THE UNIVERSITY OF ARIZONA
COLLEGE OF AGRICULTURE & LIFE SCIENCES
Nutritional Sciences
& Wellness

Graduate Student Handbook

for Graduate Programs:

- **Graduate Certificate in Applied Nutrition**
- **Professional Science Master in Applied Nutrition—Nutrition & Wellness**

Academic Year 2023-2024 (August 2023-May 2024)

Contents

Program Director's Welcome

Welcome to the Applied Nutrition graduate programs offered through the School of Nutritional Sciences and Wellness (NSW)—we are so happy you are here!. The Graduate Certificate (GCAN) and PSM-Nutrition & Wellness (PSM-NW) programs are designed to accelerate your nutrition knowledge and to prepare you to apply this knowledge in your career in healthcare, community engagement, public service, and more.

Online education is a wonderful way to expand your knowledge while continuing to do all the things you do. Being able to continue your education without having to change your day to day is liberating, but it can often also be challenging. We have an amazing support team in NSW, Arizona Online, College of Agriculture, Life and Environmental Sciences (CALES), and the University of Arizona to help support you. For GCAN and PSM-NW students, our graduate program coordinator, Peggy Rupert, MA, MPH, RDN (prupert@arizona.edu), and myself are here to make sure you are successful in your studies.

We are so excited to work with you while you continue your education. Please reach out to us any time.

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Associate Professor of Practice
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Program Faculty and Personnel

Faculty Member and Contact Information	Courses
Katelyn Barker, MS, RDN Assistant Professor of Practice Katelynbarker@arizona.edu	NSC 512 The Body Positive Concept & You NSC 522 Weight Inclusive Approach to Counseling NSC 532 Exploring Eating Disorders & Body Image NSC 542 Health Communication from a Weight Inclusive Lens
Erika Barrera, MPH, RDN Assistant Professor of Practice ejbarrera@arizona.edu	NSC 535 Advanced Clinical Nutrition
Connie Bell, MBA Assistant Professor of Practice Cbell4@arizona.edu	NSC 558 Advanced Foodservice Management NSC 570 Agriculture and Food Literacy for Nutrition & Health Professionals
Amy Drescher, PhD, RDN Assistant Professor of Practice drescher@arizona.edu	NSC 545 Assessment and Regulation of Human Body Composition
Lucia Mosqueira, MS, RD Assistant Professor of Practice lmosqueira@arizona.edu	NSC 509 Advanced Nutrition Metabolism and Disease NSC 535 Advanced Clinical Nutrition
Ashlee Linares-Gaffer, MS, RDN, FAND Associate Professor of Practice alinares@arizona.edu	NSC 562 Professional Ethics and Best Practices in Nutrition Education and Counseling NSC 570 Agriculture and Food Literacy for Nutrition & Health Professionals
Ashley Munro, MPH, RDN, CDCES Instructor Ashleymunro@arizona.edu	NSC 512 The Body Positive Concept & You NSC 522 Weight Inclusive Approach to Counseling NSC 532 Exploring Eating Disorders & Body Image NSC 542 Health Communication from a Weight Inclusive Lens
Alexandra Samarron-Longoria, MPH, RDN Assistant Professor of Practice aes@arizona.edu	NSC 540 Nutrition Interventions
Elyse Shearer, PhD, RDN Assistant Professor of Practice eshearer@arizona.edu	NSC 519 Advanced Applied Nutritional Sciences NSC 610 Nutrition and Disease
Kayle Skorupski, PhD, RDN-AP, CNSC, FAND Associate Professor of Practice Director of Professional Programs kayleskorupski@arizona.edu	NSC 562 Professional Ethics and Best Practices in Nutrition Education and Counseling NSC 597 Capstone Prep Workshop NSC 698A Capstone I NSC 698B Capstone II

Program Personnel	
Prospective Students Advisor	Jessica Zepeda, PSM, RDN grad-nsw@email.arizona.edu
Graduate Programs Coordinator	Peggy Rupert, MA, MPH, RDN prupert@arizona.edu

School of Nutritional Sciences & Wellness

The School of Nutritional Sciences & Wellness (NSW, School) at the University of Arizona prepares graduate students to be leaders in nutritional sciences, dietetics, food systems, health, and wellness. The School is housed in the College of Agriculture, Life and Environmental Sciences (CALES).

The NSW mission is to provide outstanding research, graduate and undergraduate programs, and outreach education that advances nutrition and physical activity in optimizing health and wellness for all people. Graduates from NSW programs will be imbued with these values and will carry forward the unit's vision in their future endeavors:
- Integrity: What we say and do embodies scientific rigor and social responsibility.
- Stewardship: We focus on improving the health of future generations.
- Outreach and Connectedness: We strive to empower communities to think critically about their well-being through nutrition and physical activity.
- Inclusiveness: We embrace diversity and its power.
- Translation: We put discovery and knowledge on a path toward improved human health and wellness.
- Entrepreneurship: We have the drive and courage to boldly pursue new ideas.

NSW faculty and personnel strive to practice these values in support of graduate students interested in advancing and communicating the discovery and translation of nutritional sciences and wellness to optimize health for people in Arizona and beyond.

About This Handbook

This handbook includes information for students enrolled in the NSW Graduate Certificate in Applied Nutrition (GCAN) and the NSW Professional Science Master in Applied Nutrition—Nutrition & Wellness (PSM-NW). Both programs are offered through Arizona Online.

While we strive to ensure the accuracy of the content included in this handbook, information is subject to change. Students will be notified when changes occur to policies/procedures and other content when program personnel learn of such changes.

I. Graduate Certificate in Applied Nutrition (GCAN)

Overview[1]

The 14-unit Graduate Certificate in Applied Nutrition (GCAN) is offered through [Arizona Online](#) and is appropriate for a wide range of healthcare professionals as well as individuals who want to improve their knowledge about nutrition and wellness or want to pursue health-related careers.

The program provides flexibility to students, many of whom are working professionals, and is designed to be completed in a little as 7 months, which can be extended.[2] Table 1 highlights key program elements.

Table 1. At a Glance—GCAN (14 units)[3]

Total Units = 14		Delivery Method	Time to Completion	Cost
9 core units	5 elective (PLUS) units	Online	Can be completed in as little as 7 months (refer to footnote 2)	$650 per unit, plus fees[4]

GCAN Learning Outcomes

1. Define and describe evidence-based nutritional science research methods and apply appropriate research methods to clinical case studies and research scenarios.
2. 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.
3. Demonstrate an understanding of the metabolism and genetic interactions of the macronutrients, including application to health and disease.
4. 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.
5. 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 Academy of Nutrition and Dietetics (AND) Evidence Analysis Library.
6. 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.
7. Apply an evidence-based approach to examine medical nutrition therapy for the prevention and management of related class topics.
8. Describe the fundamentals of data collection and measurement.
9. Identify appropriate statistical models and software for quantitative data analysis.

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[1] Refer to Section III of this handbook for program policies not included in Section I.

[2] Students who start the GCAN during the summer session (5 week 1) can complete the program in 7 consecutive months. Students who start fall or spring semester require more time due to course availability. Note [Continuous enrollment](#) and [time limitation](#) policies apply.

[3] These 14 units will transfer into the Professional Science Master's—Nutrition & Wellness degree program (PSM-NW). See Section II of this handbook for information about the PSM-NW program.

[4] Refer to the [Arizona Online cost estimator](#) to calculate program costs. Students must be enrolled in a minimum of 5 units per term to qualify for [financial aid](#) (additional requirements apply). Through the [Arizona Online Corporate Initiative](#), some students may qualify for tuition reimbursement from their employer.

GCAN Admission Requirements

Minimum Education Requirements
- Bachelor of science (BS) degree in nutrition or related field or bachelor of arts (BA) degree in nutrition; BS and BA degrees must be from an accredited institution.
- Minimum cumulative 3.0 GPA.
- Undergraduate coursework in physiology and biochemistry are prerequisites for GCAN courses.

