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| For Academic Affairs and Research Use Only |
| Proposal Number |  |
| CIP Code:  |  |
| Degree Code: |  |

**NEW OR MODIFIED COURSE PROPOSAL FORM**

**[ ] Undergraduate Curriculum Council**

**[X] Graduate Council**

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| **[X]New Course, [ ]Experimental Course (1-time offering), or [ ]Modified Course (Check one box)** |

Signed paper copies of proposals submitted for consideration are no longer required. Please type approver name and enter date of approval.

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| JoAnna Cupp 1/8/2021**Department Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…**COPE Chair (if applicable)** |
| JoAnna Cupp 1/8/2021**Department Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…**Head of Unit (if applicable)**   |
| Shanon Brantley 02/02/2021**College Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…**Undergraduate Curriculum Council Chair** |
| Mary Elizabeth Spence 1/11/2021**Office of Assessment (new courses only)** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…**Graduate Curriculum Committee Chair** |
| \_\_Susan Hanrahan 2/1/21\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…**College Dean** | \_\_\_\_\_\_\_\_\_\_\_Alan Utter\_\_\_\_\_\_\_\_ 2/26/21**Vice Chancellor for Academic Affairs** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…**General Education Committee Chair (if applicable)**   |  |

1. **Contact Person (Name, Email Address, Phone Number)**

JoAnna Cupp, jcupp@astate.edu, 870-680-8295

1. **Proposed starting term and Bulletin year for new course or modification to take effect**

Summer I 2023; bulletin year fall 2022

**Instructions:**

*Please complete all sections unless otherwise noted. For course modifications, sections with a “Modification requested?” prompt need not be completed if the answer is “No.”*

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|  | **Current (Course Modifications Only)** | **Proposed (New or Modified)** *(Indicate “N/A” if no modification)* |
| **Prefix** |  | **NS** |
| **Number\*** |  | **6313** |
| **Title** |  | **Nutritional Epidemiology** |
| **Description\*\*** |  | **Examines methods used in nutritional epidemiological studies and reviews current knowledge related to diet and other nutritional determinants of long-term health and disease.** |

 ***\**** (Confirm with the Registrar’s Office that number chosen has not been used before and is available for use. For variable credit courses, indicate variable range. *Proposed number for experimental course is 9*. )

\*\*Forty words or fewer as it should appear in the Bulletin.

1. **Proposed prerequisites and major restrictions** **[Modification requested? Yes/No]**

(Indicate all prerequisites. If this course is restricted to a specific major, which major. If a student does not have the prerequisites or does not have the appropriate major, the student will not be allowed to register).

1. **Yes** Are there any prerequisites?
	1. If yes, which ones?

This course is shared between two degrees.

Master of Science in Nutrition and Dietetics (MSND) prerequisites:

 Admission to the Master of Science in Nutrition and Dietetics program

 HP 5113 Leadership in Health Professions

 NS 6263 Advanced Medical Nutrition Therapy

 NS 6303 Nutrition and Dietetics Research

 STAT 6833 Biostatistics

transitional Master of Science in Nutrition and Dietetics (tMSND) prerequisites:

 Admission to the Graduate School

 [HP 5113 and NS 6263 will be waived for these students]

 NS 6303 Nutrition and Dietetics Research

 STAT 6833 Biostatistics

* 1. Why or why not?

The curriculum in the MSND program is lock step as part of an accredited program requiring a Master’s degree with sequential and logical progression of courses. Students must complete previous semester of graduate courses before progressing to subsequent semesters.

The tMSND program can be done on a part-time or full-time basis and is a non-accredited degree. To enhance preparation for the epidemiology course, it is determined that students in this program should have completed only the NS 6303 research course and the STAT 6833 statistics course prior to enrolling in this course. HP 5113 and NS 6263 prerequisites will be waived for these students.

