Doctor of Philosophy in Health Sciences

Cohort: HS 8

ROCKY MOUNTAIN UNIVERSITY of HEALTH PROFESSIONS

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Program Description

The vision of Rocky Mountain University of Health Professions (RMUoHP) is to become widely recognized for excellence in healthcare education. The Doctor of Philosophy (PhD) in Health Sciences with concentration areas in Athletic Training, Healthcare Leadership and Administration, Healthcare Professions Education, Health Promotion and Wellness, Human and Sport Performance, Integrated Health Sciences, and Neurologic Rehabilitation prepare and support students to complete an academic terminal doctoral degree which can

provide opportunities for employment in institutions of higher education, healthcare and research clinics, hospital settings, and other healthcare venues. The PhD in Health Sciences prepares stewards of healthcare disciplines.

Each concentration is committed to the development of lifelong scholars who can perform the following:

- Conduct, evaluate, publish, present, and integrate research findings into their daily academic agenda and/or clinical practice;
- Act in leadership roles in their discipline and community;
- Provide the highest level of intervention to their patients/clients; and
- Participate in undergraduate and graduate education environments to effectively teach the next generation of evidence-based clinicians, scholars, and educators in academic and healthcare programs.

The program is designed for practitioners and educators to continue professional work obligations while completing their degree. The program consists of 5 blended and 7 online semesters, including qualifying exams and dissertation, for a total of 70 credit hours. If students have not completed the program in 4 years, they continue enrollment until dissertation is completed. The dissertation emphasizes the application of scientific principles related to the application of evaluation, intervention, and research of related issues of inquiry seen in healthcare, education, leadership and administration. Dissertation committee members are known experts in the field from across the United States with members of the RMUoHP faculty providing guidance and support.

Degree Objectives

The PhD in Health Sciences Program is committed to the development of the healthcare professional who can:

- Conduct and disseminate evidence-based, sound, ethical, cost-effective research/scholarship;
- Demonstrate the ability to make significant and relevant contributions to the current body of scientific knowledge in the discipline;
- Demonstrate oral and written communication skills sufficient to publish and present work in their field;
- Develop knowledge expertise in the area of dissertation interest;
- Master research methods—both quantitative and qualitative;
- Develop and deliver instructional designs, strategies, and curriculum based upon best practices in the scholarship of teaching and learning;
- 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 and develop advanced evidence-based practice knowledge.

Core Courses: All students are required to complete a set of core research courses on subjects which include evidence based practice, quantitative and qualitative inquiry,

biostatistics, epidemiology, survey mixed methods as well as required theory courses. These courses provide the foundation for the dissertation phase and research process.

Concentration Courses: Students are required to select a concentration area before enrolling in the PhD program. Concentration courses provide further knowledge, skills, and abilities essential to advanced clinical practice and support research areas students often pursue.

Concentrations:

- Athletic Training
- Healthcare Leadership & Administration
- Healthcare Professions Education
- Health Promotion & Wellness
- Human & Sport Performance
- Integrated Health Sciences
- Neurologic Rehabilitation
- Pediatric Science

See Concentrations section for more details about each concentration track.

General Program Requirements

1. Complete a minimum of 70 credit hours past the master's degree or professional/clinical doctorate degree (i.e., DAT, DPT, OTD, SLPD)
2. 35% of graduate coursework can be transferred from a regionally or nationally accredited University, with a maximum of 12 hours transferred from the student's master's degree professional or post-professional clinical doctoral program upon approval of Program and Concentration Track Directors.
3. Successfully complete preliminary examinations to advance to candidacy.
4. Submit article (i.e., literature review, critical appraisal, clinical applications) for publication prior to taking qualifying exams in consultation with mentor.
5. Complete a dissertation and successfully defend it in a final oral examination.
6. Submit dissertation manuscript for publication prior to conferring degree.