English Language Proficiency (for international/non-native speakers)
Refer to the Graduate College Admissions - [Acceptable English Proficiency Credentials](#).

Characteristics
The following characteristics are essential for success in this program:
- Self-directed, independent learner
- Able to manage time effectively
- Effective written and verbal communication
- Able to utilize a wide range of resources effectively

Application Materials & Deadlines
- Applicants apply online through the University's [GradApp portal](#).
- Materials to be uploaded into GradApp application:
  o Statement of purpose
  o Transcripts
  o Résumé
  o Names & contact information for at least 1 reference (references upload their letters into the GradApp system)
- In addition, applicants respond to several questions to help the admissions committee in their review process.
- Application deadlines:
  o Fall admission: June 1
  o Spring admission: October 1
  o Summer admission: March 1

Students must be admitted to the Graduate College prior to enrolling in courses. Refer to the Graduate College's [application requirements and procedures](#).

GCAN Transfer Credit[5]
Per Graduate College policy, coursework completed more than two years prior to admission to a certificate program cannot be transferred into the program. Students who completed GCAN-approved courses as a nondegree-seeking student may transfer up to six (6) units of GCAN-approved coursework as long as they were completed less than two years prior to GCAN admission and the courses received grades of A or B.

International students must be accepted into the GCAN program prior to enrolling in Arizona Online courses[6].

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[5] See also [Graduate College certificate requirements](#). Students should contact the GCAN coordinator to confirm GCAN-approved courses.

[6] See also [Graduate College international admission types](#).

GCAN Financial Information

Cost per unit for this certificate program is $650 plus fees[7]. As a certificate program, no federal financial aid is available. For more information, refer to the financial aid eligibility website. In addition, no funding opportunities are currently available for this program in the form of scholarships or teaching/research assistant positions.

Students in the workforce may want to explore the University's corporate partnerships information for possible tuition reimbursement from their employer.

GCAN Curriculum

The GCAN includes 9 units of core courses and 5 units of elective (PLUS) courses designed to tailor students' studies to their specific interests[8]:

CORE (9 units)	Units	Typically Offered
• NSC 509 Advanced Nutrition Metabolism and Disease	3	Summer (5week1)
• NSC 519 Advanced Applied Nutritional Sciences	3	Summer (5week 2)
• NSC 610 Nutrition & Disease	3	Fall, Spring
Electives/PLUS (5 units)		
• NSC 512 The Body Positive Concept & You	3	Fall, Spring
• NSC 522 Weight Inclusive Approach to Counseling	3	Fall
• NSC 532 Exploring Eating Disorders & Body Image	3	Summer, Fall, Spring
• NSC 540 Nutrition Interventions	3	Fall, Spring
• NSC 545 Assessment and Regulation of Human Body Composition	3	Fall
• NSC 558 Advanced Foodservice Management	3	Fall, Spring
• NSC 570 Agriculture and Food Literacy for Nutrition & Health Professionals	3	Fall, Spring
• NSC 575 Nutrigenomics for the Study of Disease Prevention and Intervention	3	Spring
• CTE 500 Principles & Philosophy of Career and Technical Education	2	Refer to Class Search, Arizona Online for terms/semesters offered
• CTE 510 Curriculum Development in Career and Technical Education	2	
• CTE 520 Classroom Instructional Development for Career and Technical Educ.	2	
• CTE 530 Career and Technical Education Student Organization Development	2	
• HPS 530 Nutrition, Health and Development	2	
• Other Arizona Online courses can be used for elective courses with GCAN director's approval	varies	varies

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[7] Additional fees apply; refer to the Arizona Online cost estimator for details.

[8] Refer to the NSW graduate courses website for course descriptions.

II. Professional Science Master in Applied Nutrition—Nutrition & Wellness Program

Overview[9]

The Professional Science Master in Applied Nutrition–Nutrition & Wellness program (PSM-NW) serves the needs of students, educators, registered dietitian nutritionists (RDN), and other health professionals interested in advanced training in the application of nutritional sciences to human health, and in the development of valuable professional skills (e.g., leadership, writing and communication skills, project management), while acquiring hands-on experience in business or the public sector.

Coursework for this 30-unit master's degree program is offered through Arizona Online. The program provides flexibility to students, many of whom are working professionals, and is designed to be completed in 18 months, which can be extended.[10] Table 2 highlights key program elements.[11]

Table 2. At a Glance—PSM-NW (30 units)[12]

Total Units = 30			Delivery Method	Time to Completion	Cost[13]
12 core units	7 capstone units	11 elective (PLUS) units	Online	Less than 2 years (refer to footnote 9)	$650 per unit, plus fees

PSM-NW Learning Outcomes

1. Critically evaluate nutrition sciences research and demonstrate knowledge of researchmethods and statistics.
2. Apply evidence-based nutrition concepts to a professional setting, i.e., clinical, communication, education, and industry.
3. Demonstrate professional interpersonal skills including communication, collaboration, and leadership.

PSM-NW Admission Requirements

Minimum Education Requirements

- Bachelor's degree in nutrition or similar field from an accredited institution with minimum cumulative 3.0 GPA. If degree is in a field other than nutrition, coursework in the following subjects is required for admission—course descriptions may be requested:

  Physiology – 3-4 units, equivalent to UA 200-level or higher courses, such as:
  PSIO 201 or 202 – Human Anatomy and Physiology 1 or 2 (4 units each)
  PSIO 305 – Integrative Systems Physiology (3 units)
  PSIO 380 – Fundamentals of Human Physiology (4 units)

  Biochemistry – 3 units, equivalent to UA 200-level or higher courses, such as:
  BIOC 384 – Foundations in Biochemistry (3 units)
  BIOC 385 – Metabolic Biochemistry (3 units)

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[9] Refer to Section III of this handbook for program policies not included in Section II.

[10] Time to degree completion varies depending on course availability, program start term, and a student's personal circumstances. Note Continuous enrollment and time-limitation policies apply.

[11] This degree does not lead to the registered dietitian nutritionist (RD/RDN) certification. Refer to PSM-Dietetics program.

[12] The 14 units of the GCAN will transfer into the PSM-NW program. See Section I of this handbook for information about the GCAN program.

[13] Refer to the Arizona Online cost estimator to calculate program costs. Students must be enrolled in a minimum of 5 units per term to qualify for financial aid (additional requirements apply). Through the Arizona Online Corporate Initiative, some students may qualify for tuition reimbursement from their employer.

Nutrition – 6 units:
3 units, equivalent to UA 100-level or higher <u>nutrition courses</u>, such as:
      NSC 101 – Introduction to Human Nutrition (3 units)
      NSC 170C1 – Nutrition, Food, and You (3 units)
3 units, equivalent to UA 200-level or higher <u>nutrition courses</u>, such as:
      NSC 275 – Fundamentals of Precision Nutrition and Wellness (3 units)
      NSC 301 – Nutrition and the Life Cycle (3 units)
      NSC 308 – Nutrition and Metabolism (3 units)

<u>English Language Proficiency (for international/non-native speakers)</u>
Refer to the Graduate College Admissions—<u>Acceptable English Proficiency Credentials</u>.

<u>Characteristics</u>
The following characteristics are essential for success in this program:
- Self-directed, independent learner
- Able to manage time effectively
- Effective written and verbal communication
- Able to utilize a wide range of resources effectively

<u>Application Materials & Deadlines</u>
- Applicants apply online through the University's <u>GradApp portal</u>.
- Materials to be uploaded:
  o Statement of purpose
  o Transcripts
  o Résumé
  o Names & contact information for at least 2 references (references upload their letters into the system)
- In addition, applicants respond to several questions to help the admissions committee in their review process.
- Application deadlines:
  o Fall admission: June 1
  o Spring admission: October 1
  o Summer admission: March 1

Transfer Credit[14]
Students who complete PSM-NW-approved courses[15] as a nondegree-seeking student may transfer up to six (6) units of PSM-NW-approved coursework as long as they were completed less than two years prior to PSM-NW admission and the courses received grades of A or B.