1. **Yes** Is this course restricted to a specific major?
	1. If yes, which major? Nutrition and Dietetics; this is a shared course for the Master of Science in Nutrition and Dietetics and the transitional Master of Science in Nutrition and Dietetics degrees.
2. **Proposed course frequency [Modification requested? Yes/No]**

(e.g. Fall, Spring, Summer; if irregularly offered, please indicate, “irregular.”) *Not applicable to Graduate courses.*

N/A

1. **Proposed course type [Modification requested? Yes/No]**

Will this course be lecture only, lab only, lecture and lab, activity (e.g., physical education), dissertation/thesis, capstone, independent study, internship/practicum, seminar, special topics, or studio? Please choose one.

Lecture only

1. **Proposed grade type [Modification requested? Yes/No]**

What is the grade type (i.e. standard letter, credit/no credit, pass/fail, no grade, developmental, or other [please elaborate])

Standard letter

1. **No** Is this course dual-listed (undergraduate/graduate)?
2. **No** Is this course cross-listed?

*(If it is, all course entries must be identical including course descriptions. Submit appropriate documentation for requested changes. It is important to check the course description of an existing course when adding a new cross-listed course.)*

**a.** – If yes, please list the prefix and course number of the cross-listed course.

 Enter text...

 **b.** – **Yes / No** Can the cross-listed course be used to satisfy the prerequisite or degree requirements this course satisfies?

 Enter text...

1. **Yes** Is this course in support of a new program?

a. If yes, what program?

 Master of Science in Nutrition and Dietetics and the transitional Master of Science in Nutrition and Dietetics

1. **No** Will this course be a one-to-one equivalent to a deleted course or previous version of this course (please check with the Registrar if unsure)?

a. If yes, which course?

Enter text...

**Course Details**

1. **Proposed outline** **[Modification requested? Yes/No]**

(The course outline should be topical by weeks and should be sufficient in detail to allow for judgment of the content of the course.)