Program Outline & Requirements

Course Code & Title	Credits
Health Sciences Core Courses *(11 courses, 31 credits required)*:	
All courses listed are required:	
HS 710 Evidence-Based Practice	3
HS 712 Research Methods: A Quantitative Approach	3
HS 714 Scientific/Professional Writing	1
HS 720 Survey of Qualitative Research	3
HS 722 Biostatistics I	3
Students choose one: HS 730 Epidemiologic Methods≠ **-OR-** HS 727 Survey Mixed Methods Research≠ *(if not taken as an elective)*	3
Students choose one: HS 732 Biostatistics II≠ **-OR-** HS 734 Qualitative Research II≠	3
HS 740 Teaching & Learning Theory	3
HS 762 Literature Review, Analysis, & Synthesis	3
HS 800 Dissertation Prep I	3
HS 810 Dissertation Prep II	3
Health Sciences Core Required Credits:	**31**
Elective Research Courses *(1-2 courses, 3 credits required)*:	
Students select one (1) course:	
HS 727 Survey Mixed Methods Research≠ *(if not taken in core)*	3
HS 732 Biostatistics II≠ *(if not taken in core)*	3
HS 734 Qualitative Research II≠ *(if not taken in core)*	3
HS 735 Qualitative Interviewing Techniques	2
HS 736 Mixed Methods Integration	1
HS 742 Biostatistics III≠	3
HS 751 Case Series Single Subject Design	3
HS 770 Research Practicum§	1-3
Elective Research Required Credits:	**3**
Elective Support Courses *(2 courses, 6 credits required)*:	
Students select two (2) courses:	
HLA 620 Healthcare Leadership*	3
HLA 700 Healthcare Legal & Ethical Issues*	3
HPE 670 Learning Assessment & Evaluation*	3
HPE 760 Instructional Technology: Design, Theory, & Application**	3
Elective Support Required Credits:	**6**

*Courses taken as part of a concentration in HLA or HPE will not count towards the elective requirement. Students in those concentrations must select the other optional courses.

§Research Practicum course credits may be substituted for another course, with Program Director approval. May be repeated up to 3 credits.

**Students in the HPE concentration are required to take HPE 760 as one of their electives.

≠Indicates course with a prerequisite. See course descriptions for more details.

Program Outline & Requirements continued on next page…

Program Outline & Requirements (Cont.)

Concentration Courses *(6 courses, 18 credits required)*:	
Students are required to select a concentration before enrolling in the PhD program. *Refer to the Concentration Courses chart and the information for each track (hyperlinked below) for complete details:*	
Athletic Training	
Healthcare Leadership & Administration	
Healthcare Professions Education	
Health Promotion & Wellness	
Human & Sport Performance	
Integrated Health Sciences	
Neurologic Rehabilitation	
Pediatric Science	
Concentration Required Credits:	**18**
Qualifying Exam & Dissertation Courses *(4 courses/12 credits required)*:	
All courses listed are required:	
HS 833A Qualifying Exam Preparation	3
HS 833B Proposal Writing	3
HS 877A Grant Writing	3
HS 877B Writing for Publication	3
Qualifying Exam & Dissertation Required Credits:	**12**
Total Program Required Credits:	**70**
Dissertation Residency:	
Enrollment in HS 877C, HS 877D, etc. required until program completion:	
HS 877C, HS 877D, etc. as needed (3 credits per course/semester, all online) *Continue with 3 credits per semester until degree completion. Not included in program tuition.* *Forum based courses, 2 week modules.*	

Program Calendar

(Semesters in **Blue** include required on-site class sessions)