International students must be accepted into the degree program prior to enrolling in Arizona Online courses[16].

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[14] See also <u>Graduate College transfer credit policy</u> for master's degrees.

[15] Students should contact the PSM-NW coordinator to confirm PSM-NW-approved courses.

[16] See also <u>Graduate College international admission types</u>.

PSM-NW Financial Information[17]

Cost per unit for this degree program is $650 plus fees[18]. Financial aid and scholarships may be available. The PSM-NW does not offer teaching assistant (TA) or research assistant (RA) opportunities.

Financial Aid
To qualify for financial aid, students must be enrolled in at least five (5) units per semester/term. Refer to these website for more information: Financial Aid Eligibility, Apply for Aid: Arizona Online, and Types of Aid: Graduate and Professional Student Funding.

Scholarships
Various scholars ships may be available to PSM-NW students. The University utilizes Scholarship Universe, an advanced scholarship management system. Refer to Types of Aid: Scholarships for more information.

Graduate College
Refer to the Graduate College website for funding/financial information. The Graduate & Professional Student Council lists several sources of grant funding that PSM-NW students may be eligible to pursue.

NSW
The NSW often recruits PSM graduate students on an as-needed basis to work as paid PSM Graders to assist undergraduate course instructors with grading assignments. Eligibility and other requirements include:
- enrolled in a minimum of 6 units
- work 9 hours per week during the semester/term
- maintain frequent communication with the course instructor
- meet at least once per week with the instructor to review grading needs
- complete a timesheet every two weeks during employment

The PSM-NW coordinator contacts PSM students when opportunities are available. For more information, contact the PSM-NW coordinator.

Other
Students who are working may want to explore the University's corporate partnerships information for possible tuition reimbursement from their employer.

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[17] Refer to Office of Scholarships and Financial Aid for full details.

[18] Additional fees apply; refer to the Arizona Online cost estimator to estimate costs.

PSM-NW Curriculum

The PSM includes 12 units of core courses, 7 units of capstone courses, and 11 units of elective (PLUS) courses[19]:

CORE (12 units)	Units	Typically Offered
• NSC 509 Advanced Nutrition Metabolism and Disease	3	Summer (5 wk 1)
• NSC 519 Advanced Applied Nutritional Sciences	3	Summer (5 wk 2)
• NSC 562 Professional Ethics & Best Practices in Nutrition Educ. & Counseling Note: Students may substitute ALC 522 Communicating Knowledge in Agriculture & Life Sciences (3 units, fall) or GHI 514 Intercultural Communication for Health Sciences for NSC 562 (3 units, fall). Students who choose this option must still fulfill the 11 units of elective/PLUS units.	3	Summer (10 wk)
• NSC 610 Nutrition & Disease OR NSC 535 Advanced Clinical Nutrition[20]	3	Fall, Spring
Capstone Courses (7 units)		
• NSC 597 Capstone Prep	1	Fall, Spring
• NSC 698A Capstone I	3	Summer, Fall, Spring
• NSC 698B Capstone II	3	Summer, Fall, Spring
Electives/PLUS (11 units)		
• NSC 512 The Body Positive Concept & You	3	Fall, Spring
• NSC 522 Weight Inclusive Approach to Counseling	3	Fall
• NSC 532 Exploring Eating Disorders & Body Image	3	Summer, Fall, Spring
• NSC 540 Nutrition Interventions	3	Fall, Spring
• NSC 545 Assessment and Regulation of Human Body Composition	3	Fall
• NSC 558 Advanced Foodservice Management	3	Fall, Spring
• NSC 570 Agriculture and Food Literacy for Nutrition & Health Professionals	3	Fall, Spring
• NSC 575 Nutrigenomics for the Study of Disease Prevention and Intervention	3	Spring
• CTE 500 Principles & Philosophy of Career and Technical Education	2	Check Class Search, Arizona Online for terms offered
• CTE 510 Curriculum Development in Career and Technical Education	2	
• CTE 520 Classroom Instructional Development for Career and Technical Educ.	2	
• CTE 530 Career and Technical Education Student Organization Development	2	
• HPS 530 Nutrition, Health and Development	2	
• Other Arizona Online courses can be used for elective courses with program director's approval.	varies	varies

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[19] Refer to the NSW graduate courses website for course descriptions.

[20] NSC 535 is for students entering the program with RDN status or concurrently completing a dietetic internship.

III. GCAN and PSM-NW Policies, Procedures, Guidelines

Unless otherwise noted, the following policies apply to both the GCAN and PSM-NW programs. Students are also expected to review and be familiar with the [Graduate College policies](#).

New-Student Orientation
Newly admitted students are required to attend a brief orientation prior to the start of their first-semester courses. The orientation provides students with important information and affords them the opportunity to ask questions. The graduate programs coordinator contacts new students to let them know when the orientations will be scheduled.

Advising
The graduate programs coordinator typically meets with students 1 to 2 times per term to assist students with basic questions about their program and to help students stay on track in completing program requirements. In addition, the coordinator shares University information (typically emails) with students as it is received. While the coordinator can respond to some course-specific questions, students are generally advised to speak with their course instructors. NSW faculty and personnel who work with these graduate programs encourage students to communicate with them on a regular basis to ensure they are making adequate progress toward their degree.

In some instances, students may need more time than expected to complete their program. In such cases, students should contact the coordinator to discuss their plans so that they maintain their student eligibility status.

Program Progression[21]
Upon acceptance, the typical progression is as follows:
Pre-Term/Semester 1
- Create NetID and student email account (see NetID and Email section below)
- Orientation: Via Zoom, a few weeks prior to the start of the first term/semester
- Registration: Enroll in term/semester 1 courses

Term/Semester 1
- GradPath (see sections that follow): Complete GradPath Responsible Conduct of Research verification, start Plan of Study
- Meetings: 1-2 check-in meetings with the program coordinator
- Registration: Enroll in term/semester 2 courses

Term/Semester 2
- GradPath: Continue working on Plan of Study
- Meetings: 1-2 check-in meetings with the program coordinator
- Registration: Enroll in term/semester 3 courses
- Capstone site: Communicate with possible sites

Term/Semester 3
- GradPath: Continue working on Plan of Study
- Meetings: 1-2 check-in meetings with the program coordinator (or as needed)
- Registration: Enroll in term/semester 4 courses
- Capstone site: Confirm capstone site

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[21] Progression will vary depending on the term in which the student begins their program. "Capstone site" and "Committee Appointment form" apply only to PSM-NW students.

Terms/Semesters 4 & 5
- GradPath: Complete Plan of Study and Committee Appointment form
- Meetings: Check-in meetings with the program coordinator as needed
- Registration: Enroll in any remaining courses
- Capstone site: Complete capstone project
- Certificate/Degree audit: Graduate Counselor audits GradPath entries to confirm graduation eligibility
- Graduation!

NetID and Email

The University NetID is the personal identifier for a number of online services, including email and UITS computing accounts (UAConnect), UAccess account, D2L (learning management system), and University site-licensed software. Students can set up their NetID and find related information on the UA NetID website. Refer to the IT Support website for assistance.

A student email account is created automatically with the NetID. Students receive University notifications of tuition, bills, etc., via this email account. Students should use their this account for communication with their instructors, faculty, and staff. The format is *YourNetID@arizona.edu.* The email account is provided by the Google G Suite for Education, which provides access to Google's full suite of applications. Details are available on the UA Google Workspace website.

CatCard

The CatCard is the official student identification card. Features include a digitized photo & signature, Contactless SmartChip, ISO number, and magnetic strip. Online students are not required to obtain a CatCard, but there are many benefits, such as using the card to obtain student discounts. To learn more, see the CatCard website.

Course Registration

For guidance on how to register for classes once you are admitted to the program, refer to the Office of the Registrar website. Appendix 2 in this document provides sample schedules for both programs.