I. Introduction to Nutritional Epidemiology

Week 1 Overview of Nutritional Epidemiology

 Introduction, early studies and challenges

 Epidemiologic approaches to diet and disease

 Correlation studies

 Special exposure groups

 Controlled trials

 Interpretation of epidemiologic data

 Food and Nutrients

 Complexity of the human diet

 Nutrients versus foods

 Food composition data and analysis systems

 Nutritional supplements

 II. Dietary Assessment Methods

Week 2 Nature of Variation in Diet

 Importance of day-to-day variation

 Number of days to estimate true intake

 Implications for developing countries

 Effects of random within person variations on association measures

 24-hour Recall and Diet Record (Food Record) Methods

 Methods

 Validation

 Technology enhancements of diet assessment

 Recall of Remote Diet

Week 3 Food Frequency Methods

 Rationale and components

 The food lists

 Frequency response section

 Options for portion size information

 Computation of nutrient intakes

 Combination of food frequency and dietary recalls

 Overall questionnaire design and administration

 Reproducibility and Validity of Food Frequency Questionnaires

 Approaches for evaluating dietary questionnaires

Week 4 Correction for the Effects of Measurement Error

 Types of measurement error

 Approaches to correct errors

Week 5 Dietary Assessment Project

Week 6 Biochemical Indicators of Dietary Intake

 Uses of dietary biomarkers

 Recovery and concentration biomarkers

 Methodological issues for biomarkers of food consumption

 Types of analytical procedures and specimen types

 Specimen collection and storage

 Concentration markers for selected nutrients and foods

 III. Anthropometric Variables, Activity and Energy

Week 7 Anthropometric Measures and Body Composition

 Weight and height

 Measurement of adipose and lean body mass

 Measurement of relative body composition

 Skinfold measurements

 Validity of measures of body fat composition

 Distribution of body fat

Week 8 Assessment of Physical Activity in Nutritional Epidemiology

 Terms and definitions

 Reference measures of energy expenditure

 Motion sensors

 Physical fitness

 Self-reported methods

 Validation studies of physical activity questionnaires

 Physical Activity Assessment Project

 IV. Applications of Nutritional Epidemiology

Week 9 Genetics in Dietary Analyses

 Gene-diet interactions

 Use of genetic markers to inform diet and disease relationships

 Use of genetic features to characterize endpoints

Week 10 Nutrition Monitoring and Surveillance

 Terminology Discussion

 Monitoring/surveillance of physical activity, weight, biomarkers and

 knowledge/attitudes/beliefs

 Emerging methods and barriers

Week 11 Policy Applications

 How knowledge about diet/health is transformed to policy

 Types of nutritional policies

 Comprehensive national nutritional policies

 Evaluation of policies

Week 12 Epidemiological Studies: Diet and Coronary Heart Disease

Week 13 Epidemiological Studies: Dietary Fat and Breast Cancer

Week 14 Epidemiological Studies: Folic Acid and Neural Tube Defects

Week 15 Epidemiological Studies: Project Reports

1. **Proposed special features** **[Modification requested? Yes/No]**

(e.g. labs, exhibits, site visitations, etc.)

None

1. **Department staffing and classroom/lab resources**

It is projected that two faculty, one 9-month and one 12-month, will be needed to cover this course and others in the mandatory graduate program. NS 6313 is an online class; no classroom or lab space is required.

1. Will this require additional faculty, supplies, etc.?

See note on faculty above.

1. **No** Does this course require course fees?

 *If yes: please attach the New Program Tuition and Fees form, which is available from the UCC website.*

**Justification**

**Modification Justification (Course Modifications Only)**

1. Justification for Modification(s)

Enter text...

**New Course Justification (New Courses Only)**

1. Justification for course. Must include:

 a. Academic rationale and goals for the course (skills or level of knowledge students can be expected to attain)

 Hand in hand with research, the study of epidemiology informs evidence-based guidelines for nutrition practice. It also provides directions for policy decisions that influence the health and well-being of global populations. With evolving scientific and medical advances, understanding the complex relationships between diet and disease becomes even more challenging. Students must be educated to interpret studies of diet in relation to chronic disease risk and turn the results into practical applications for their patients and clients. Course goals – upon completion of this course, students are able to: discuss methodologies used in nutritional epidemiology studies; examine current state of epidemiological evidence for relationship of diet to selected diseases; analyze and evaluate nutritional epidemiological research publications.

b. How does the course fit with the mission of the department? If course is mandated by an accrediting or certifying agency, include the directive.

 The course fits with the department mission to provide quality education and experiences for students in the field of nutrition and dietetics. Educating future practitioners in nutrition and dietetics must include a focus on the health problems of populations and, more importantly, how to control and prevent the health problems through effective nutrition programs and services. No nutrition graduate program can be considered complete without the study of nutritional epidemiology.

In addition, there are two directives from the Accreditation Council for Education in Nutrition and Dietetics (ACEND), the accrediting agency for the Academy of Nutrition and Dietetics, related to the topic of nutritional epidemiology:

**Standard 3.1** The program’s curriculum must be designed to ensure the breadth and depth of requisite knowledge and skills needed for entry-level practice as a registered dietitian nutritionist. **a.** The program’s curriculum must include the following required components, including prerequisites: 1. **Research methodology, interpretation of research literature and integration of research principles into evidence-based practice**

6. **Role of environment, food, nutrition and lifestyle choices in health promotion and disease prevention**

13. Organic chemistry, **biochemistry**, anatomy, **physiology**, **genetics**, microbiology, pharmacology, **statistics**, logic, **nutrient metabolism**, integrative and functional nutrition and nutrition across the lifespan

14. **Cultural consideration**, reflexivity, and diversity, equity and inclusion

[2 – 5, 7 – 12, 15; other unrelated components] **b.** The program’s curriculum must prepare students with the following core knowledge and competencies: Domain 1. Scientific and Evidence Base of Practice: Integration of scientific information and translation of research into practice; Domain 2. Professional Practice Expectations: Beliefs, values, attitudes and behaviors for the professional dietitian nutritionist level of practice;

Domain 3. Clinical and Customer Services: Develop and deliver information, products and services to individuals, groups and populations.