Semester	Course	Credits	On-site Dates
Semester 1 **Summer 2020** *May 4-Aug. 21*	HS 710 Evidence-Based Practice	3	Online
	HS 712 Research Methods: A Quantitative Approach	3	Online
	HS 714 Scientific/Professional Writing	1	Online
	Semester Totals:	**7**	**Online**
Semester 2 **Fall 2020** *Aug. 31-Dec. 18*	Concentration Course 1	3	Online
	Elective Support Course*: HLA 620 Healthcare Leadership **-OR-** HPE 760 Instructional Technology Design Theory & Application**	3	Online
	Semester Totals:	**6**	**Online**
Semester 3 **Winter 2021** *Jan. 4-Apr. 23*	HS 720 Survey of Qualitative Research	3	Online
	HS 722 Biostatistics I	3	Online
	Concentration Course 2 (HLA concentration only)	(3)	Online
	Semester Totals:	**6**	**Online**
Semester 4 **Summer 2021** *May 3-Aug. 20*	Concentration Course 2 (Conc. Course 3 for HLA only)	3	Online
	Elective Support Course*: HLA 700 Healthcare Legal & Ethical Issues **-OR-** HPE 670 Learning Assessment & Evaluation**	3	Online
	HS 730 Epidemiologic Methods **-OR-** HS 727 Survey Mixed Methods Research*	3	Online
	Semester Totals:	**9**	**Online**
Semester 5 **Fall 2021** *Aug. 30-Dec. 18*	Concentration Course 3 (Conc. Course 4 for HLA only)	3	Online
	HS 740 Teaching & Learning Theory	3	Online
	HS 732 Biostatistics II **-OR-** HS 734 Qualitative Research II*	3	Online
	Semester Total:	**9**	**Online**
Semester 6 **Winter 2022** *Jan. 4-Apr. 22*	Concentration Course 4 (Conc. Course 5 for HLA only)	3	Online
	HS 762 Literature Review Analysis & Synthesis	3	Online
	Elective Research Course*: HS 742 Biostatistics III **-OR-** HS 727 Survey Mixed Methods Research **-OR-** HS 751 Case Series Single Subject Design	3	Online
	Semester Total:	**9**	**Online**
Semester 7 **Summer 2022** *May 2-Aug. 19*	Concentration Course 5 (Conc. Course 6 for HLA only)	3	June 23-24
	HS 800 Dissertation Prep I	3	June 25-26
	Semester Total:	**6**	**June 23-26**
Semester 8 **Fall 2022** *Aug. 29-Dec. 16*	HS 833A Qualifying Exam Preparation	3	Online
	Semester Total:	**3**	**Online**
Semester 9 **Winter 2023** *Jan. 9-Apr. 28*	Concentration Course 6 (No Conc. Course for HLA only)	(3)	Feb 18-19
	HS 810 Dissertation Prep II	3	Feb 17-18
	Semester Total:	**6**	**Feb 18-19**
Dissertation Phase (9 credits/3 semester minimum):			
Semester 10	HS 833B Dissertation Proposal Preparation (Summer 2023, *May 8-Aug. 25*)	3	Online
Semester 11	HS 877A Grant Writing (Fall 2023, *Sep. 5-Dec. 22*)	3	Online
Semester 12	HS 877B Writing for Publication (Winter 2024, *Jan. 8-Apr. 26*)	3	Online
Semester 13 to Program Completion	Residency – HS 877C, HS 877D, etc. as needed (3 credits per course/semester, all online) *Continue with 3 credits per semester until degree completion. Not included in program tuition. Forum based courses, 2 week modules.*		
	Total Program Required Credits:	**70**	
Eight-year deadline for program completion from start of program is May 4, 2028			

*COURSES FOR STUDENT SELECTION: Students must submit course selection form to Registrar's Office prior to the start of semester in which elective course is taken. If a student wishes to take additional elective courses, tuition for those additional courses will be charged.

**Students in the HLA & HPE concentrations may take the other optional course, or a course from a different concentration.

Elective Research Courses

(1-2 courses, 3 credits required)

Course	Credits	Semester(s) Taught	# Days On-site
HS 727 Survey Mixed Methods Research‡	3	Fall & Winter	Online
HS 732 Biostatistics II‡ *(if not taken in core)*	3	Summer	1.5 days
HS 734 Qualitative Research II‡ *(if not taken in core)*	3	Summer	1.5 days
HS 735 Qualitative Interviewing Techniques	2	Summer	Online
HS 736 Mixed Methods Integration	1	Summer	Online
HS 742 Biostatistics III‡	3	Winter	Online
HS 751 Case Series Single Subject Design	3	Winter	Online
HS 770 Research Practicum§	1-3	Any semester	Online

‡Indicates course with a prerequisite. See course descriptions for more details.

