Doctor of Science in Health Science

Health Promotion & Wellness

Curriculum

The vision of Rocky Mountain University of Health Professions (RMUoHP) is to advance the quality, delivery and efficacy of healthcare. The Doctor of Science (DSc) in Health Science with clinical concentration areas in Athletic Training, Clinical Electrophysiology, Health Promotion and Wellness, and Pediatric Science develops evidence-based clinician-scientists with advanced clinical skills who can critically evaluate the literature and participate in the research process through identification of best practice in the concentration area and apply that to independent clinical research.

The core and concentration courses are designed to enhance clinical, research, teaching, and leadership skills. The program is designed for practitioners and educators to continue professional work obligations during the program while attending nine semesters of didactic work followed by completion of a dissertation. The dissertation will emphasize the application of scientific principles related to the application of evaluation, intervention and research of clinical problems seen in healthcare.

The purpose of the DSc in Health Science program is to prepare professionals from healthcare related fields as master clinicians, researchers, leaders, and educators. The program provides students with the ability to make contributions by publishing in peer-reviewed journals and/or presenting research at professional conferences. Students planning to enter an academic career will learn skills for effective teaching in academic healthcare programs.

Degree Objectives

The DSc in Health Science Program is committed to the development of the healthcare professional who can:
• Conduct and disseminate clinically sound, ethical, cost-effective research;
• Make significant and relevant contributions to the current body of scientific knowledge in the discipline;
• Develop knowledge expertise in the area of dissertation interest;
• Influence ethical and legal management of healthcare through education of providers, consumers, and society at large;
• Enhance leadership abilities, including competence in the roles of clinician, researcher, educator, and leader;
• Describe and distinguish the various theories associated with the concentration area.

Curriculum
Core Courses: All students are required to complete research methods/biostatistics courses as well as required theory courses. These courses provide the foundation for the concentration courses and the research process.

Concentration Courses: Students are required to select a concentration area before enrolling in the DSc program. Concentration courses are generally in the specific area of the research that the student will pursue.

Concentrations:

• Athletic Training
• Clinical Electrophysiology
• Health Promotion & Wellness

Admission Requirements
1. A Master's degree from an accredited college or university.
2. Have a grade point average of 3.4 (on a 4.0 scale) on all work completed during the Master's degree.
3. Possess writing and oral communication skills sufficient to conduct and deliver the results of meaningful research. Must submit an essay that includes current personal, intellectual and professional interests and why the student is applying to the degree program.
4. Submit a current Curriculum Vita.
5. Possess information technology skills sufficient to effectively participate in RMUoHP's DSc program.
6. Possess information technology skills sufficient to effectively conduct research.
7. Have successfully completed, with a grade of B- or better, at least one course in Research Methods or Statistics at the Master's or higher level.

Concentration – Health Promotion & Wellness

The Health Promotion and Wellness concentration includes a multidisciplinary focus. The curriculum is designed to provide the student a multidimensional
exploration of wellness, including the physical, psychological, spiritual, social, and emotional aspects leading to the ability to conduct scholarly creative inquiry advancing the body of knowledge in health promotion and wellness. The curriculum includes coursework aimed at increasing the student’s abilities in the assessment and implementation of sound scientific principles in the promotion of health and wellness. The central element of the program is the completion of a dissertation that incorporates clinical research and advances knowledge in the area of concentration. The core courses of biostatistics, research methods, scientific/professional and proposal writing are designed to expand scientific inquiry and advance knowledge of the professorate.

The post-professional program in the science of health promotion and wellness offers expanded study in the areas of epidemiology, theories of behavior change, principles of health promotion, nutrition, population health and ecological issues. The curriculum also includes coursework in risk factors and risk reduction strategies, motivational coaching and resilience, integrative therapies, controversial topics in health promotion, grant writing, learning theory and design. The program is designed to be successfully completed with minimal lifestyle disruption and will accommodate a variety of professional and personal situations (full-time working professionals, full-time parents, nonworking professionals, etc.). During the program, students will attend nine semesters. Engagement in readings, assignments, threaded discussions, etc., as well as attendance on campus for face-to-face interaction with peers and mentors in a traditional classroom setting (except for the seventh semester; see on-site dates listed in calendar below), is required in each semester. The number of on-site days is course dependent. Courses noted “Online” have no on-site days allotted. For all courses, students complete coursework throughout the entire semester. A written qualifying examination, a practical comprehensive examination, and dissertation are required.