The epidemiology course supports Domains 1, 2 and 3 as far as competencies which the students meet during the graduate program.

c. Student population served.

The NS 6313 epidemiology course serves both students who are on track to become registered dietitian nutritionists (RDNs), as mandated by accreditation, and students who may already be RDNs or working in health care and are now seeking a graduate degree.

d. Rationale for the level of the course (lower, upper, or graduate).

The graduate level of the course is appropriate as students must have a baccalaureate degree in order to enroll in the Nutrition and Dietetics program as they seek an advanced educational experience.

**Assessment**

**Assessment Plan Modifications (Course Modifications Only)**

1. **Yes** Do the proposed modifications result in a change to the assessment plan?

 *If yes, please complete the Assessment section of the proposal*

**Relationship with Current Program-Level Assessment Process (Course modifications skip this section unless the answer to #18 is “Yes”)**

1. What is/are the intended program-level learning outcome/s for students enrolled in this course? Where will this course fit into an already existing program assessment process?

Program-Level Learning Outcomes

Domain 1 - Scientific and Evidence Base of Practice: Integrate scientific information and translation of research into practice, specifically KRDN\* 1.1, 1.3 and CRDN\* 1.4

Domain 2 - Professional Practice Expectations: Exhibit beliefs, values, attitudes and behaviors for the professional dietitian nutritionist level of practice, specifically KRDN\* 2.3 Domain 3 - Clinical and Customer Services: Develop and deliver information, products and services to individuals, groups and populations, specifically, KRDN\* 3.5

(\*KRDN Knowledge for the Registered Dietitian Nutritionist; \*CRDN Competency for the Registered Dietitian Nutritionist)

The current curriculum map for the Dietetics Program is revised to add the program-level learning outcomes as noted above and the Core Knowledge & Competencies for the RDN (Registered Dietitian Nutritionist) as applicable to the new graduate degree, Master of Science in Nutrition and Dietetics (MSND). There is a new curriculum map applicable to the transitional Master of Science in Nutrition and Dietetics degree (tMSND) as it is a non-accredited degree and is not tied to the undergraduate Dietetics Program leading to the MSND.

1. Considering the indicated program-level learning outcome/s (from question #19), please fill out the following table to show how and where this course fits into the program’s continuous improvement assessment process.

*For further assistance, please see the ‘Expanded Instructions’ document available on the UCC - Forms website for guidance, or contact the Office of Assessment at 870-972-2989.*

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| **Program-Level Outcome 1 (from question #19)** | Domain 1 - Scientific and Evidence Base of Practice: Integrate scientific information and translation of research into practice |
| Assessment Measure | Outcome CRDN 1.5 Conduct projects using appropriate research methods, ethical procedures and data analysis Direct measure: NS 6303 Research manuscript - 80% of students will receive a grade of B or better, based on the rubric for this course project Indirect measure: NS 6313 Student survey - 100% of students will complete the self-assessment survey pertaining to the research poster and participation in Create@State event  |
| Assessment Timetable | Fall semester, every 3 years, 2023-2024, 2026-2027, 2029-2030 |
| Who is responsible for assessing and reporting on the results? | MSND and tMSND faculty  |