§Research Practicum course credits may be substituted for another course, with Program Director approval. May be repeated up to 3 credits.

NOTE: Courses require a minimum of 3 students. If less than three students are interested in a particular course it will not be taught and student(s) will select a different elective course.

Elective Support Courses

(2 courses, 6 credits required)*

Course	Credits	Semester(s) Taught	# Days On-site
HLA 620 Healthcare Leadership	3	Fall & Winter	Online
HLA 700 Healthcare Legal & Ethical Issues	3	Summer	Online
HPE 670 Learning Assessment & Evaluation‡	3	Summer & Fall	Online
HPE 760 Instructional Technology: Design, Theory & Application**	3	Fall	Online

*Courses taken as part of a concentration in HLA or HPE will not count towards the elective requirement. Students in those concentrations may take the other optional course, or a course from a different concentration.

**Students in the HPE concentration are required to take HPE 760 as one of their electives.

‡Indicates course with a prerequisite. See course descriptions for more details.

NOTE: Courses require a minimum of 3 students. If less than three students are interested in a particular course it will not be taught and student(s) will select a different elective course.

Concentration Courses

Course Sequence	Course Code & Title	Required for Concentration	Semester(s) Taught	# Days On-site
Athletic Training				
1	AT 640 Connective Tissue & Injury Repair: An Evidence-Based Approach	Yes	Fall	Online
2	AT 617 Evidence Based Advanced Therapeutic Interventions	Yes	Summer	1.5 days
3	AT 700 Athletic Training Seminar	Yes	Fall	Online
4	AT 618 Preventative Measures	Yes	Winter	Online
5	AT 631 Motor Control Movement Analysis	No	Summer	1.5 days
6	AT 652 Extensive Therapeutic Exercise≠	No	Winter	1.5 days
Healthcare Leadership & Administration				
1	HLA 620 Healthcare Leadership	Yes	Fall	Online
2	HLA 680 Strategic Change Management for Healthcare Organizations	No	Winter	Online
3	HLA 670 Organizational Behavior & Management in Healthcare	Yes	Summer	1.5 days
4	HLA 710 Management & Entrepreneurship in Healthcare	Yes	Fall	Online
5	HLA 740 Healthcare Delivery	Yes	Winter	Online
6	HLA 700 Healthcare Legal & Ethical Issues	No	Summer	Online
Healthcare Professions Education				
1	HPE 718 Climate of Higher Education	Yes	Fall	Online
2	HPE 700 Design & Implementation of Inter-Professional Education	Yes	Summer	1.5 days
3	Elective Concentration Course	No	Fall	Online
4	HPE 752 Curriculum Design for Healthcare Professions	Yes	Winter	Online
5	HPE 670 Learning Assessment & Evaluation	Yes	Summer	1.5 days
6	HPE 620 Clinical Education Experiential Design & Application for Healthcare Professions≠	No	Winter	Online
Health Promotion & Wellness				
1	WE 623 Wellness Promotion & Programming	Yes	Fall	Online
2	WE 610 Population Health Issues	Yes	Summer	1.5 days
3	WE 700 Theories of Behavior Change	Yes	Fall	Online
4	WE 710 Theories & Application of Wellness Coaching	No	Winter	Online
5	WE 711 Advanced Wellness Coaching	No	Summer	Online
6	WE 717 Integrative Therapies in Health Promotion	Yes	Winter	1.5 days

* Course taught in additional semesters in certificate program.
≠Indicates course with a prerequisite. See course descriptions for more details.

Concentration Courses, Cont.

