005 survey only 15% were 55 or older and the median age was 44 years). In addition, only 4% of the 80,000 currently have doctoral degrees (AND Compensation and Benefits Survey 2013; p 2 & 7) and they are a large part of the 55 or older group.

B. Describe how the proposed program is consistent with the current State University System (SUS) Strategic Planning Goals. Identify which specific goals the program will directly support and which goals the program will indirectly support. (See the SUS Strategic Plan at <http://www.flbog.org/about/strategicplan/>)

The proposed dietetics degree program is part of the UNF Master Plan and is included in the current SUS Strategic Plan List of Academic Degree Programs for Exploration. The DCN degree program supports the goals listed below:

Goal 1: Teaching and Learning Excellence and Productivity: Strengthen Quality and Reputation of Academic Programs and Universities and Increase the Number of Degrees Awarded in STEM and Other Areas of Strategic Emphasis.

A DCN will produce advanced practice graduates in a STEM discipline. This will increase the reputation of the SUS for having a unique, high quality advanced level degree in an important health practice area. This degree addresses other areas of strategic importance to the state: the increased educational preparation of practitioners with the skills to effectively develop, evaluate, lead and monitor nutrition programs for quality and effectiveness. Graduates of the DCN will assume leadership positions and increase the mean salary of the state's nutrition and dietetics practitioners. Potential candidates from Florida for the proposed DCN degree are experienced practitioners in Food and Nutrition Service (~432), Clinical Nutrition (~1470), Community settings (~330), Corporate settings (240), Media positions (~30), etc. whose median salary ranges \$65,000-98,000 (Estimate of numbers from extrapolation of the national percentages applied to Florida's 3000 Registered Dietitians; AND Compensation and Benefits Survey 2013; p 3). All of these positions would likely increase salary with additional education as would their professional growth opportunities. Doctoral prepared position salaries range from \$50,000 (10th percentile) to \$129,000 (90th percentile) depending on years of experience. Registered Dietitian salaries are much lower, ranging from \$42,000 (10th percentile) to \$88,000 (90th percentile) for a baccalaureate level degree (AND Compensation and Benefits Survey 2013; p 41). In Florida and elsewhere, a higher level of preparation increases compensation and benefits for both the practitioner and the economy.

Goal 2: Scholarship, Research & Innovation: Strengthen Quality and Reputation of Scholarship, Research and Innovation, and Increase Collaboration and External Support for Research Activity.

This degree is innovative – the only practice-based doctoral degree in nutrition in the southeast – while simultaneously including the traditional element of a strong evidence-based/research component. All students in the DCN will be required to conduct research, primarily as applied practice evidence-based outcomes. This program will subsequently greatly increase the research productivity of the College and University and help provide solutions to cost, quality of care, and morbidity and mortality concerns related to nutrition and health. Moreover, the clinical and applied quality of the research requires collaboration with external organizations, an important strategic priority for the knowledge economy. With the rise in overweight/obesity and the subsequent health risks (e.g., the increase in chronic diseases, such as cancer, heart disease, and diabetes), the demand for advanced level practice dietitians will increase. This program directly supports this increased demand and addresses research and scholarship priorities.

Goal 3: Strengthen Quality and Recognition of Commitment to Community and Business Engagement, Increase Levels of Community and Business Engagement, and Increase Community and Business Workforce.

UNF's Department of Nutrition and Dietetics places students and has long established relationships with all of the surrounding hospitals, the county health departments, long term care facilities, renal dialysis clinics, and non-profit agencies providing services to children, the homeless and the elderly. This program will strengthen the commitment to the community demonstrated by our current students and provide a higher level of support when doctoral students are placed here and in other counties in Florida for their outcomes based residency projects. These sites already hire master's level graduates and will be an employment resource for the doctoral graduates throughout the state. The proposed DCN will include community-based engagement as part of the outcomes based residency requirement.

Goal 4: Meeting community needs and fulfilling unique institutional responsibilities.

This program prepares advanced-level nutrition professionals who are critical resources for promoting the optimal health and nutritional status of the public, thus clearly consistent with the missions of the College and University. The majority of students will be employed in clinical and community sites and will increase their engagement in leadership and service activities through the residency outcomes based research requirement. The DCN will increase the skill capacity of practitioners in health care facilities, organizations and non-profits and help meet the demand for leaders, policy makers, and high-level quality practitioners in these settings.

C. If the program is to be included in an Area of Programmatic Strategic Emphasis as described in the SUS Strategic Plan, please indicate the category and the justification for inclusion.