Academic and Enrollment Policies

NSW policy requires that students hold final responsibility for being aware of and responding to all NSW, Graduate College, and University policies/procedures, requirements, formats, and deadlines as they pertain to progression toward and completion of their degree program. Students may contact the GCAN/PSM-NW coordinator for guidance and assistance. Students are expected to review and be familiar with Graduate College academic and enrollment policies:

Academic Policies
- Academic Probation
- Code of Academic Integrity
- Discrimination and Sexual Harassment
- Extension of Time to Complete Degree
- Grievance Policy

- Minimum Academic Requirements
- Retroactive Withdrawal
- Satisfactory Academic Progress
- Time to Degree
- Withdrawal From the University

Enrollment Policies

A few selected policies are summarized in this section.

Student Responsibilities and Professional Conduct

The Arizona Board of Regents sets the standards of behavior for University students. The Student Code of Conduct exists to create a safe and healthy environment for all University students, faculty, and staff. In addition, the students are expected to abide by standards of integrity and ethical behavior set forth in the Code of Academic Integrity.

Incomplete Policy

Students earning a grade of Incomplete (I) for a course should submit a **completed/signed** Report of Incomplete Grade form to the program coordinator for inclusion in their student files. Refer to the Incomplete information on the Registrar's website. Incomplete grades should be completed in a timely manner and are submitted at the discretion of the course instructor.

Remediation Policy

Students must pass all coursework with a grade of C or better for the units to count toward the required 30 units of the degree. An overall GPA of > 3.0 in the programs is required for graduation.

Students who fall below 3.0 GPA in a semester/term are issued a Notice of Academic Probation from the Graduate Student Academic Services unit in the Graduate College. 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 date by which such actions must be taken. This notification will be copied to the Graduate College.

The Graduate College has established guidelines that must be followed 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.

Students should refer to the Graduate College's full set of Academic Policies to review policies pertaining to graduate students.

Discrimination and Sexual Harassment

Students who believe that they have experienced discrimination or sexual harassment should contact the Office of Institutional Equity. Students are referred to an individual with expertise in these areas for confidential advice on handling the situation or filing a written complaint. Students with disabilities who would like information on University policies with regard to the Americans with Disabilities Act (ADA) should contact the University's Disability Resource Center (DRC) at (520) 621-3268.

GradPath Degree-Audit System

The Graduate College requires all students to complete and submit information via the Graduate College's GradPath system to document their progress in their selected program as part of their path toward graduation. Students access GradPath using their UAccess account. Per Graduate College policy, students' degrees will not be awarded until they have submitted their GradPath forms. Students are strongly advised to complete these requirements as soon as possible to expedite the approval process through the SNSW and Graduate College approval units. The GradPath website provides information on how to access GradPath, along with student FAQs (frequently asked questions).

GradPath forms—GCAN

GCAN students will see these required GradPath forms in their accounts:

- Responsible Conduct of Research statement acknowledgment (see also the Research, Innovation & Impact website for Compliance Training information).
- Plan of Study

CERTG - Applied Nutrition (Active in Program)		
Responsible Conduct of Research Statement (APNTRCRTG)	View Current	ⓘ
Plan of Study (APNTRCRTG)	View Current	ⓘ

GradPath forms—PSM-NW

PSM-NW students will see these required GradPath forms in their accounts:

- Responsible Conduct of Research statement acknowledgment (see also the Research, Innovation & Impact website for Compliance Training information).
- Plan of Study
- Master's/Specialist Committee Appointment form
- Master's/Specialist Completion Confirmation – the program coordinator completes this submission

PSM - Applied Nutrition (Active in Program)		
Responsible Conduct of Research Statement (ANPSM)	View Current	ⓘ
Plan of Study (ANPSM)	View Current	ⓘ
Master's/Specialist Committee Appointment Form (ANPSM)	View Current	ⓘ
Master's/Specialist Completion Confirmation (ANPSM)	View Current	ⓘ

## D2L (Desire2Learn) Learning Management System

D2L provides instructors and students with an online space for traditional classroom courses, online courses, and hybrid courses. Students access D2L with their UAccess account. Each course has its own D2L workspace that includes:

- Course syllabus
- Course materials and resources
- Assignments
- Grades
- List of classmates
- Online discussions
- Assessments (quizzes, tests, etc.)

D2L also provides access to such tools as ZOOM, Panopto, VoiceThread, and Examity. You can access D2L via the D2L website (UA NetID required to login), which includes tech support information. After logging into D2L, students may access the "Launch Pad: Student Resource Hub" course, which includes various resources for online students (see Figure 1 below). Refer to the D2L Consulting website for additional guidance and support.

Note that files submitted in D2L must be Microsoft Office compatible (i.e., MS Word) in PDF format. Other file types (i.e., PAGES) will not be accepted. University students can download Microsoft Office 365 for their use. Refer to the UA Bookstore website for details. Other software is available to students for free or a discounted fee. See the University Software Licensing website for details.

Figure 1. D2L Launch Pad Course
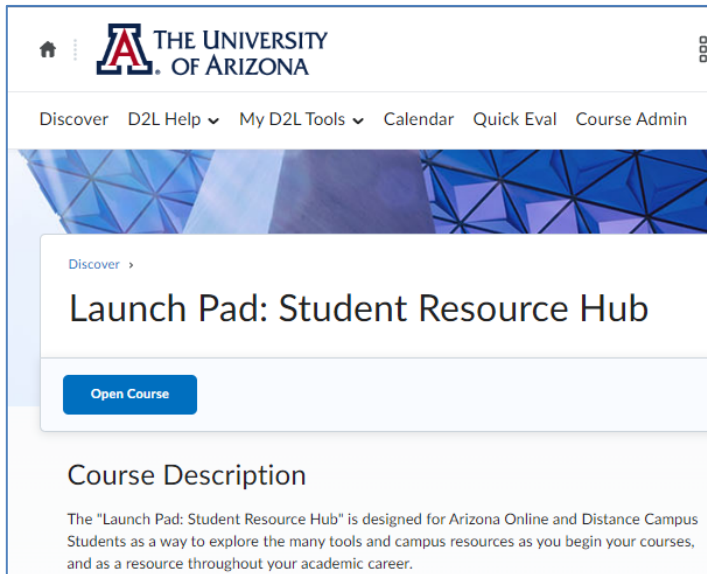
Students also should review the Arizona Online Technical Requirements website for additional technical support for their online education.

University of Arizona Libraries

The University of Arizona libraries provide resources, services, and expertise to the University and the local community. Find out more on the University Libraries website. The Library team has set up a PSM Nutrition website for PSM students. This website has the contact information for the librarian for the College of Agriculture and Life Sciences as well as links for information relevant to graduate students and to online students.

Student Support and Resources

The Graduate College provides various types of support resources to new and current students. Refer to the Graduate College's New and Current Students website.

The Student Success & Retention Innovation website provides information on Support, Opportunity, Success (SOS) services. SOS is for University students who find themselves facing questions or issues and are unsure about where to go for answers. Whether you're brand-new to campus or have been around for a while, just reach out to SOS for round-the-clock support.

The Disability Resource Center (DRC) website supports and advises on inclusive learning and working environments and facilities, including assistive technology, throughout all aspects of the University.

The Graduate & Professional Student Council (GPSC) serves all graduate students. View the GPSC website for student resources. Students can sign up for the GPSC newsletter for timely information regarding funding opportunities, employment opportunities, trainings, social events, and more.

Campus Health Resources

Arizona Online students can receive healthcare services from Campus Health, including mental health services. View all the services offered to Online students on the Campus Health website.

General Catalog

Students will find comprehensive information related to all University academic programs on the Catalog website.

Appendix 1. Sample Programs of Study[22]

For course descriptions, see Appendix 2.

GCAN Sample, Fall Semester Start

Following is a sample program of study based on a fall-semester start. When planning their program of study, students need to consider the number of units they are able to manage each semester/term and when courses are offered (see Class Search).

