Department\* 

Program Type: 

 Degree Type: 

If proposing a new Degree Type, enter it in this field.

Nutrition Science (PhD)

Provide a brief summary of the proposed program changes and describe the rationale for the change(s):

The PhD in Nutrition Science is a tertiary degree requiring the completion of a minimum of 48 credits that are designed to be completed over a 4-year period. Admitted students will complete 15 credit hours of content courses, 15 credit hours of research courses, 3 credit hours of elective course(s), 3 credit hours of independent research, and 9 credit hours of dissertation research. Students will also participate in a 0 credit hour Department seminar course. All students will be required to complete and pass a preliminary examination requirement, a Dissertation proposal defense, and a Dissertation defense. The research courses in the proposed PhD in Nutrition Science’s program are the same courses that students’ in the proposed PhD in Health Behavior Science and Promotion are required to complete, which allows for synergy and efficiency of resources across the two BHAN PhD programs.

List new courses required for the new curriculum. How do they support the overall program objectives of the major/ minor/ concentrations)?

NTDT812: Current Topics in Nutritional Sciences

Graduate-level training in methods to systematically review, interpret, and summarize literature on a given topic is essential for all aspects of nutrition practice, including academic, research, clinical, industry, and government positions. Currently, there are no courses in the Department of Behavioral Health and Nutrition that focus on current controversies in nutritional science, and the skills to methodically evaluate the evidence base and render a scientific conclusion. This course is designed to be taken by PhD students and MS students in the department, and will be a required course for student in the PhD in Nutrition Science program and students in the newly proposed Master of Science/Dietetic Internship (MS/DI) program.  We do not expect that the addition of this course will impact the enrollment in other courses across the University. Instead, this course will fill a curricular void in the Department of Behavioral Health and Nutrition graduate programs.

The graduate programs in nutrition (MS and a proposed PhD program) require that students have a firm foundation of the literature related to nutrition and its role in health and disease. Graduate-prepared Registered Dietitian Nutritionists (RDNs) and nutrition scientists need to develop the skills required to assimilate the research to date on important topics. This course will teach students how to methodically and systematically review the literature and create scientific summaries of the evidence for given topics. This course will be taken by students in the Master of Science in Human Nutrition, the proposed Master of Science in Nutrition and Dietetics/Dietetic Internship program, and the proposed PhD in Nutrition Sciences program. We anticipate an enrollment of approximately 15 graduate students per semester from nutrition graduate programs alone. There are no current topics courses in the nutrition curriculum to date.

This course has been developed with input from all faculty in the Nutrition program within the Department of Behavioral Health and Nutrition (BHAN). This course has been reviewed and approved by the BHAN Department Chair and Curriculum Committee.

BHAN855 Qualitative and Mixed Methods Research in Health Sciences

Graduate-level training in qualitative and mixed methods research specific to health behavior, health promotion, and nutritional science is needed. Currently, there are no courses in the Department of Behavioral Health and Nutrition that focus on qualitative and mixed methods research despite these approaches being commonly used in the field. This course is designed to be taken by doctoral students but also suitable for master’s degree in the department and potentially across the College of Health Sciences. While there are other graduate-level qualitative research courses across the University including EDUC850, NURS816, SOCI676 and UAPP808, these classes have a small student cap size (between 4 and 15 students), are specific to the respective academic fields, and do not consider mixed research methodologies also. BHAN855 will offer discipline specific training on the qualitative and mixed research methods and skills pertinent to the fields of health behavior, health promotion and nutrition sciences.

The course objectives are:

 Describe qualitative and mixed methods research paradigm as it is used in health sciences

Describe rationales for using qualitative and mixed research methods, value of these approaches, weaknesses in these approaches, and important ways in which qualitative research differs from quantitative research.

Create appropriate data collection tools (e.g. interview or focus group guides) for qualitative health and mixed methods research

Analyze small scale qualitative data

Evaluate the validity and reliability of qualitative and mixed methods research in the peer-reviewed, published literature

BHAN856 Multivariable Biostatistics for Population Health

Higher level graduate-level training in biostatistics for population health is needed. Currently, there are no higher-level biostatistics courses in the Department of Behavioral Health and Nutrition, despite biostatistics being critical to the field of health behavior science, health promotion, and nutritional science. This course is designed to be taken by doctoral students but also suitable for quantitatively strong master’s degree students in the department and potentially across the College. While there are other graduate-level biostatistics courses across the University including EDUC812 Regression and Structural Equation Modeling, PSYC861: Psychological Statistics II, PSYC878: Hierarchical Linear Modeling, and PSYC867: Structural Equation Modeling, these courses do not cover the regression, GEE and repeated measures approaches that are particularly relevant to the health field. Moreover, the application of these approaches to the population health context is not used. We do not expect that the addition of this course will impact the enrollment in other courses within the University and instead fill a curricular void at the College of Health Sciences graduate level.

Solidify understanding of commonly used distributions in multivariate biostatistics

Develop understanding of the concepts and assumptions underlying a range of multivariate statistical techniques

Learn to select the most appropriate multivariate statistical approach to address specific research hypotheses

Gain experience applying a wide range of multivariate statistical techniques

Begin developing a sophisticated methodological tool kit

Write empirical report using multivariate statistics, consistent with format of publishable research paper

Help: (This would include other departments/units whose courses are a required part of the proposed curriculum. If no other unit is affected, enter “None”)

Identify other units affected by the proposed changes and provide letters of support from those units. :

Identify other units affected by the proposed changes and provide letters of support from those units. :

Prospective Curriculum:\*

NS PhD Program Coursework

Courses

BHAN 855 Qualitative and Mixed Methods Research in Health Sciences (3cr)

BHAN 856 Multivariable Biostatistics for Population Health (3cr)

Elective N/A General Elective (3cr)

NTDT 812 Current Topics in Nutrition (3cr)

NTDT 822 Research Methods in Nutrition Assessment (3cr)

NTDT 868 Independent Research (1-6cr)

NTDT 969 Dissertation Research (9cr)

NTDT N/A Elective (9cr)

Stats/data analysis N/A Electives (9cr)

BHAN - 855 - Qualitative and Mixed Methods Research in Health Sciences (3cr)

BHAN - 856 - Multivariable Biostatistics for Population Health (3cr)

Elective - N/A - General Elective (3cr)

NTDT - 812 - Current Topics in Nutrition (3cr)

NTDT - 822 - Research Methods in Nutrition Assessment (3cr)

NTDT - 868 - Independent Research (1-6cr)

NTDT - 969 - Dissertation Research (9cr)

NTDT - N/A - Elective (9cr)

Stats/data analysis - N/A - Electives (9cr)

Preview Curriculum View Curriculum Schema View Curriculum Courses

Expected Outcomes

The NS PhD Program provides the highest degree for nutrition science professionals, preparing graduates for research careers in many settings, including academia, non-governmental organizations (business and non-profit), allied health fields, and public service at all levels of national government. The curriculum will provide graduate students with the training needed to become effective scientific practitioners with the capacity to conduct independent research in nutrition with health-related outcomes, in applied and academic settings.

Completion of a high-quality PhD dissertation, based on original research, is a key feature of the academic program. Students’ capacity to complete dissertation research is developed through a rigorous curriculum designed to bring students to the intellectual forefront of their discipline. Nutrition science research involves the study of diet and metabolism, including effects on health, performance and disease in addition to the study of human behaviors related to food choices, with the goal of translation of such knowledge to the community through high quality, evidence-based interventions.

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