Course Sequence	Course Code & Title	Required for Concentration	Semester(s) Taught	# Days On-site
Human & Sport Performance				
1	HP 702 Applied Sports Science	No	Fall	Online
2	HP 704 Methods & Programming in Strength & Conditioning	Yes	Summer	1.5 days
3	HP 610 Advanced Sport Performance Technology	Yes	Fall	Online
4	HP 706 Sports Nutrition for Human Performance	Yes	Winter	Online
5	HP 710 Applications of Exercise Science in Tactical Fitness & Performances	Yes	Summer	1.5 days
6	HP 714 Recovery & Regeneration	Yes	Winter	1.5 days
Integrated Health Sciences				
Required to take 18 credits (6 courses) from the other concentration areas. At least two courses of the six are required to be taken in the same concentration area.				
Neurologic Rehabilitation				
1	WE 623 Wellness Promotion & Programming	No	Fall	Online
2	N 720 Neuroscience Systems	Yes	Summer	Online
3	N 722 Clinical Neuroscience & Contemporary Motor Models	Yes	Fall	Online
4	N 724 Neurological Screenings & Outcome Assessment	Yes	Winter	Online
5	N 727 Advanced Neurologic Practice I	Yes	Summer	Online
6	N 729 Advanced Neurologic Practice II	Yes	Winter	1.5 days
Pediatric Science				
1	P 710 Pediatric Research Seminar	Yes	Fall	Online
2	P 740 Lifespan Participation from Infancy to Adulthood: Complex Integration of Mobility, Sensory Processing, & Communications	Yes	Summer	1.5 days
3	**Choose one:** P 707 Oral-Motor & Feeding Impairments with Medical Fragility§ **-OR-** P 608 Assistive Technology for Children with Motor, Behavioral, & Communication Impairment§	No§	Fall	Online
4	P 704 Pediatric Genetic & Pathologic Conditions: Etiology, Pathophysiology, Clinical Course, & Pediatric Therapy Examination & Intervention	Yes	Winter	Online
5	P 750 Neuroscience in Pediatric Rehabilitation§	No§	Summer	1.5 days
6	P 719 Family Studies & Research Process	Yes	Winter	1.5 days

§ Students in the Pediatric Science concentration have the option of taking P 755 Pediatric Research Independent Study in place of one of the indicated concentration courses

Course Descriptions

Health Science Core Courses

HS 710 Evidence-Based Practice **(3 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.

HS 712 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.

HS 714 Scientific/Professional Writing **(1 credit; Online)**

This pass/fail course reviews PubMed, Index Medicus, other search methodologies, American Psychological Association editorial format, the composition of a scientific/professional manuscript, and the style of Scientific/professional writing, its construction and formats.

HS 720 Survey of Qualitative Research **(3 credits; 1.5 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.

HS 722 Biostatistics I **(3 credits; 1.5 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, correlations, regression, t-tests and one-way ANOVA testing.

HS 727 Survey Mixed Methods Research **(3 credits; Online)**

This course will familiarize students with theory and application of survey research design and methods with integration of a mixed methods approach. Students will learn the principles and practices of conducting survey research including: accounting for and reducing sources of error, designing appropriate sampling strategies, assessing the reliability and validity of self-constructed questionnaires and interview protocols, administering surveys through various means and analyzing and reporting results of survey research. How to integrate qualitative inquiry with survey research to develop and conduct a mixed method study including writing results will be emphasized. *Pre-requisite HS 720. (Note: Course may be taken as either a core course, or as an elective research course)*

HS 730 Epidemiologic Methods **(3 credits; Online)**

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*.

HS 732 Biostatistics II **(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 factorial ANOVA, ANCOVA, MANOVA, multiple linear regression and non-parametric group comparisons. *Prerequisite: HS 722. (Note: Course may be taken as either a core course, or as elective research course)*

HS 734 Qualitative Research II **(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. (Note: Course may be taken as either a core course, or as elective research course)*

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.

HS 762 Literature Review, Analysis, and Synthesis **(3 credits; Online)**

This course provides the student with skill sets to conduct a literature search, analysis and synthesis on a selected research topic complimentary of their dissertation. Research will be systematically selected based upon quality of design/methods, relevance to proposed dissertation/study instruments and linkage to research hypothesis/questions. Submission of a synthesis paper with literature summary table will be included.