The Health Promotion and Wellness Program is committed to the development of the healthcare professional who can:

- Access, evaluate, and integrate best evidence in order to design guidelines and to provide current best practice practices to positively influence the health and quality of life of all people;
- Contribute to the evidence in health promotion and wellness by designing, acquiring approval and funding for, conducting, and disseminating original research or case studies;
- Develop learner-centered instruction and instructional delivery methods based upon evidence-based practices;
- Provide leadership and service in healthcare research, academia, and community at the local, regional, national and/or international levels;
- Become a leader in the integration of health promotion and wellness practice within traditional health disciplines.
HPW Mission
The mission of the Health Promotion and Wellness DSc program is to prepare healthcare professionals to: become evidence-based practitioners, learner-centered instructors, independent researchers, and leaders in the integration of health practice into traditional health disciplines.

Program Module Calendar

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<th>Semester</th>
<th>Start Date</th>
<th>On-site Dates</th>
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<tbody>
<tr>
<td>Semester 1 Sum 2014</td>
<td>May 5, 2014</td>
<td>June 10-14, 2014</td>
<td>August 22, 2014</td>
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<td>Semester 2 Fall 2014</td>
<td>September 2, 2014</td>
<td>ONLINE</td>
<td>December 19, 2014</td>
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<td>Semester 4 Sum 2015</td>
<td>May 4, 2015</td>
<td>ONLINE</td>
<td>August 21, 2015</td>
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<td>Semester 8 Fall 2016</td>
<td>August 29, 2016</td>
<td>Oct 7-9, 2016</td>
<td>December 16, 2016</td>
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<td>Semester 9 Winter 2017</td>
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<td>CC 833A</td>
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<td>Semester 10 Summer 2017</td>
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<td>CC 833B</td>
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<tr>
<td>Residency</td>
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<td>Student must register for Residency Credit (CC 877A, CC 877B, etc.) each semester until dissertation is completed &amp; minimum credit requirement for program is attained.</td>
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Eight-year deadline from start of program is May 5, 2022
Semester 1
(6 credits)

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HS 710  Evidence-based Practice  
(2 credits, 2 days On-site)
This course is designed to prepare healthcare professionals with the knowledge, skills and abilities necessary to make independent judgments about the validity of clinical research and to implement evidence-based clinical practice in their careers. This course will focus on the concepts of evidence-based practice with emphasis on forming answerable clinical questions and effective literature search strategies. The evaluative approach to appraising the research literature will prepare the students to judge the evidence on: 1) the accuracy and validity of diagnostic tests and the application of important diagnostic tests in the care of a specific patient; 2) the effectiveness of clinical interventions; 3) the natural history of health-related conditions; 4) risk of harm from select preventative and therapeutic interventions. Based on presentation of case scenarios, students will be required to formulate the key question(s), rapidly search medical and health-related databases, appraise the evidence with a critical analysis and describe application of the evidence in a clinical context. Instructor: Steve Allison, PhD, PT

HS 712  Introduction to Research Methods:
A Quantitative Approach  
(3 credits; 2 days On-site)
This course provides an introduction to general research principles and research ethics. The student will be introduced to the following topics in the research process: question formulation, principles of measurement, basic design and methodological features, issues of reliability and validity, and fundamentals of conducting a literature review. A quantitative article critique will be conducted in class and outside of class. The class format will include lecture, small group discussion, and practice. Instructor: Tim Flynn, PhD, PT

HS 714  Scientific/Professional Writing  
(1 credit; Online)
This pass/fail course reviews PubMed, Index Medicus, other search methodologies, American Medical Association Manual of Style editorial format, the composition of a scientific/professional manuscript, and the style of Scientific/professional writing, its construction and formats. Instructor: Lori Thein Brody, PhD, PT, SCS, ATC

Content and dates are subject to change.
Semester 2
(6 credits)

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**WE 622 Introduction to Health Promotion and Wellness & Risk Reduction Strategies** (3 credits; Online)
This course will provide an overview of the concepts of health promotion, health education, public health, primary prevention, lifestyle, behavior, and wellness and, based on evidence, their relationships to each other and to secondary and tertiary care. The historical relevance of and evidence for focusing on individual and social determinants of health will be explored and an ecological model combining both approaches will be introduced. The evidence related to risk factors for disease due to lifestyle choices will be reviewed and discussed in this course, including but not limited to smoking, nutritional choices, obesity, inactivity, diabetes, social support, and stress. Evidence for the prevention of diseases through the adoption of healthy behaviors will also be discussed. Strategies for adopting positive health-related behaviors will be explored. Class format will include lecture, small group activities and projects, and a personal wellness philosophy presentation. Instructor: Andrea Gorman, PhD, RD, LPC

**HS 750 Leadership and Policy in Healthcare** (3 credits; Online)
This course examines ways to synthesize theoretical leadership concepts with personal and professional values embedded in a clinical practice environment. Issues of power, innovation, working with teams, change and leadership/healthcare delivery models are addressed. Themes of self-reflection, self-mastery, and interpersonal skills are explored. Instructor: Marie-Eileen Onieal, PhD, MMHS, CPNP, FAANP

Semester 3
(6 credits)

