NUTRITIONAL SCIENCES DEPARTMENT

The Department of Nutritional Sciences leads in cutting-edge research, outstanding undergraduate and graduate programs, Cooperative Extension programs and continuing professional education that advance the discovery and translation of nutrition and physical activity in optimizing health for people in Arizona, and beyond.

PROGRAM DESCRIPTION

The Graduate Certificate in Applied Nutrition (GCAN) is a graduate certificate program in the Department of Nutritional Sciences at The University of Arizona designed to be completed in only 8 months. This 14-credit online certificate provides knowledge and skills in the area of clinical nutrition. Created to provide students with training in advanced nutritional sciences, the GCAN will prepare graduates to successfully compete for jobs in the nutrition workforce as well as enhance placement into graduate or professional training programs. The GCAN is responsive to the challenges faced by today's nutrition professionals, and provides a path to advancement outside of the traditional, research-intensive M.S. degree. This certificate may also serve to enhance the skill set of various healthcare professionals; including, but not limited to, doctors, nurses, chiropractors, medical assistants, health/wellness coaches and personal trainers. This certificate program is designed to provide new insight and skill-building activities in areas to promote positive clinical outcomes in today's health care environment, including:

- Statistical methods
- Metabolism as it applies to various clinical conditions
- Research methods in nutritional sciences
- Advanced medical nutrition therapy (MNT)
- Nutrition assessment & support
- Nutrigenomics
- Body composition

ADVISING

The program coordinator serves as advisor for students enrolled in the graduate certificate in applied nutrition program. It is recommended that you contact the program coordinator at least each semester to facilitate adequate contact regarding progress in courses, questions regarding future coursework and any other academic or personal issues.
GRADUATE CERTIFICATE FACULTY

<table>
<thead>
<tr>
<th>Faculty &amp; Contact Information</th>
<th>Course(s) Taught/Program Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kayle Skorupski, MS, RDN, CSG, CNSC</td>
<td>Program Coordinator</td>
</tr>
<tr>
<td><a href="mailto:kayleskorupski@email.arizona.edu">kayleskorupski@email.arizona.edu</a></td>
<td></td>
</tr>
<tr>
<td>Qionghiu “Shelley” Zhang, MS</td>
<td>NSC 501: Statistics for Applied Nutritional Sciences I</td>
</tr>
<tr>
<td><a href="mailto:qzhang1@email.arizona.edu">qzhang1@email.arizona.edu</a></td>
<td>NSC 502: Statistics for Applied Nutritional Sciences II</td>
</tr>
<tr>
<td>Amy Drescher, PhD, RDN</td>
<td>NSC 509: Advanced Nutrition Metabolism and Disease</td>
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<tr>
<td><a href="mailto:drescher@email.arizona.edu">drescher@email.arizona.edu</a></td>
<td>NSC 545: Body Composition</td>
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<tr>
<td>Mary Marian, DCN, RDN, CSO, FAND</td>
<td>NSC 519: Advanced Applied Nutritional Sciences</td>
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<tr>
<td><a href="mailto:mmarian@email.arizona.edu">mmarian@email.arizona.edu</a></td>
<td>NSC 542: Advanced Medical Nutrition Therapy</td>
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<tr>
<td>Randy Burd, PhD</td>
<td>NSC 575: Nutrigenomics</td>
</tr>
<tr>
<td><a href="mailto:rburd@email.arizona.edu">rburd@email.arizona.edu</a></td>
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NETID AND EMAIL

Your NetID is your personal identifier for a number of online services at the University of Arizona, including:

- Email and UITS computing accounts (CatMail, UAConnect, HPC)
- UAccess accounts
- D2L – web-based course management system
- University site-licensed software

The UA NetID verifies identify when it is used for online services the University of Arizona provides. To set up your NetID, please visit: https://netid.arizona.edu/

Your CatMail account is created automatically when you select your NetID. The new email address with all have the format your NetID@email.arizona.edu, and it is the official means of communication between the students and the university. It is required that you use your UA email for communication with your instructors. You will also receive notification of tuition bills, etc. via this email address. The email is provided by the Google G Suite for Education, which provides access to Google’s full suite of applications. For more information, please visit: it.arizona.edu/service/catmail-student-email

Last updated 5/15/2017
D2L (Desire2Learn)

D2L provides instructors and students with an online space for traditional classroom courses, online classes, or hybrids. In D2L you will find:

- Course syllabi
- Readings
- Assignments
- Quizzes
- Grades
- List of classmates
- Online discussions
- And more....