HS 800 Dissertation Prep I **(3 credits; 1.5 days 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/research question-driven dissertation prospectus that can be used to convince funding agencies and/or doctoral committees to support the study. Emphasis will be placed on developing a clear background, scientific/clinical rationale, and hypothesis/research question along with the start of a methods section and strategies to form a dissertation committee. In addition, this course will provide key information about the responsible conduct of research, the informed consent process, and the Institutional Review Board process so the student will be able to design a safe and ethical environment for their volunteer subjects.

HS 810 Dissertation Prep II **(3 credits; 1.5 days On-site)**

This course is a continuation of HS800 Dissertation Prep I where students will finalize their written prospectus. Students will continue securing dissertation committee commitments and be prepared to defend a mock prospectus defense via presentation while on campus. Students prepare for the Institutional Review Board process by completing the CITI Human Subjects Research course, becoming familiar with the online submission platform, and drafting informed consent documents.

Elective Research Courses

HS 727 Survey Mixed Methods Research **(3 credits; Online)**

This course will familiarize students with theory and application of survey research design and methods with integration of a mixed methods approach. Students will learn the principles and practices of conducting survey research including: accounting for and reducing sources of error, designing appropriate sampling strategies, assessing the reliability and validity of self-constructed questionnaires and interview protocols, administering surveys through various means and analyzing and reporting results of survey research. How to integrate qualitative inquiry with survey research to develop and conduct a mixed method study including writing results will be emphasized. *Pre-requisite: HS 720 (Note: Course may be taken as either a core course, or as an elective research course)*

HS 732 Biostatistics II **(3 credits; 1.5 days On-site)**

The purpose of this course is to build upon the topics introduced in Biostatistics 1. This course will cover such topics as factorial ANOVA, ANCOVA, MANOVA, multiple linear regression and non-parametric group comparisons. *Prerequisite: HS 722. (Note: Course may be taken as either a core course, or as elective research course)*

HS 734 Qualitative Research II **(3 credits; 1.5 days On-site)**

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. (Note: Course may be taken as either a core course, or as elective research course)*

HS 735 Qualitative Interviewing Techniques **(2 credits; Online)**

This course provides a theoretical framework for interviewing approaches for various situations, types of interviewing formats (e.g. focus group, evaluation interview, cultural interview) and development of interview formats. Recording, analyzing, and reporting interview data, ethical and relationship issues, and research on interviewing methods.

HS 736 Mixed Methods Integration **(1 credit; Online)**

This course provides students with techniques used to integrate quantitative and qualitative data, analysis and results based upon a mixed methods study design. Writing tips of a mixed methods publication is also included.

HS 742 Biostatistics III **(3 credits; Online)**

The purpose of this course is to build upon the topics introduced in Biostatistics 2. This course will cover such topics as logistic regression, advanced data cleaning procedures, advanced non-parametric methods, measurement tool reliability and development of data visualizations. *Prerequisites HS 722, 732*

HS 751 Case Series Single Subject Design **(3 credits; Online)**

This course will seek an in-depth exploration and practice regarding the mechanics, design and construction of case series and single subject research designs in a healthcare environment. Students will develop and submit a single subject/case series research design related to individual dissertation topics or to relevant clinical questions.

HS 770 Research Practicum **(1-3 credits; Online)**

Faculty-directed clinical, basic, or applied research practicum, which may include but not limited to review of literature preparation, human subjects committee proposal development, data collection, and presentation/manuscript preparation. Graded

Pass/Fail. (Optional course. May be taken in substitution for another course, with Program Director's approval. May be repeated up to 3 credits.)

Elective Support Courses

HLA 620 Healthcare Leadership **(3 credits; Online)**

Concepts of leadership related to current healthcare organizations are examined. Specific concepts including communications, public relations, team building, negotiation, and conflict resolution are explored. Strategic aspects such as vision, viewpoint and admission included. Managing uncertainty is discussed in relation to healthcare organizations. Contemporary leadership challenges, communication strategies and crisis communication are explored. Leadership functions and decision-making are analyzed.