The Areas of Programmatic Strategic Emphasis:

1. Critical Needs
 - Education
 - Health Professions
 - Security and Emergency Services
2. Economic Development
 - Globalization
 - Regional Workforce Demand
3. Science, Technology, Engineering, and Math (STEM)

This proposal directly meets several Programmatic Strategic Emphasis Areas of Critical Needs including education, health professions, regional workforce demand and STEM. It will meet a documented regional, state and national workforce demand for advanced practice nutrition professionals (the Dietetics Workforce Demand Study conducted by The Lewin Group projected a growing demand for specialists and advanced-practice RDNs based on projected increases in health problems

associated with aging, diabetes and obesity, augmenting the need for RDNs with specialized knowledge and skills in these areas of practice). This demand was established by the precipitous rise of overweight, obesity, diabetes, and other chronic conditions which have created a national awareness for nutrition education, lifestyle and behavior change management. This highlights the need for an advanced practice workforce prepared to work at the local, state, and national levels.

While entry-level practitioners are the bulk of the current workforce, the Academy of Nutrition and Dietetics has affirmed the increasing need for specialist and advanced level practice education. The complexity of the health system, the multivariate influences on weight and the prevalence of multiple chronic conditions require highly skilled practitioners and clinical scholars. In the current health care environment, there is a rapidly increasing need for dietetics practitioners to expand their scope of practice in multiple areas such as program development and outcomes evaluation, medication management and food/medication interactions, feeding tube placements and evaluation, waived point-of-care, laboratory testing, physical assessment to help coordinate care in disease-specific areas, human resource management, and management of clients with multiple complex disease issues. All of these roles demand not only advanced knowledge skills, and the ability to design and conduct research but additional competencies in critical thinking, evaluation, and management. If the SUS is to address workforce needs and prepare practitioners who can address the critical issues affecting the state such as health status of the population and health care costs and potentially serve as a model to other states, a DCN in the 51.3102 category should be included (www.fldoe.org/cc/docs/102908StrategicGoals.doc).

D. Identify any established or planned educational sites at which the program is expected to be offered and indicate whether it will be offered only at sites other than the main campus.

The program will be a distance learning doctoral degree in order to reach a wider group of students than would be able to complete an onsite doctoral degree. The vast majority of the candidates for this degree would already be employed as registered dietitians with master's degrees who are unable to leave their work environment for the approximate three to four years required to complete the degree. The flexibility of distance learning will provide professionals who have a need for advanced level knowledge and skills in nutrition and dietetics the option of obtaining the advanced practice competencies without leaving their geographical area and enable them to implement evidence-based outcome studies in their work settings.

INSTITUTIONAL AND STATE LEVEL ACCOUNTABILITY

II. Need and Demand

- A. Need: Describe national, state, and/or local data that support the need for more people to be prepared in this program at this level. Reference national, state, and/or local plans or reports that support the need for this program and requests for the proposed program which have emanated from a perceived need by agencies or industries in your service area. Cite any specific need for research and service that the program would fulfill.**

Currently there is one Doctorate of Clinical Nutrition (DCN) program at Rutgers University in New Jersey. According to enrollment and curriculum discussions with Drs. Julie O'Sullivan Maillet and Riva Touger-Decker, Directors of the Rutgers program, their DCN program easily meets its enrollment targets for candidates. The program at Rutgers has two annual admission cycles and gets approximately 20 applicants and selects 8-12 persons per year. (E-mail from Dr. Touger-Decker, 7/2/14). Their DCN graduates are employed predominantly in health care facilities with smaller numbers in the food and pharmaceutical industry and in university faculty positions. Dr. Touger-Decker in her letter of support for our proposed program stated, "Doctoral degrees in philosophy (PhDs), Education and Public Health as well as Science offer routes for those who seek these areas of focus. We need doctoral degrees for those

in clinical practice who can grow the body of practice based research and develop the body of scientific evidence to support clinical nutrition practices”.

Nationwide, of the approximately 80,000 dietetics and nutrition practitioners, 42% currently hold a master’s or doctoral degree (33,600), of which 4% (3,200) hold a doctoral degree and 38% (30,400) hold a master’s degree. This represents a large population of potential candidates for the DCN.

Practice Areas of Dietetics by Expected Growth 2010-2020		
Practice Area Rank	Expected Demand Growth (%)	Fulltime Employment Shortfall Estimate (n)
Clinical nutrition- inpatient and outpatient	42%	10,000+
Clinical nutrition- long term care	36%	1,900
Food and nutrition management	35%	1,200
Community nutrition	34%	2,900
Consultation and business	28%	900
Education and research	24%	400

Roderick S. Hooker, PhD, MBA; James H. Williams; Jesleen Papneja, DDS, MHIS; Namrata Sen, MHSA; Paul Hogan, MS. Dietetics supply and demand: 2010-2020. J Acad Nutr Diet 2012;112(3) (suppl1):S75-S91.