D2L includes access to tools such as Adobe Connect, Panopto, VoiceThread and Examity. To access D2L, please visit: https://d2l.arizona.edu/. For assistance with D2L, please visit: http://help.d2l.arizona.edu/student/student-home

D2L requires that you submit files as Microsoft Office compatible (ie WORD) or as PDF files. Other file types (ie PAGES) will not be accepted. As a UA student, you are able to download Microsoft Office 365 for your use. For more information, please visit: http://uabookstore.arizona.edu/technology/campuslicensing/default.asp

STUDENT SUPPORT AND RESOURCES

As a UA Online student, you will have access to wide range of resources and tools to support you on your journey including: UA Online Launch Pad, free tutoring, academic skills coaching, and the Disability Resources Center. For more information regarding these support services please visit: http://uaonline.arizona.edu/student-support

The Graduate College also has many resources available, for more information visit: http://grad.arizona.edu/new-and-current-students

STUDENT RESPONSIBILITIES AND PROFESSIONAL CONDUCT

Please visit the following link for more information regarding the Student Code of Conduct at the University of Arizona: https://deanofstudents.arizona.edu/student-code-conduct-student-faqs

IMPORTANT LINKS

- Graduate College – access to Graduate College policies, contacts, information about resources, deadlines and other useful information: http://grad.arizona.edu

Last updated 5/15/2017
• Resources for professional development and health and wellness please visit: http://grad.arizona.edu/new-and-current-students
• General Catalog provides comprehensive information related to all academic programs at the University of Arizona: http://catalog.arizona.edu/
• Academic Integrity – please review the code of academic integrity: https://deanofstudents.arizona.edu/policies-and-codes/code-academic-integrity

It is the Department of Nutritional Sciences policy that the student hold final responsibility for being aware of and responding to all Nutritional Sciences, Graduate College and University of Arizona polices, requirements, formats and deadlines as they pertain to progression towards and completion of their certificate program. If any questions persist following review of all policies, please contact your program coordinator for assistance and clarification.

FINANCIAL INFORMATION

Cost per unit for the certificate program is $650 per unit. Currently no funding opportunities are available for this program in the form of scholarships, TA or RA positions. As a certificate program, no financial aid is available. For more information regarding financial aid eligibility please visit: http://financialaid.arizona.edu/faq-or-dynamic/do-i-qualify

ADMISSION REQUIREMENTS

GCAN program applicants must meet the following minimum requirements:

• Bachelor of Science degree in Nutrition or related field from an accredited institution. A Bachelor of the Arts (B.A.) degree will be accepted in the area of Nutrition.
• Undergraduate Physiology and Biochemistry courses are prerequisites for GCAN courses.
• Minimum 3.0 GPA overall in undergraduate degree
• International students must submit a Minimum TOEFL (Internet-based) Score of 79 or (Paper-based) Score of 550. The minimum IELTS (overall band score) is 7.
• Additionally, because the GCAN is delivered exclusively online, the following student characteristics are essential to successfully completing the program:
  o Self-directed, independent learner
  o Able to manage time effectively
  o Effective written and verbal communication
  o Able to utilize a wide range of resources effectively

For complete application requirements and instructions on how to apply to the graduate college please visit: https://apply.grad.arizona.edu/users/login. Students must be admitted to the graduate college prior to enrolling in courses.
COURSE REQUIREMENTS AND DESCRIPTIONS

All courses will be fully distributed through online course tool platforms and technology. Students accepted into the GCAN must complete the following courses to earn the Certificate:

- NSC 501
- NSC 509
- NSC 519
- NSC 542
- NSC 575 – or – NSC 545
- NSC 502

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<tr>
<th>Course</th>
<th>Term Offered</th>
<th>Catalog Description</th>
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<tbody>
<tr>
<td>NSC 501: Statistics for Applied Nutritional Sciences I (1 unit)</td>
<td>Summer Pre-Session</td>
<td>This course will introduce the concepts of research methods with a focus on the varied research conducted in nutritional sciences. Students will be guided through a comprehensive compendium of the elements of research design in order to understand the application of these elements to Applied Nutritional Science.</td>
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<td>May 15, 2017</td>
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<tr>
<td>NSC 509: Advanced Nutrition Metabolism and Disease (3 units)</td>
<td>Summer I</td>
<td>This class will review the multi-facets of macronutrient metabolism and application to the prevention and development of common chronic diseases. The clinical applications of nutrient deficiencies and toxicities will also be reviewed. Metabolic alterations associated with obesity, metabolic syndrome, and other diseases will be discussed. The application of evidence-based guidelines and research for nutritional interventions will be discussed through weekly readings and assignments.</td>
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<td>June 5, 2017</td>
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<tr>
<td>NSC 519: Advanced Applied Nutritional Sciences (3 units)</td>
<td>Summer II</td>
<td>This course will advance understanding of research design, methods, and implementation, interpretation of research findings, and advances in nutrition science research for selected chronic diseases.</td>
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<td>NSC 542: Advanced MNT (3 units)</td>
<td>Fall 7WK 1</td>
<td>This course focuses on the prevention and management of selected chronic disease and acute care conditions. An in-depth exploration of the selected topics and related research using an evidence-based approach will serve as the class foundation. The course will be completed with students presenting a discussion/review of an approved topic.</td>
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<td>Course</td>
<td>Term Offered</td>
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<tr>
<td>NSC 545: Body Composition (3 units)</td>
<td>Fall 7WK 2</td>
<td>This course covers advanced principles of body composition assessment and management. Methods of body composition assessment will be covered with a focus on aging, obesity, sarcopenia and bone health. The impact of physical activity and pharmacology will be reviewed.</td>
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<tr>
<td>NSC 575: Nutrigenomics (3 units)</td>
<td>Fall 7WK 2</td>
<td>Nutrigenomics is the application of genomics to human nutrition. This online course will explore relevant technologies, genetics &amp; nutrition. Designed by researchers in colleges &amp; centers of excellence, it will be continually updated with the latest information. Graduate-level requirements include Nutrigenomics/Organization of the genome; Advanced Models; Target validation; Mouse models; lab assignments; Advanced discussion board questions (4 total) are due after each unit.</td>
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<tr>
<td>NSC 502: Statistics for Applied Nutritional Sciences II (1 unit)</td>
<td>Winter</td>
<td>This course will introduce basic statistical concepts and applied statistical strategies that are essential for conducting and critiquing research in nutritional sciences and related fields. The course will be delivered online structured with video lectures, self-check practices, discussion forum, assignments and quizzes. The experiences within the course will provide students the necessary competencies to appropriately summarize data (descriptive statistics) and implement statistical tests (inferential statistics) based upon appreciation of research design and data characteristics. All the analyses will be taught using an established statistical software program IBM SPSS Statistics 20. Some of the simple analyses will also be demonstrated using excel as an alternative.</td>
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**STUDENT OUTCOMES**

- Define and describe evidence-based nutritional science research methods and apply appropriate research methods to clinical case studies and research scenarios
- Synthesize current scientific literature from various sources to produce a review paper written in the style of a nutrition journal and produce a presentation appropriate for health professionals
- Demonstrate an understanding of the metabolism and genetic interactions of the macronutrients; including application to health and disease
- Identify risk factors associated with the development of chronic disease and describe dietary management strategies for the prevention and management of the most common chronic diseases

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• Demonstrate the ability to critically review and evaluate the literature related to nutrition and topics covered in the certificate courses using methods established by the A.N.D Evidence Analysis Library
• Demonstrate an understanding of the metabolic influences of select class topics regarding anthropometric, biochemical, clinical, and diagnostic parameters used for assessing systemic and nutrition health status
• Apply an evidence-based approach to examine medical nutrition therapy for the prevention and management of related class topics.
• Describe the fundamentals of data collection and measurement
• Identify appropriate statistical models and software for quantitative data analysis

CREDIT FOR COURSES TAKEN AS A NON-DEGREE-SEEKING STUDENT

Domestic students may transfer up to 6 units of coursework taken as non-degree seeking students. This means that you may enroll in the required certificate courses prior to being admitted into the program. This does not mean that you may transfer other courses to count toward the certificate. The only courses taken as a non-degree seeking student that may be applied to the GCAN are NSC 501, NSC 509, NSC 519, NSC 542, NSC 545, NSC 575 or NSC 502.

International students are not permitted to enroll in online classes outside of a certificate or degree program. In other words, international students must be accepted into the certificate program prior to enrolling in online courses

INCOMPLETE POLICY

Students earning a grade of Incomplete, “I” for a course should submit a completed Report of Incomplete Grade form to the program coordinator for inclusion in their academic record. This form is available here: http://registrar.arizona.edu/grades/incomplete-i-grade. Incomplete grades should be completed in a timely manner and are submitted at the discretion of the course instructor.

REMEDICATION

Students judged to have academic difficulties (e.g. poor, grades, failing or at risk of failing to satisfy program requirements) will receive notice from the program coordinator with specific suggestions as to how these problems might be remedied and the data by which such actions must be taken. This notification will be copied to the Graduate College. The Graduate College has established guidelines, which departments must follow in order to dismiss students from their programs. Students should familiarize themselves with the steps so they know their rights, responsibilities, and remedies should such a situation develop. Students who fail to remediate by the deadlines specified may be dismissed from the program.

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