Required total units = 14 units as follows: Core = 9 units as listed; Elective/Plus = 5 units

Fall 2023: Term 1			
Course	**Units**	**Course Type**	**Typically Offered**
NSC 610 Nutrition and Disease (fall, spring)	3	Core	Fall, Spring
Elective (PLUS) course 1	2-3	Elective/PLUS	Varies
Subtotal	**5-6**		
Spring 2024: Term 2			
Course	**Units**	**Course Type**	**Typically Offered**
Elective (PLUS) course 2	3	Elective/PLUS	Varies
Subtotal	**3 (8-9)**		
Summer 2024: Term 3			
Course	**Units**	**Course Type**	**Typically Offered**
NSC 509 Adv Nutrition Metabolism	3	Core	Summer (5w1)
NSC 519 Adv Applied Nutritional Sciences	3	Core	Summer (5w2)
Subtotal	**6 (14-15)**		
Total Units	**14-15**		

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[22] Students may contact the graduate program coordinator for a more comprehensive list of possible elective/PLUS courses.

PSM-NW Sample, Fall Semester Start

Following is a sample program of study based on a fall-semester start. When planning their program of study, students need to consider the number of units they are able to manage each semester/term, whether or not they will apply for financial aid (which requires 5 units per term), and when courses are offered (see Class Search).

- Required total units = 30 units as follows:
  - Core = 12 units as listed; Capstone = 7 units as listed; Elective/Plus = 11 units

Fall 2023: Term 1 (Aug-Dec)			
Course	**Units**	**Course Type**	**Typically Offered**
NSC 610 Nutrition and Disease (fall, spring) Note: Students who are currently enrolled in a dietetic internship or hold the RDN credential may enroll in NSC 535 Advanced Clinical Nutrition instead of NSC 610.	3	Core	Fall, Spring
Elective (PLUS) course 1	3	Elective/PLUS	Varies
Term 1 total	**6**		
Spring 2024: Term 2 (Jan-May)			
Course	**Units**	**Course Type**	**Typically Offered**
NSC 597 Capstone prep (fall, spring only)	1	Capstone	Fall, Spring (7w1)
Elective (PLUS) course 2	3	Elective/PLUS	Varies
Elective (PLUS) course 3	3	Elective/PLUS	Varies
Term 2 total	**7**		
Summer 2024: Term 3 (courses listed are only offered during the summer session) (May-Aug)			
Course	**Units**	**Course Type**	**Typically Offered**
NSC 509 Adv Nutrition Metabolism	3	Core	Summer (5w1)
NSC 519 Adv Applied Nutritional Sciences	3	Core	Summer (5w2)
*NSC 562 Profes Ethics & Best Prac. Nutr. Ed. & Counseling	3	Core	Summer (10w)
Term 3 total	**9**		
Fall 2024: Term 4 (Aug-Dec)			
Course	**Units**	**Course Type**	**Typically Offered**
NSC 698-A Capstone I	3	Capstone	Fall, Spring, Summer (7w1)
NSC 698-B Capstone II	3	Capstone	Fall, Spring, Summer (7w2)
Term 4 total	**6**		
Spring 2025: Term 5 (Jan-May)			
Course	**Units**	**Course Type**	**Typically Offered**
Elective (PLUS) course 4	2-3	Elective/PLUS	Varies
Term 5 total	**2-3**		
Total Units	**30-31**		
*Note: NSC 562 is only offered during summer session. Students may substitute either ALC 522 or GHI 514, which are typically offered fall semester only, for NSC 562. Students should contact the PSM-NW coordinator for more information prior to enrollment.			

Appendix 2. Course Descriptions

Nutritional Sciences (NCS) Courses

Note: See also NSC Graduate Courses and Class Search for additional NSC graduate courses and descriptions.

NSC 509 Advanced Nutrition Metabolism and Disease (3) This class will review the multi-facetsof 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.

NSC 519 Advanced Applied Nutritional Sciences (3) This course will advance understanding ofresearch design, methods, and implementation, interpretation of research findings, and advances in nutrition science research for selected chronic diseases.

NSC 535 Advanced Clinical Nutrition (3) This course will review the nutrition care process and the application of nutrition science principles in the selection of the appropriate medical nutrition therapies related to gastrointestinal disorders, cancer, diabetes mellitus, neurological impairment, renal disease, wound healing, and critical illness. The role that integrative medicine may play will also be reviewed. A case-based approach will be utilized to foster analytical and critical thinking skills related to designing nutrition prescriptions and interventions as well as redesigning nutrition care plans related to monitoring and evaluation. This course will cover disease prevention and management utilizing lifestyle and nutrition therapies including oral diet and nutrition support.

NSC 610 Nutrition & Disease (3) The overall goal of this class is to improve students' understanding of how diet influences health and chronic disease risk by examining the biochemical and physiological effects of specific dietary components and overall dietary patterns. This course will use current research materials and in-depth examples—or case studies—of how nutrition can impact diabetes, inflammatory diseases, cardiovascular disease, and cancer. By learning these prevalent examples, students will gain the ability to develop new areas of expertise in response to specific nutrition and disease challenges that they encounter in their careers and/or research. Review articles and primary research papers will be made available on D2L to supplement textbook material and provide examples of real-world applications for lecture content. This course will emphasize current research as it applies to material covered in class.

NSC 562 Professional Ethics and Best Practices in Nutrition Education and Counseling (3) Students will learn and implement inclusive best practices in nutrition education and counselingto serve diverse audiences in preparation for supervised experiential learning in food, nutrition,and healthcare settings. This course will touch on various theories and best practices in culturally responsive education, counseling, leadership, and communication to help students demonstrate the professional competency required for dietetics professionals by the Accreditation Council for Education in Nutrition and Dietetics (ACEND). Students will complete the course with a deeper understanding of the Code of Ethics for the Profession of Nutrition and Dietetics and practice applications that align with the "core values of customer focus, integrity, innovation, social responsibility, and diversity," including the influence of personal identities and biases on practitioner interactions. Students will complete written and oral deliverables, including self-assessments, reflections, case studies, and targeted education materials. Students will also begin the process of developing their professional digital portfolios. **Note: Students may substitute one of the following two courses for NSC 562 – contact the program coordinator to discuss:**

- ALC 522 Communicating Knowledge in Agriculture and the Life Sciences (3) Principles and processes of

knowledge diffusion and methods of transferring appropriate technology to user/clientele groups. Community effectively within organizations. Graduate level requirementsinclude an additional report.

- GHI 514 Intercultural Communication for Health Sciences (3) This course will examine how culture influences health communication. Students will gain an understanding of intercultural communication theories and will be able to apply them to become more effective health communicators. Students will gain skills to identify different variables as they relate to intercultural encounters such as values, assumptions, context, and audience. A variety of local and global contexts will be explored including health literacy, health promotion campaigns, healthcare interactions, global health collaborations, health identity, health research, health policy, and patient/provider interactions.

NSC 597 Capstone Prep Workshop (1) The Capstone Workshop Prep course is designed to helpstudents: identify potential sites for their capstone courses, develop talking points when discussing the capstone with potential sites, obtain the required affiliation requirements with their site, build knowledge of research requirements through completion of CITI trainings and further develop presentation and writing skills.

NSC 698A Capstone I (3) Capstone I consists of 135 hours of practical professional training with a sponsoring agency/facility. Students will conduct a needs assessment and propose a topic for final project to be completed in NSC 698B. Students will write a progress report which will be presented to the class.

NSC 698B Capstone II (3) Capstone II consists of 135 hours of practical professional training with a sponsoring agency/facility that culminates the Professional Science Master program and produces a final project. Students will develop a final report on the project objectives, methods,and outcomes. The project will be presented to the class in a presentation form, and a poster will also be produced.

Elective/PLUS Courses

PLUS (elective) courses allow students to broaden their professional knowledge and/or professional development goals. Students should make sure their GradPath Plan of Study reflects the PLUS courses that they have or will complete for their program.