 *(Repeat if this new course will support additional program-level outcomes)*

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| **Program-Level Outcome 2 (from question #19)** | Domain 2 - Professional Practice Expectations: Exhibit beliefs, values, attitudes and behaviors for the professional dietitian nutritionist level of practice |
| Assessment Measure | Outcome CRDN 2.2 Demonstrate professional writing skills in preparing professional communications Direct measure: : NS 6013 LinkedIn profile – 80% of students will receive a letter grade of B or better, based on the rubric for this assignment Indirect measure: Exit survey – 100% of students will complete and submit exit survey regarding degree experience, including feedback on development of professionalism during program enrollment  |
| Assessment Timetable | Spring semester, every 3 years, 2023-2024, 2026-2027, 2029-2030 |
| Who is responsible for assessing and reporting on the results? | MSND and tMSND faculty  |

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| **Program-Level Outcome 3 (from question #19)** | Domain 3 – Clinical and Customer Services: Develop and deliver information, products and services to individuals, groups and populations |
| Assessment Measure | Outcome KRDN 3.1 Use the Nutrition Care Process to make decisions, identify nutrition-related problems and determine and evaluate nutrition interventions Direct measure: Exit exam – 80% of students will score at least 80% on cumulative exit exam at end of program, indicating among other competencies, an ability to apply knowledge of the Nutrition Care Process Indirect measure: Time to degree/program length – 100% of students will complete degree requirements within 150% of planned program length (1.5 years) as a measure of time to achieve required competencies in the program  |
| Assessment Timetable | Spring, every 3 years 2024-2025, 2027-2028, 2030-2031 |
| Who is responsible for assessing and reporting on the results? | MSND and tMSND faculty  |

 **Course-Level Outcomes**

1. What are the course-level outcomes for students enrolled in this course and the associated assessment measures?

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| **Outcome 1** | KRDN 1.1 Demonstrate how to locate, interpret, evaluate and use professional literature to make ethical, evidence-based practice decisionsKRDN 1.3 Apply critical thinking skillsCRDN 1.4 Evaluate emerging research for application in nutrition and dietetics practice |
| Which learning activities are responsible for this outcome? | Analyze and evaluate a nutritional epidemiology research publication; discuss potential applications in practice. |
| Assessment Measure  | 80% of students will receive a letter grade of B or higher on this activity, based on the assignment guidelines and rubric, to meet this outcome. |

*(Repeat if needed for additional outcomes)*

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| **Outcome 2** | KRDN 2.3 Assess the impact of a public policy position on nutrition and dietetics practice. |
| Which learning activities are responsible for this outcome? |  Compose a 500 to 800-word paper discussing a minimum of three nutritional policies that have been adopted as a result of translating knowledge about diet and health into action. Include the solid evidence used in support of the policies. |
| Assessment Measure  | 80% of students will receive a letter grade of B or higher on this written paper, based on the assignment guidelines and rubric, to meet this outcome.  |

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| **Outcome 3** | KRDN 3.5 Describe basic concepts of nutritional genomics |
| Which learning activities are responsible for this outcome? | Participate in reflective writing activity to discuss opportunities and implications of the use of genetic biomarkers can be incorporated into studies of diet and disease. |
| Assessment Measure  | 80% of students will receive a letter grade of B or higher on this activity, based on the assignment guidelines and rubric, to meet this outcome.  |

**Bulletin Changes**

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| **Instructions**  |
| **Please visit** [**http://www.astate.edu/a/registrar/students/bulletins/index.dot**](http://www.astate.edu/a/registrar/students/bulletins/index.dot) **and select the most recent version of the bulletin. Copy and paste all bulletin pages this proposal affects below. Please include a before (with changed areas highlighted) and after of all affected sections.** **\*Please note: Courses are often listed in multiple sections of the bulletin. To ensure that all affected sections have been located, please search the bulletin (ctrl+F) for the appropriate courses before submission of this form.**  |

[Insert after Nursing and before Occupational Therapy on page 382-383]

***NS 6313. Nutritional Epidemiology Examines methods used in nutritional epidemiological studies and reviews current knowledge related to diet and other nutritional determinants of long-term health and disease. Restricted to Nutrition and Dietetics graduate students. Prerequisites, HP 5113, NS 6263, NS 6303, and STAT 6833.***