PROFESSIONAL SCIENCE MASTER'S IN APPLIED NUTRITION PROGRAM HANDBOOK

Nutrition & Wellness Emphasis

Summer 2021 Cohort

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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 Professional Science Master's in Applied Nutrition – Nutrition & Wellness Emphasis serves the needs of students, educators, registered dietitian nutritionists (RDNs), and health professionals interested in obtaining advanced training in the application of nutrition science to human health, and developing valuable professional skills (e.g., leadership, writing and communication skills, project management) while gaining hands-on experience in business or the public sector.

Coursework for this 30-unit master's degree program is offered **100% online** through the Arizona Online, providing maximum flexibility to students, many of whom are working professionals. The program is designed to be completed in less than 18 months, however, can be extended as needed. A minimum of five units per semester required to be eligible for financial aid.

Unlike existing master's in nutrition science programs, the Professional Science Master includes 6 credit hours of graduate level capstone during which students will work with a partner organization to complete approximately 270 hours (45 hours per unit of credit) of hands on experience that will serve as their graduate capstone project. Students will also have the opportunity to complete 9 units of PLUS coursework (elective coursework) tailored to their profession and/or professional development goals.

ADVISING
The program coordinator serves as advisor for students enrolled in the professional science master's 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.

ADMISSION REQUIREMENTS
PSM in Applied Nutrition 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.
- If undergraduate degree is in a field other than nutrition, coursework in physiology, biochemistry and previous nutrition coursework is required.
- Minimum 3.0 GPA overall in undergraduate degree or over the last 60 units of coursework.
- Additionally, because the PSM program is delivered exclusively online, the following student characteristics are essential to successfully completing the program:

- Self-directed, independent learner
- Able to manage time effectively
- Effective written and verbal communication
- 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.

Faculty	**Course(s) Taught**
Kayle Skorupski, MS, RDN-AP, CNSC, FAND Program Coordinator kayleskorupski@arizona.edu	NSC 509: Advanced Nutrition Metabolism and Disease 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
Kyle Jones, MS kylemjones@arizona.edu	NSC 501: Statistics for Applied Nutritional Sciences I NSC 502: Statistics for Applied Nutritional Sciences II
Ashlee Linares-Gaffer, MS, RDN, FAND alinares@arizona.edu	NSC 562: Professional Ethics and Best Practices in Nutrition Education and Counseling
Maria Plant, DCN, RD plant@arizona.edu	NSC 519: Advanced Applied Nutritional Sciences
Lucia Mosqueira, MS, RD lmosqueira@arizona.edu	NSC 542: Advanced Medical Nutrition Therapy NSC 610: Nutrition and Disease

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 courses prior to being admitted into the program. This does not mean that you may transfer other courses to count toward the degree. Courses taken as a non-degree seeking student that may be applied to the Nutrition & Wellness Emphasis are NSC 501, NSC 502, NSC 509, NSC 519, NSC 542/610, NSC 562. PLUS course electives also may be taken as non-degree seeking.

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 program prior to enrolling in online courses.

FINANCIAL INFORMATION

Cost per unit for the program is $650 per unit. Hourly grader positions may be available on a competitive basis. If you are interested in a grader opportunity, please contact the program coordinator. For paid grader position, students need to be enrolled in at least 6 units a semester. If there is an opportunity, you will be provided more information. No Research

Assistantship (RA) or Teaching Assistant (TA) opportunities are available for this program. Financial Aid is available, must be enrolled in at least 5 units per semester. For more information regarding financial aid eligibility please visit: https://financialaid.arizona.edu/types-of-aid/graduate

The University of Arizona utilizes Scholarship Universe, an advanced scholarship management system for our students. For more information, please visit: https://financialaid.arizona.edu/scholarshipuniverse

The Graduate College provides information regarding funding and financial information (including information regarding grants, fellowships, and scholarships): https://grad.arizona.edu/funding

The Graduate & Professional Student Council provides Research and Project (ReaP) Grants that offer up to $1,000 to partially or completely fund projects. For more information, please visit: http://gpsc.arizona.edu/research-grants

The Graduate & Professional Student council provides travel grants for professional development purposes. For more information, please visit: http://gpsc.arizona.edu/travel-grants