Students should check Class Search to determine when their selected PLUS courses are offered. The course list below includes courses that PSM-NW students have taken (in green), or courses that might be of interest to currently enrolled students. **The list is not all-inclusive.** Students who find other courses of interest that are not listed below will need permission from PSM Director Dr. Kayle Skorupski prior to enrollment.

PLUS Courses—Nutrition
NSC 515L Advanced Sports Nutrition Lab (1) NSC 415/515 Lab will use nutritional science and physiology to focus on sport specific menu and food needs for athletes. Content will include menu development and analysis of various menus, recipes and cookbooks designed for athletes. This will encompass designing specific food products and menus that are appropriate for specific sport activities that have special nutritional challenges during training and competition. This course will also include training on dietary and body composition assessment tools, allowing students to use that knowledge while assessing both body composition and food intake of an athlete. Graduate students will be required to complete an additional project described in syllabus. **Requires concurrent enrollment with NSC 515R.**

NSC 515R Advanced Sports Nutrition (3) NSC 415R/515R will use nutritional science and physiology to focus on sport specific competition and training nutritional challenges and issues. Content will include the nutritional and physiological requirements of various sports; sport specific cultural influences that affect attitudes towards nutrition; and nutritional challenges faced by athletes training and competing in different sports. This course will also include a review of dietary intake methodologies; body composition assessment; diet analysis; and training table and residence hall menu development and assessment.

Graduate students will be required to complete a research project described in syllabus. **Requires concurrent enrollment with NSC 515L.**

NSC 540 Nutrition Interventions (3) This course will provide students with tools and competencies for developing, implementing, and evaluating nutrition intervention programs. Course topics include evidence-based behavior change, social determinants of health and wellness, nutrition screening and tools for community settings, using nutrition surveillance data to inform program development, and cultural awareness/bias recognition. Course skill-building will focus on problem identification, conducting needs assessments, developing evidence-based intervention strategies, evaluating program implementation and effectiveness (including planning a budget and seeking/obtaining funding support). Students will select a semester-long course project based on their personal interests and that of a collaborating community entity. Students completing this course will be able to apply knowledge of social, psychological and environmental aspects of eating and food to formulate food and nutrition services that meet the needs of individuals, communities, and populations.

NSC 545 Assessment and Regulation of Human Body Composition (3) 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.

NSC 558 Advanced Food Service Management (3) This course will provide students with knowledge, tools and competencies related to foodservice systems management to prepare them to lead in institutional foodservice management and entrepreneurial roles. Course topics include recipe/menu development and modification; supply and procurement; food production and service systems; sanitation and safety; quality management; management tools, functions, skills; resource management; and information management and reporting.

NSC 570 Agriculture and Food Literacy for Nutrition & Health Professionals (3) This course will provide students with knowledge, tools and competencies related to foodservice systems management to prepare them to lead in institutional foodservice management and entrepreneurial roles. Course topics include recipe/menu development and modification; supply and procurement; food production and service systems; sanitation and safety; quality management; management tools, functions, skills; resource management; and information management and reporting.

NSC 575 Nutrigenomics for the Study of Disease Prevention & Intervention (3) Nutrigenomics is the application of genomics to human nutrition. This online course will explore relevant technologies, genetics & nutrition. Designed by researchers in colleges & 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.

PLUS Courses—Non-Nutrition
ACBS 527R General Mycology (3) An exploration of the diversity of fungi and fungus like organisms covering general biology and roles as pathogens (of humans and plants), saprobes and symbionts. Fungi as models for eukaryotic molecular research and their uses in industry will be covered. Graduate-level requirements include a term paper 10 pages in length to allow a more in depth exploration of a topic in fungal biology. Also required is a 30 minute oral presentation on a topic of choice for 100 points of grade.

AED 617 Research, Methods and Project Design (3) Principles and practices of planning, designing, conducting and reporting research and scholarly activities in education, extension, other social science disciplines, and agricultural technology management.
AED 621 Program Planning and Evaluation (3) Developing and evaluating programs in teaching and

extension; situation analysis, objectives, policies, content, procedures, and evaluative criteria.

AED 697C Workshop on Teaching at the College Level (3) Workshop that deals with the practical applications of teaching/learning theories at the college level as they relate to instructional methodologies, strategies, and planning. This will include instructional objectives, content organization, and assessment of learning experiences. This workshop will involve the exchange of ideas, and will focus on practical methods, skills and principles.

ALC 510 Entrepreneurial Leadership in Agriculture and the Life Sciences (3) This course is an exploration of the principles and practices of entrepreneurial leadership, and the application of such principles and practices within agricultural and rural communities, the Cooperative Extension system, educational organizations and systems, agricultural agencies at the local, state, and federal levels, and agricultural enterprises and life sciences industries. Emphasis is placed on the knowledge and skills required to effectively lead change within and across organizations, communities, and settings that intersect the agricultural and life sciences fields. Graduate students will thoroughly outline a lesson plan (learning objectives, measurable learning outcomes, instructions methods, etc.) specific to entrepreneurial leadership topic to be delivered to an audience of adult learners within a non-formal (or informal) community setting.

ALC 511 Principles and Applications of Organizational Innovation (3) This course provides an introduction to the principles and practices central to organizational innovation and leadership. Frameworks and methods for designing, developing, and implementing innovation within agricultural organizations and industrial settings and environments will be explored. The overarching goal of the course is to equip students with the perspective and skill base necessary to be leaders of innovation and change within agriculture organizations that extend across educations, public, governmental, and industrial settings and environments. Graduate-level requirements include a semester long case study that will culminate in both a term paper and in-class presentation. Additionally, the graduate level requirements will include three short papers that critique scholarly research on topics relevant to organizational change and innovation across the agricultural fields. Lastly, graduate students will be expected to make meaningful contributions to in-class discussions.

ALC 522 Communicating Knowledge in Agriculture and the Life Sciences (3) Principles and processes of knowledge diffusion and methods of transferring appropriate technology to user/clientele groups. Community effectively within organizations. Graduate level requirements include an additional report. **Note: Students may use ALC 522 as a PLUS course only if they have not used it to meet NSC 562 course requirement.**

BME 578/SIE 578 Artificial Intelligence for Health and Medicine (3) The practice of modern medicine in a highly regulated, complex, sociotechnical enterprise is a testament to the future healthcare system where the balance between human intelligence and artificial expertise will be at stake. The goal of this course is to introduce the underlying concepts, methods, and the potential of intelligent systems in medicine. We will explore foundational methods in artificial intelligence (AI) with greater emphasis on machine learning and knowledge representation and reasoning, and apply them to specific areas in medicine and healthcare including, but not limited to, clinical risk stratification, phenotype and biomarker discovery, time series analysis of physiological data, disease progression modeling, and patient outcome prediction. As a research and project-based course, student(s) will have opportunities to identify and specialize in particular AI methods, clinical/healthcare applications, and relevant tools.

CTE 500 Principles & Philosophy of Career and Technical Education (2) Understanding the historical social and economic values of career and technical education through investigation of federal laws, and state policies. As well as, developing a symbiotic philosophy with administration, theories, and principles in mind in regards to programs in the secondary school. CTE 500 Students will be required to complete a Literature

Review in addition to course modules 1 - 4 which is required for the Undergraduate Student.

CTE 510 Curriculum Development in Career and Technical Education (2) Creating an understanding for the development of robust classroom curriculum, aligned with Arizona State and CTE standards, and incorporating learning devices geared for student success. This development process will focus on the total program within CTE, and assist in planning year- long curriculum maps with an emphasis on writing objectives, cross walking standards, and elaboration on objective building for full lesson creation and implementation. Lesson content and teaching methods will be tailored into the next course of CTE 420/520. CTE 510 students will be required to complete a literature review in addition to course modules required for the undergraduate student in CTE 410.