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**HS 720 Survey of Qualitative Research** (3 credits; 2 days On-site)
This course introduces the student to qualitative research methods and their applications to problems and phenomena in healthcare. Emphasis is placed on the appropriate use and differences of qualitative methods, their philosophical underpinnings, and application to clinical issues. Instructor: Angela R. Merlo, PT, DPT, PhD

Content and dates are subject to change.
HS 722  Biostatistics 1  (3 credits; 2 days On-site)
The purpose of this course is to introduce the student to biostatistics, the science of evaluating information in a biological setting. Such topics as simple descriptive statistics, basic probability concepts, probability distributions (normal & binomial), sampling distributions, and an introduction to t-distributions will be covered. Instructor: Tom Cappaert, PhD, ATC, CSCS

Semester 4  
(9 credits)

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COURSES FOR STUDENT SELECTION: Students must submit course selection form to registrar prior to the start of Semester 3. Choose one of the following two courses:

HS 732  Biostatistics 2  (3 credits; Online)
The purpose of this course is to build upon the topics introduced in Biostatistics 1. This course will cover such topics as interval estimation, confidence intervals, hypothesis tests, and one and two-sample t-tests.  
Prerequisite: HS 722. Instructor: Tom Cappaert, PhD, ATC, CSCS

OR

HS 734  Qualitative Research 2  (3 credits; Online)
This course is the second in a two-course sequence on qualitative research methods that extends and elaborates on the topics covered in HS 720. Major approaches used in conducting qualitative research and the application of these methods to problems and phenomena in healthcare will be examined. The emphasis of the course is on the collection, management, analysis, and interpretation of qualitative data. Exploration and application of topics such as sampling, interviewing and observation techniques, data analysis methods, and reporting of qualitative research will be addressed. Evaluation and critique of research studies utilizing qualitative methods will also be examined.  
Prerequisite: HS 720. Instructor: Angela R. Merlo, PT, DPT, PhD

HS 760  Technology and Informatics  (3 credits; Online)
This course is designed for the advanced clinician to explore major existing and emerging technologies and their potential impact on health care and health care education. Systems are addressed that support patient centered, safe, effective, timely, efficient and equitable care. An emphasis is placed on the role that information technology supports these systems and on

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development and use of technologies in 21st century healthcare/education. Current technology used for online/blended and face to face learning experiences will be analyzed and discussed. Instructor: TBA

WE 706.2 Controversy in HPW (3 credits; Online)
Students will research a current topic of controversy or debate within health promotion and wellness field and write a paper on the issue. Topics may be a clinical question, policy or professional issue and need to address the concerns of all stakeholders. Instructor: Andrea Gorman, PhD, RD, LPC

Semester 5
(6 credits)

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HS 730 Epidemiologic Methods (3 credits; 1.5 days On-site)
This course will introduce the student to important epidemiological methodology/concepts commonly used in evidence-based practice/medicine. The course will focus on the common observational designs, and common measures of disease frequency, risk association, and validity of diagnostic tests. The use and construction of receiver operating curves will be discussed. The course will also include an introduction into logistic regression and survival analysis methods in how they apply to disease outcomes/disorders. Students will conduct and apply basic epidemiological concepts using statistical software, and learn how to design and develop. The student will be provided with information to aid in data collection and management. *Prerequisite: HS 710.* Instructor: TBA

HS 740 Teaching and Learning Theory (3 credits; 2 days On-site)
This course incorporates a learner centered approach to course development and instructional delivery based on the best evidence of how people learn. Students will demonstrate both traditional and innovative instructional techniques and strategies for teaching in didactic and clinical settings based upon the evidence-base of best teaching practices. Instructor: Malissa Martin, EdD, ATC
Semester 6  
(7 credits)

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**HS 800  Proposal Writing**  
(2 credits; 1 day On-site)  
The conduct of scientific inquiry requires careful planning and forethought to assure the eventual implementation of a study will successfully result in interpretable and meaningful measurements and that valid conclusions may be drawn. This course will provide students with the necessary background and experience to formulate a clearly delineated, hypothesis-driven research proposal that can be used to convince funding agencies and/or doctoral committees to support the study. In addition, this course will provide key information about the Institutional Review Board process so that the student will be able to assure a safe and ethical environment for their volunteer subjects. Instructor: Brent Alvar, PhD, CSCS*D, RSCC*D, FNSCA, FACSM

**HS 752  Curriculum Development**  
(2 credits; 1 day On-site)  
This course examines various classical and modern curriculum theorists as they apply curriculum development. Emphasis is placed on congruence between institutional mission, philosophy, and goals; professional standards; and needs and expectations of a program’s communities of interest. Students design a curriculum to meet the needs of a stated role and setting. Instructor: Leamor Kahanov, EdD, ATC