The Bureau of Labor Statistics acknowledged in its report that dietitians with “specialized training, an advanced degree, or certifications beyond the particular State’s minimum requirement should enjoy the best job opportunities”. The Academy of Nutrition and Dietetics’ Visioning Report Recommendation #1 is to elevate the educational preparation for the future entry-level RD to a minimum of a graduate (MS) degree. The accrediting body for dietetics education, ACEND has agreed and the Master’s level degree is becoming the entry level requirement by 2024. Universities must notify students beginning in 2017 of this change. The anticipation of this change will have the immediate effect of creating a significantly larger workforce demand for doctoral level practitioners and clinical scholars whose responsibilities are beyond those of the master’s entry-level prepared practitioner and who conduct supervised practice and didactic training for the master’s prepared entry level practitioner. UNF’s program will position the state to be a leader in addressing the need for doctoral prepared clinical nutrition practitioners who are DCNs in addition to the graduates from the three nutrition PhD programs already in the SUS.

However, even with the current bachelor’s, master’s and PhD nutrition programs in the state, Florida ranks 46th in the nation in the ratio of dietetics practitioners per 100,000 citizens. In the dietetics profession, based on historical work force data, a rate of attrition (dietetics practitioners who leave the work force for reasons of emigration, extended leave, retirement, or death) of 2% to 5% is expected which will also have an impact on supply. The work force is currently largely female, older, and white/non-Hispanic. Only 8% of dietetics practitioners currently practice in research and higher education (6,400). However, 33% desire advanced certification or an advanced degree. (Roderick S. Hooker, PhD, MBA; James H. Williams; Jesleen Papneja, DDS, MHIS; Namrata Sen, MHSA; Paul Hogan, MS. Dietetics supply and demand: 2010-2020. J Acad Nutr Diet 2012;112(3) (suppl1):S75-S91.)

Given the lack of clinical doctorates currently available in the profession, most practitioners desiring an advanced degree have sought a PhD in nutrition or in other emphasis areas such as public health, epidemiology, health care administration, food science, anthropology, educational leadership, business psychology, or sociology. According to National IPEDS data on graduates of nutrition and dietetics PhD Programs in 2013, 29 PhDs were produced in Foods, Nutrition and Wellness, 14 in Human Nutrition, 1 in Dietetics, 6 in Clinical Nutrition, and 97 in Multidisciplinary Studies in Nutrition Science for a total of 144 nationwide. http://nces.ed.gov/programs/digest/d13/tables/dt13_318.30.asp It is not a coincidence that both DCN programs, the Rutgers existing program and the UNF proposal, are offered by distance learning in order to capitalize on this national market for advanced practice doctorates.

According to the American Hospital Directory there are 212 hospitals in Florida. Each is required to have a minimum of one full time dietitian or more depending on the number of total and critical beds. Depending on their size, many have staffs of 5-10 dietitians. The Agency for Health Care Administration reports 682 long term care facilities and all are required to have a dietitian full time or as a consultant depending on the number of beds. All of these facilities require registered dietitians as supervisors and clinical managers and most are currently at the master's level. When the master's becomes entry level, these supervisors will be required to be doctoral prepared. A secondary employment opportunity for graduates of the DCN will be as university faculty. Students prefer faculty who have been practitioners. A survey of the three other SUS institutions in the state that have PhD programs in nutrition and dietetics reported that each has had difficulty in recruiting doctoral level faculty and foresee the demand to only increase. With only 4% of the 80,000 Registered Dietitians in the country holding doctoral degrees coupled with the expected attrition, nationwide demand for nutrition and dietetics faculty is increasing.

Local and regional employers also indicated in their letters of support that it would be their desire to hire individuals who have earned the Doctorate in Clinical Nutrition, e.g. Mayo Clinic, Baptist Health Systems, Brooks Rehabilitation Hospital, Duval County Health Department, Nassau County Health Department, and the University of Alabama. The Director of the Florida Department of Health, Duval County stated "At the community level, they may supervise public health nutrition programs, feeding programs, and non-profits whose focus is to provide nutritious foods to various populations including the young, the elderly, and in between." Margaret Garner from the University of Alabama stated "Educational institutions that develop programs to meet state, regional, national and global needs must be sensitive to the needs of these communities. A practice doctorate provides research opportunities in the practice sites where results can be applied immediately rather than in the traditional PhD which often focuses on bench or lab research which may take years to reach practice. Many of these DCN students will come from Florida and the southeast, bringing their practice based research to their health care facilities. As our health care institutions are strapped for resources, our educational institutions can maximize the experience of our faculty, students and the learning environment of our communities to create and sustain a win-win relationship. Applied research benefits everyone when it specifically addresses the needs and the desired outcomes. Every aspect from the client/patient's health, to student learning, the community institution's reputation and mission, and the educational institution's commitment to advance education and research will show benefit".