CTE 520 Classroom Instructional Development for Career and Technical Education (2) Implementing principles of teaching and learning based on classroom instruction objectives, as well as development of content for lesson planning. Based on contextual needs within specific CTE programming, methodology, instruction techniques, and assessments will be developed. Basic classroom management skills will also be compared. CTE 520 students will be required to complete and submit a literature review as part of their course requirements in addition to course module completion.

CTE 530 Career and Technical Education Student Organization Development (2 units) This course focuses on the Career and Technical Student Organizational aspect of the total CTE program. Understanding your role as an advisor will assist you in carrying out the program of work for your organization, management of the organization, and implementing pivotal leadership training to ensure student success in developing an effective youth organization. CTE 530 students will be required to complete and submit a literature review as part of their course requirements in addition to course module completion.

EHS 520 Environmentally Acquired Illness (3) Illnesses related to environmental exposures are on the rise but frequently misdiagnosed due to a lack of understanding of the complexities of multiple hazard exposures and variable health outcomes. This course provides an overview of common and emerging Environmentally Acquired Illnesses (EAIs) and explores the multitude of hazards, conditions, and predisposing factors related to human disease. Students will learn how to identify gaps in the current model of patient evaluation and treatment. In addition, they will critique current research design and gain hands on experience in developing a systems approach to understanding, evaluating, and communicating the impact and control of EAIs relative to human health.

EHS 575 Environmental and Occupational Health (3) Course emphasizes health hazard sources, methods to identify & evaluate them, and framework used to effect hazard control. Students will evaluate public health issues, understand research designs, identify and evaluate factors important to the development of monitoring programs.

EHS 539A Outbreaks and Environmental Biology: Then and Now (3) This course will examine historical and present day outbreaks in regards to the environmental microbiology of pathogens. Different pathogens control interventions that were used to mitigate the outbreaks will also be explored. Graduate-level requirements include a more in-depth analysis of topics, more participation in online discussion groups, and additional test questions.

ENGL 514 Advanced Scientific Writing (3) Preparation of professional literature for publication. Graduate level requirements include longer and more detailed papers.

ENVS 508 Scientific Writing for Environmental, Agricultural and Life Sciences (3) Effective writing is a valuable tool for any student aspiring for a career in the Environmental, Agricultural, and Life Sciences. This course will cover in-depth technical writing skills needed for scientific writing success, ranging from how to perform comprehensive reviews of the scientific literature, to performing peer reviews of the writing of

fellow students. Ultimately, completion of this course will improve students' ability to write technical reports, theses and dissertations, and journal articles. Graduate-level requirements include work on theses, dissertations or journal articles.

FCSC 513A/LAW/PHIL 513A The Ethical Entrepreneur (3) Students undertake an ethical and economic assessment of the institutions that make up a marketplace. Acquire powerful ideas for discussing the daily news with students or colleagues and equipping them with analytical skills for addressing ethical issues in their daily lives and in their future roles as citizens. General use of statistics, and perhaps more importantly, misleading with statistics is a topic covered. Sample topics that may be addressed include why some societies grow rich while others remain poor; why some institutions lead to corruption, waste and mutual destruction; why other institutions steer human ingenuity toward inventing ways of making fellow citizens (one's customer base) better off; the boundaries of individual ethics within the market-place; what one must do to succeed in a market society; and what one must do to deserve to succeed.

GHI 514 Intercultural Communication for Health Sciences (3) This course will examine how culture influences health communication. Students will gain an understanding of intercultural communication theories and will be able to apply them to become more effective health communicators. Students will gain skills to identify different variables as they relate to intercultural encounters such as values, assumptions, context, and audience. A variety of local and global contexts will be explored including health literacy, health promotion campaigns, healthcare interactions, global health collaborations, health identity, health research, health policy, and patient/provider interactions. **Note: Students may use GHI 514 as a PLUS course only if they have not used it to meet NSC 562 course requirement.**

GLO 535 Global Media Ethics and Diversity (3) This course will provide students with a framework to think critically about media's obligations to the public. Analyses examine ethical philosophies as they relate to both citizen-driven media and journalist professionals' roles and responsibilities in various societies and governmental systems around the world. Through case studies, readings, lectures, documentaries and individual research, students will explore ethics questions related to cultural bias, political and economic pressure, diverse representation, accuracy, privacy, national security, and other pressures on news media in countries around the world.

HPS 529 Project Design and Implementation in Global Health (3) This course will equip students with skills in conceptualizing, developing, implementing, and evaluation small-scale projects in global health and development.

HPS 530 Nutrition, Health and Development (2) This course focuses on nutritional issues of women and children in low and middle income countries. Local and international programs that combat malnutrition will be evaluated in the context of socioeconomic development and current political/economic policies and realities.

HPS 531 Contemporary Health Issues and Research (3) Designed to explore a broad spectrum of health education and health behavior issues and programs in order to evaluate their impact (or potential impact). Toward that end, we will read, review, and critique numerous research efforts that were designed to change behavior via health education and/or health behavior programs.

HPS 533 Global Health (3) Examines major health problems of underdeveloped, developed, and emerging nations. Students conduct in-depth analyses of health problems among various populations in multicultural settings, both nationally and internationally.

HPS 534 Infectious Diseases, Global Health and Development (3) This course will analyze the etiology and distribution of major tropical infectious disease, and the environmental, economic, and cultural factors that lead to their proliferation. Impact on development and global prevention initiatives will be appraised.

HPS 544 Fundamentals of Evaluation (3) Evaluation is essential to all research and service based programs. The course provides all students interested in pursuing an advanced public health degree with the fundamentals of planning and evaluation. In addition to core issues surrounding evaluation (e.g., measurement and design) the role of the evaluator in the planning and implementation phases of research and service-based public health programs is highlighted. The relationship between areas of specialization and evaluation will be a central theme throughout the course.

HPS 577 Sociocultural and Behavioral Aspects of Public Health (3) This course is an overview of significant social, cultural and behavioral issues related to public health. Major public health problems and the influences of sociocultural issues are analyzed in relation to health behavior. Readings, discussions, films, and class experiences/assignments focus on understanding the social and cultural issues that influence health-related behavior among specific populations in the southwestern U.S., North America and internationally.

INFO 517 Introduction to Digital Cultures (3) Digital information technologies shape our lives. The benefits and the possible dangers of digital information technologies will be explored from a multidisciplinary perspective, looking at the insights into our digital age from history, linguistics sociology, political theory, information science, and philosophy. Students will have opportunities for active reflection on the ways in which digital technology shapes learning and social interaction. Graduate-level requirements include different percent break-down of requirements and more stringent expectations in work produced.

INFO 533 Medical On-Line Searching (3) This course will focus on the online retrieval and evaluation of medical literature and the issues surrounding provision of timely, relevant, peer- reviewed medical information. Emphasis will be on the development of the intellectual acuity required to provide physicians, nurses, pharmacists, allied health professionals, medical researchers and consumers with targeted responses to medical queries. Current search modalities such as Evidence-Based Medicine will be covered both in readings and in class discussions.

INFO 587 Information Seeking Behaviors (3) Information-seeking theories, methods, and user behaviors will be covered in order to gain an understanding of how people seek, gather, retrieve anduse information. Information-seeking behavior draws on literature from library and information science, psychology, and communications. Graduate-level requirements include conducting a real- world experience or evaluation of information seeking behaviors in a self selected social context andinformation system. The project will include a two-page proposal of the experience due at the mid term and an online presentation to the class of the findings of the study, including; problem/issue studies, research question, data collected and analyzed, significance to the social context, and a statement of personal relationships to the topic and participants.

LIS 520 Ethical Issues in Information (3) This course presents an overview and understanding of the intractable and pressing ethical issues as well as related policies in the information fields. Emerging technological developments in relation to public interests and individual well-being are highlighted throughout the course.Special emphasis is placed on case studies and outcomes as well as frameworks for ethical decision-making.