**WE 700  Theories of Behavior Change**  
(3 credits; 2 days On-site)  
This course is designed to expose the student to the fundamental theories driving research and practice in health education, and to provide an opportunity for the student to put theory into practice based on current evidence. A variety of theories will be reviewed and the opportunity for the student to become familiar with the literature applying the theories provided. Working in a group, students will design a health education program based on a given theory and supported by evidence and present the findings to the class. Class format will include lecture and group activities. Instructor: Janet Bezner, PT, PhD
Semester 7
(6 credits)

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**WE 624 Motivation, Coaching and Resilience Impact on Health**

The prominent methodologies of coaching and motivation will be presented and theories of compliance with behavior change will be explored. Application of these methods to various ages and groups will be discussed. The concept of resilience (the ability to adapt or recover rapidly) will be explored and discussed in relationship to health and well-being. Psychological, emotional and spiritual resources, such as coping, social support, meaningful connections, sense of life purpose, optimism, commitment, control, and reframing will be defined, and the evidence for each reviewed and discussed in terms of their ability to be learned, developed, and capitalized upon to improve health status. Class format will include self-journaling, lecture, small group and experiential activities. Instructor: Nancy Lesch, MM Andrea Gorman PhD, RD, LPC.

**WE 610 Population Health Issues**

In this course the health issues of specific populations will be discussed, including gender and age specific populations, as well as one or two additional populations driven by class preferences. Additional populations may include shift workers, various ethnic groups, or religious groups. Health and well-being issues specific to each population selected will be discussed and explored and evidence-based strategies developed to address the issues for each population. The ecological model of health promotion will be explored. Class format will include lecture and small group activities. Instructor: Rick Nauert, PT, MSHF, MSHA, PhD

Semester 8
(7 credits)

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**HS 810 Dissertation Prep/Proposal Defense**

This course will prepare students for the dissertation phase of the degree program. Students will have secured a committee and have developed an outline of their dissertation topic prior to taking the course. Students will prepare and present their dissertation proposal to their peers and a panel of
experts. Feedback will be provided and students will work with their committee to submit the final dissertation proposal. Instructor: Brent Alvar Brent Alvar, PhD, CSCS*D, RSCC*D, FNSCA, FACSM and Andrea Gorman PhD, RD, LPC

WE 704 Nutrition (3 credits; 1 day On-site)
This course is designed to survey current nutrition issues as they relate to humans across the lifespan such as: food policy, industry trends, resources for the non-Dietetic health practitioner to evaluate claims, research and evidence-based guidelines for nutrition, nutrigenomics, functional foods and supplements. Effective methods of utilizing nutrition screening and assessment protocols will be addressed. Class format will include lecture, personal diet analysis, small group work, forum posts and discussions. Instructor: Andrea Gorman, PhD, RD, LPC

WE 717 Integrative Therapies in Health Promotion (3 credits; 1 day On-site)
The use of complementary and alternative therapies in the context of health promotion will be explored in this course using an evidence-based approach. Topics introduced may include energy medicine (Reiki, Qi gong, healing touch), manipulative and body-based practices (massage therapy, reflexology, Rolfing, Trager bodywork, Alexander technique, Feldenkrais), or mind-body approaches (relaxation, hypnosis, visual imagery, meditation, yoga, biofeedback, tai chi, prayer). Class format includes lecture, small group work, and hands on activities. Instructor: Teresa Araas, PhD, CHES, CYT-300, RYT-200

Dissertation Phase
(12-credit minimum)

Each doctoral student will be required to complete a dissertation that is evidence-based and involves applied research of experimental, nonexperimental, or descriptive designs. Examples of dissertations include: small randomized control trials; single-case/subject designs, quasi-experimental designs, qualitative methods, survey research, epidemiological designs (cross-sectional, cohort or case-control) normative research, and correlational designs.

In 10th semester students will complete comprehensive exams

CC 833A Doctoral Dissertation 1 – Semester 9 (6 credits)
CC 833B Doctoral Dissertation 2 – Semester 10 (6 credits)

Semesters of Dissertation Residency Credit (CC 877A, CC 877B, etc.) as needed
DSc-HS Program Faculty

Steve Allison, PhD, PT
Brent Alvar, PhD, CSCS*D, RSCC*D, FNSCA, FACSM
Lori Thein Brody, PhD, PT, SCS, ATC
Tom Cappaert, PhD, ATC, CSCS
Tim Flynn, PhD, PT, OCS, FAAOMPT
Malissa Martin, EdD, ATC
Angela R. Merlo, PT, DPT, PhD
Marie-Eileen Onieal, PhD, MMHS, CPNP, FAANP
Andrea Gorman, PhD, RD, LPC
Rick Nauert, PT, MSHF, MSHA, PhD
Janet Bezner, PT, PhD
Nancy Lesch, MM
Teresa Araas, PhD, CHES, CYT-300, RYT-200

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