SEMESTER SCHEDULE & GRADUATION TIMELINE

Fall 2021: 8 credits
NSC 501 Statistics for Applied Nutritional Sciences I
NSC 502 Statistics for Applied Nutritional Sciences II
PLUS Course 1
OR ALC 522 Communicating Knowledge in Agriculture and the Life Sciences
PLUS Course 2

Spring 2022: 7 credits
NSC 597 Capstone Prep Workshop
NSC 610 Applied Nutrition & Disease OR NSC 542 Advanced Medical Nutrition Therapy
PLUS Course 3

Summer 2021: 9 credits
NSC 509 Advanced Nutrition Metabolism & Disease
NSC 519 Advanced Applied Nutritional Sciences
NSC 562 Professional Ethics and Best Practices in Nutrition Education and Counseling
OR PLUS 1 course 1 if took ALC 522 Communicating Knowledge in Agriculture and the Life Sciences in Fall

Fall 2022: 6 credits
NSC 698A Capstone I
NSC 698B Capstone II

Graduation December 2022. Students are able to extend graduation timeline as needed, depending on ability to take classes. Please communicate with program coordinator if you are concerned regarding ability to follow this timeline. Working together, a personal timeline for coursework and graduation can be established.

COURSE REQUIREMENTS AND DESCRIPTIONS

NSC 501 – Statistics for Applied Nutritional Sciences (1) 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.

NSC 502 – Statistics for Applied Nutritional Sciences II (1) 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.

NSC 509 – Advanced Nutrition Metabolism and Disease (3) 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.

NSC 519 – Advanced Applied Nutritional Sciences (3) 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.

NSC 542 – Advanced Medical Nutrition Therapy (3) 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.

OR

NSC 610 Nutrition and 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 counseling to 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.

OR

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.

PLUS Course work (9 units) Please refer to page 10 for more information regarding PLUS course options.

NSC 597 – Capstone Prep Workshop (1) The Capstone Workshop Prep course is designed to help students: 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.

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), UAccess account, D2L (learning management system and 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

CATCARD
The CatCard is the official University of Arizona Identification card. The card features a digitized photo, digitized signature, Contactless SmartChip, ISO number and magnetic stripe. It is up to you how you want to use your card.

As an online student, it is not required to obtain a CatCard, but there are many benefits, like using/showing your card to obtain student discounts. As an online student, you are able to obtain a CatCard, but first you will need to upload a photo. To learn more about this process, and to obtain your card, please visit: https://myphoto.catcard.arizona.edu/index.aspx

D2L (DESIRE2LEARN) BRIGHTSPACE
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 ZOOM, 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 (i.e. WORD) or as PDF files. Other file types (i.e. 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

Other software is available to students for free or a discounted fee. Please visit this site for more details: https://softwarelicense.arizona.edu/students

UNIVERSITY OF ARIZONA LIBRARIES

The University of Arizona libraries provide resources, services and expertise to the University and the local community, the main library website can be found at http://new.library.arizona.edu/
There is a library resource page set up specifically for Applied Nutrition students, please access: http://libguides.library.arizona.edu/gcpsm for more information. This website has the contact information for the librarian for the College of Agriculture and Life Sciences, as well as links for information that is relevant to graduate students and to online students.

STUDENT SUPPORT AND RESOURCES

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

The department of Academic Success & Achievement provides a service called SOS (Support, Opportunity, Success). SOS is for UA 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. Access their website to learn more about SOS, or to ask a question: https://sos.arizona.edu/
The Disability Resource Center (DRC) is focused on creating inclusive learning and working environments and facilities through all aspects of the University of Arizona. The access consultant for the Graduate College is Jayci Robb and she can be reached at: jacyir@email.arizona.edu. For more information regarding the DRC, please visit their webpage: https://drc.arizona.edu/

The Graduate and Professional Student newsletter provides up to date information regarding funding opportunities, employment opportunities, trainings, social events and more. To register for the newsletter, please visit: https://arizona.us17.list-manage.com/subscribe?u=af018f756d1ccbea4673d3677&id=4c8a27f1fd For events being held by the Graduate & Professional Student Council, please visit: https://gpsc.arizona.edu/community-board

CAMPUS HEALTH RESOURCES
Arizona Online students can receive health care services from Campus Health, including mental health services. For more information, please visit https://health.arizona.edu/arizona-online-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-rights-responsibilities/student-code-conduct

IMPORTANT LINKS

- Graduate College – access to Graduate College policies, contacts, information about resources, deadlines and other useful information: http://grad.arizona.edu
- 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
- Responsible Conduct of Research: http://www.orcr.arizona.edu/

It is the Department of Nutritional Sciences policy that the student holds 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 program. If any questions persist following review of all policies, please contact your program coordinator for assistance and clarification.