The CDR **2011 Dietetics Workforce Demand Study Results and Recommendations** future scan identified aging as one of the 10 change drivers anticipated to have the greatest impact on the dietetics profession's workforce supply and demand. The anticipated growing demand for specialists and advanced practice doctoral level RDs based on issues related to aging, diabetes, obesity, treatment centers, etc. are of major interest and concern in both the state of Florida and the nation. Finally, with increased public awareness of obesity, diabetes, high blood pressure, and renal disease, Medicare coverage has expanded to include medical nutrition therapy for renal and diabetic patients creating job growth for advanced-level dietetic practitioners.

The Academy of Nutrition and Dietetics House of Delegates' Executive Summary Spring 2012 stated that "A constant flow of high quality, professional education opportunities must be provided, using all available technology and delivery methods to facilitate movement up the career ladder and support the growth and development of (advanced practice)". The House of Delegates' Fact Sheet Spring 2012 further stated "...the demands of future practice roles will be best achieved by focusing on specific educational opportunities tailored to specialist practice and advanced practice".

B. Demand: Describe data that support the assumption that students will enroll in the proposed program. Include descriptions of surveys or other communications with prospective students.

Several sources of data demonstrate that students will enroll in the proposed program. A sample of 75 Registered Dietitians in Florida reported that the majority currently work in health care clinical settings and community health. Fifty-seven of respondents reported that employers of DCNs will benefit from enhanced leadership skills and 43% reported benefit from quality care outcomes measurements. Thirty nine percent said they would prefer a DCN over a PhD degree, 24% said they would not prefer a DCN over a PhD, 35% were unsure and 2% did not reply. Seventy five percent of those considering a doctoral degree reported they would be likely to enroll in a DCN degree in the next five to ten years.

During the summer of 2012, we also conducted an informal survey of current UNF nutrition students. Of the 54 students that responded, 23 indicated “yes” and 1 responded “no” to the question “I think that (UNF) offering a distance learning doctorate in clinical nutrition, with an emphasis on evidence-based advanced practice is a good idea.” In addition, 27 of the 54 respondents indicated that they would consider a distance-learning DCN. Others offered some comments qualifying components of a program (e.g., courses they would like to take, how the degree might be structured). This indicated that roughly half of these future practitioners would consider a doctoral degree. While this is only an informal survey, it provided positive data about potential interest and intent, and it indicated new practitioner alignment with the profession’s move toward advanced practice.

In addition, Eduventures, Inc., a consulting firm, conducted a needs assessment for the online DCN for the UNF Graduate School and concluded “UNF’s plan to deliver the proposed program online is aligned with target audience preferences and may attract prospects across the U.S. and internationally. Online delivery will likely be preferable, as most prospects will need to continue working while enrolled.... The Eduventures report also cited that currently only 5% (this is in contrast to the national data from the work force demand study cited earlier which listed 4%) of practicing Registered Dietitians have a doctoral degree and the demand will increase due to the “shortfall of professionals qualified to fill future faculty positions and other leadership positions that require or prefer a doctorate, given the small number who possesses a doctorate.” According to the Commission on Dietetics Registration, clinical nutrition is the largest dietetic practice segment. This indicates UNF’s proposed doctorate in clinical nutrition will appeal to a large target audience within the nutrition and dietetics field”. April 2012. Eduventures. A Needs Assessment for an Online Doctorate in Clinical Nutrition, p. 11 and 16.

C. If substantially similar programs (generally at the four-digit CIP Code or 60 percent similar in core courses), either private or public exist in the state, identify the institution(s) and geographic location(s). Summarize the outcome(s) of communication with such programs with regard to the potential impact on their enrollment and opportunities for possible collaboration (instruction and research). In Appendix B, provide data that support the need for an additional program as well as letters of support, or letters of concern, from the provosts of other state universities with substantially similar programs.

There are no similar programs in the state or the southeastern region of the U.S. in either public or private institutions. The only similar program in the U.S. is the DCN at Rutgers University and a letter of support from that institution is enclosed with this document. UNF’s program will position the state to be a leader in addressing the need for doctoral prepared clinical nutrition scholars with expertise on evidence-based outcomes (in addition to the graduates from the three nutrition PhD programs in the SUS).

D. Use Table 1 in Appendix A (A for undergraduate and B for graduate) to categorize projected student headcount (HC) and Full Time Equivalents (FTE) according to primary