LIS 533 Medical On-Line Searching (3) This course will focus on the online retrieval and evaluation of medical literature and the issues surrounding provision of timely, relevant, peer- reviewed medical information. Emphasis will be on the development of the intellectual acuity required to provide physicians, nurses, pharmacists, allied health professionals, medical researchers and consumers with targeted responses to medical queries. Current search modalities such as Evidence-Based Medicine will be covered both in readings and in class discussions.

MKTG 558 Health Care Marketing (3) This course provides an overview and applications of health care marketing theories and methods for health care and public health organizations. Graduate level requirements include a 20-page paper describing a marketing plan and the process used to complete it.

NURS 520 Foundations of System Leadership (3) Learners will explore basic concepts related to the health care system, professional knowledge, and quality and safety using a systems perspective. Please contact Cheryl Lacasse at clacasse@email.arizona.edu if you are interested in adding this course.

NURS 521 Evidence-Based Practice Improvement (4) Learners will analyze and apply evidence for selected areas of clinical practice to facilitate optimal patient outcomes. Evidence will be used to develop, validate, and endorse strategies for system-wide practice improvements. Please contact Cheryl Lacasse at clacasse@email.arizona.edu if you are interested in adding this course.

NURS 540 Health Promotion and Risk Reduction (4) Learners will apply conceptsof health promotion and risk reduction at the individual and interpersonal level ofcare. Emphasis will be placed on evidenced-based strategies that acknowledge patient-centered values and beliefs in the process of optimizing health and well- being. Please contact Cheryl Lacasse at clacasse@email.arizona.edu if you are interested in adding this course.

NURS 541 Population Health (4) Learners will apply concepts related assessment, surveillance, and interventions for risk reduction, disease prevention, and health promotion in populations and communities. Multiple perspectives of vulnerability (including cross cultural) will be emphasized. Please contact Cheryl Lacasse at clacasse@email.arizona.edu if you are interested in adding this course.

NURS 543 Health Information and Patient Care Technologies (3) Learners will evaluate and apply emergent health care technologies such as point of care clinicaldecisional support, telehealth/medicine, and electronic documentation that support patient-provider communication, interprofessional practice, and coordinated patient care delivery. Please contact Cheryl Lacasse at clacasse@email.arizona.edu if you are interested in adding this course.

NURS 640 Healthcare Business Dynamics (3) Learners will apply business concepts and principles across a variety of healthcare settings. Concepts includethe following: organizational structure and finance, budgeting, cost-benefit analysis, marketing, resource allocation, innovation, and entrepreneurship. Business values consistent with patient-centered care will be highlighted. Please contact Cheryl Lacasse at clacasse@email.arizona.edu if you are interestedin adding this course.

NURS 642 Health Policy and Economics (3) This course will explore history, definitions, and applications related to health policy, economics, and advocacy. Students will be prepared to discuss the complexities of health policy development, implementation, and evaluation, to engage in comparative analysis of the U.S. and international health care systems, and to understand the role of policy competency and advocacy in advanced practice nursing and nursing science.

NURS 647 Human Factors in Health Information Technology (3) This course is designed to describe the role of human factors in the design, analysis and evaluation of health information technology. The interaction between the human and the machine will be described as background to which the health information technology fits and reshapes the completion of tasks and the extent to which performance can be supported across settings. Students will begin with a focus on elements of human factors that influence performance, learn approaches to design and analysis that account for human factors and evaluate dimensions of usability and user experience applied to Health Information Technology (HIT).

NURS 653 Healing Environments and Practices (3) Learners will evaluate models of optimalhealing environments that promote personal and organizational health and well-being. Emphasis is placed on evidence-based integrative approaches that support structural and human care processes.

NURS 654 - Quality and Safety Management (4) Learners will evaluate models of optimal healing environments that promote personal and organizational health and well-being. Emphasis is placed on evidence-based integrative approaches that support structural and human care processes.

PHIL 515 Healthcare Ethics (3) This course explores many challenging moral questions related to situations encountered by healthcare professionals. For example: What rights and responsibilities come with the role of healthcare provider? Should the healthcare provider always disclose to a patient the full truth about his or her diagnosis? Should diagnosis and treatment errors be disclosed to patients? Under what circumstances is it morally permissible to break patient confidentiality? Why does moral distress arise in medical professionals who regularly deal with futility of treatment cases? Should one have absolute rights over one's body (e.g. with respect to euthanasia) or are there other moral considerations that limit such freedom? What is the proper justification for allocation of moderately scarce resources? Should everyone have an absolute right to healthcare, and who should provide access? As we explore these and many other questions, we will learn about some major moral theories along the way, with an emphasis on applying them to real world moral problems. This course will give you skills for recognizing the scope and force of an ethical conflict when it occurs and ways of becoming more reflective and open-minded about differing moral views. I also hope to provide you with the skills to cogently defend your own principles and lobby for changes in regulations when there is a perceived need. The skills acquired in philosophical argument are indispensable for engaging with the evolving moral discussions surrounding medical ethics.

PHP 521 Administrative Dimensions of Indigenous Health (3) This course will provide an introduction to state and federal administrative processes that impact Indigenous (American Indian/Alaskan Native) the delivery of healthcare and public health measures within the Indian Health Service (IHS) system. The course will further examine the legislative, organizational and operational frameworks of the IHS that will provide comprehensive and meaningful knowledge for health and/or public health professionals to implement informative policy measures to improve the health of Indigenous people through administrative frameworks.

PHP 536 Aging, Environment & Well-being (3) What does environment have to do with aging and well-being? In this course we explore the relationship between older people and their environment. In doing so we look at environment through a variety of lens, such as physical space (i.e. location), and place (location imbued with individual meaning), private versus public,as contributor versus constraint to a sense of belonging and empowerment for older persons. We will consider how factors such as models of social care, human service practices, public policy, societal attitudes, and environmental design positively or negatively impact the environmental experience of diverse older persons as they age in place. Our goal is to expand our knowledge and sensitivity to the subtleties of environmental experience for older persons and challenge us to consider how development of environmental design, social interventions, and public policy can support wellbeing and optimize the lived experience of the aging and aged.

PHP 564 Science of Health Disparities (3) This course will focus on the current knowledge and approaches used to evaluate the intersectionalities that affect health inequities. Students will be required to demonstrate a breadth of global perspectives from social and biomedical sciences required to understand health inequity injustices and the science of health disparities.

PHPM 506 Economic Foundations for Health Sciences (3) Review of economic concepts and theories which underlie economics topics typically encountered in the graduate curriculum of Public Health, Nursing, Pharmacy, and health economics courses taught in the College of Business.

PHPM 507 Health Care Economics and Policies (3) Health policy is examined from an economic perspective. Basic economic theories and their relationships to the structure and function of the U.S. health care system are explored. Alternative health care systems and heath care reforms are also evaluated. Graduate-level requirements include more weekly writing assignments and a major paper demonstrating independent research, integrate and analyze data related to a contemporary problem of health care delivery or financing.

PHPM 558 Health Care Marketing (3) This course provides an overview and applications of health care marketing theories and methods for health care and public health organizations. Graduate level requirements include a 20-page paper describing a marketing plan and the process used to complete it.

PHPM 561 Introduction to Health Care Quality and Safety (3) This course provides an overview of health care quality and safety. Students will learn quality improvement concepts and techniques and will practice the techniques in teams. Prerequisite: CPH 574 or instructor permission.

PHPM 569 Fundamentals of Health Budgeting and Financial Management (3) This course will offer a current approach to the fundamentals of budgeting and financial management, with an emphasis on non-profit health care organizations, in particular the community health sector.

PHPM 574 Public Health Policy and Management (3) Management processes/roles of public health professionals; health service organization; policy issues and resource utilization/control; human resources management; public health trends.

SIE 514 Law for Engineers/Scientists (3) Topics covered in this course include patents, tradesecrets, trademarks, copyrights, product liability contracts, business entities, employment relations and other legal matters important to engineers and scientists. Graduate-level requirements include an in-depth research paper on a current topic.

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