STUDENT OUTCOMES

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

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.

REMEDIATION
All coursework must be passed with a grade of C or better for the units to count towards the required 30 units of the degree. An overall GPA of > 3.0 in the program is required for graduation.

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.

PLUS COURSES
Students following the approved timeline will be taking three PLUS courses (9 credits) during the program (either 1 course in the Summer, 1 course in the Fall and 1 course in the Spring OR 2 courses in the Fall and 1 course in the Spring).

Available PLUS PSM Courses

Updated August 2021

Courses that have previously enrolled Applied Nutrition students or who have given previous approval to do so are highlighted with green.

Courses that have not been contacted previously regarding Applied Nutrition students are highlighted in yellow. If you are interested in taking one of these courses, please reach out to Kayle to discuss.

PLUS course requirements are for 9 units. Some courses listed are less/more – please refer to the course units when planning.

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Summer 1st 5-week Session (Summer 2021)

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 and use 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 and information 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.

Summer– 2nd 5-Week Session (Summer 2021)

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.

Summer– 1st 7-Week Session (Summer 2021)

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.

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.

NURS 540 – Health Promotion and Risk Reduction (4) Learners will apply concepts of health promotion and risk reduction at the individual and interpersonal level of care. 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 543 – Health Information and Patient Care Technologies (3) Learners will evaluate and apply emergent healthcare technologies such as point of care clinical decisional 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 include the 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 interested in adding this course.

Summer – 2nd 7-Week Session (Summer 2021)

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.

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 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 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.

Fall – 1st 7-Week Session (Fall 2021)

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 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.

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 marketplace; what one must do to succeed in a market society; and what one must do to deserve to succeed.

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.

NURS 520 – Foundations of System Leadership (3) Learners will explore basic concepts related to the healthcare 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 540 – Health Promotion and Risk Reduction (4) Learners will apply concepts of health promotion and risk reduction at the individual and interpersonal level of care. 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 543 – Health Information and Patient Care Technologies (3) Learners will evaluate and apply emergent healthcare technologies such as point of care clinical decisional 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 653 - Healing Environments and Practices (3) 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.

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.

Fall – 2nd 7-Week Session (Fall 2021)

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.

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.

Fall – 15 weeks (Fall 2021)

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 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 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) *If not taken for Communication Course Requirement** 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.

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.

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 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 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.

NSC 515L - Advanced Sports Nutrition Lab (1 unit) 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. ***MUST TAKE 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. ***MUST TAKE WITH NSC 515L***

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.

Spring - 1st 7-Week Session (Spring 2021)

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.

FCSC 513A/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 marketplace; what one must do to succeed in a market society; and what one must do to deserve to succeed.

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.

NURS 520 – Foundations of System Leadership (3) Learners will explore basic concepts related to the healthcare 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 540 – Health Promotion and Risk Reduction (4 units) Learners will apply concepts of health promotion and risk reduction at the individual and interpersonal level of care. 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 543 – Health Information and Patient Care Technologies (3) Learners will evaluate and apply emergent healthcare technologies such as point of care clinical decisional 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 include the 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 interested in adding this course.

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 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.

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 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.

Spring – 2nd 7-week Session (Spring 2021)

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.

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.

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.

NURS 521 – Evidence-Based Practice Improvement (3) 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 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 health care 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 health care, 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.

Spring – 15 weeks (Spring 2021)

AED 621 - Program Planning and Evaluation (3) Developing and evaluating programs in teaching and extension; situation analysis, objectives, policies, content, procedures, and evaluative criteria.

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.

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.

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.

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.

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.

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.

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training table and residence hall menu development and assessment. Graduate students will be required to complete a research project described in syllabus. ***MUST TAKE WITH NSC 515L***

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.

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. **CPH 574 or instructor permission.

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, trade secrets, 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.