HLA 700 Healthcare Legal & Ethical Issues **(3 credits; Online)**

This course offers an exploration of the legal and ethical issues and dilemmas in the delivery of healthcare. The principles and practical application of laws and regulations affecting operational decisions of healthcare providers, health plans, and third-party payers are discussed. Also addressed are social, moral, and ethical issues encountered in the balance of patient interests, needs and rights.

HPE 670 Learning Assessment & Evaluation **(3 credits; Online)**

This course examines a variety of assessment models and techniques used to evaluate student classroom performance, student clinical performance, instructor performance and educational programs. Students will design and execute assessment plans, interpret assessment data and develop continuous improvement plans.

HPE 760 Instructional Technology: Design, Theory, and Application **(3 credits; Online)**

This course explores the history and theory of instructional technology used in educational settings. Focus is on identifying, discussing and comparing various instructional technology utilized in the design and delivery of online, blended, and traditional classroom learning environments. Best practices of current instructional technologies applied in higher education classrooms are systematically designed, created, shared, and reviewed.

Qualifying Exam & Dissertation Phase Courses

HS 833A Qualifying Exam Preparation **(3 credits; Online)**

This course is designed to assist students in the preparation for qualifying exams on core competency material and to complete the exam. The course will prepare students to develop a study strategy and plan for the exam as well as participate in discussions concerning material that comprise the exam questions.

HS 833B Proposal Writing **(3 credits; Online)**

This course is designed to assist students in their initial dissertation phase of their academic program. Emphasis will be on the socialization process of the dissertation including forming a committee, overcoming challenges and obstacles, time management and development of the dissertation prospectus/proposal.

HS 877A Grant Writing **(3 credits; Online)**

This course is designed to assist students in the dissertation phase of their academic program relative to seeking and acquiring grants. Emphasis will be on the basic grant process, searching for grant opportunities and developing a grant proposal.

HS 877B Writing for Publication **(3 credits; Online)**

In this course students will learn how to transform research into publishable articles, drafting, editing and revising work with guidance and feedback of instructor and peer review. Technical writing and organizational skills will be reviewed. Common guidelines for publication will be discussed. Students with enough data from dissertations will start developing manuscripts for publication.

Concentration Tracks

Athletic Training Concentration

Malissa Martin, EdD, ATC
Concentration Track Director

The doctoral program in athletic training prepares scientific scholars and stewards of the discipline who can function as advanced clinicians, researchers and/or academicians. Graduates can become leaders in the athletic/sports healthcare community through the completion of the doctoral program. The curriculum focuses on a rehabilitation science core however students can choose to take support courses to add an adult learning theory or leadership/administration emphasis for those who inspire a career in higher education teaching or healthcare leadership administration. The central element of the program is the completion of a dissertation that incorporates experimental research and advances knowledge in the area of athletic training (with options for athletic training education/administration/leadership). Evidence-based practice, quantitative and qualitative research, biostatistics, epidemiology, survey mixed methods research and professional writing courses provide the core foundation to prepare scholars for the discipline.

The curriculum is intended to increase the student's abilities to utilize research theory to enhance evidence-based practices and to prepare manuscripts for publication. Advanced therapeutic intervention courses enhance the student's abilities in the assessment and implementation of sound scientific principles in the treatment of athletes and other physically active individuals. The adult learning option affords students an interactive environment focusing on the designing and assessment of learning for athletic training education. Optional education and leadership/administration coursework includes instructional design/delivery, assessment of learning, curriculum development, education technology, and education administration, healthcare ethics, and healthcare leadership.

The program is designed to enable athletic trainers to continue professional work obligations during the didactic portion of the program while completing 12 semesters, consisting of online and blended course work. Students engage in readings, assignments, threaded discussions, group activities as well as attend on campus face-to-face interaction with peers and mentors in a traditional classroom setting. During the blended terms students travel to campus for 4-6 days of immersion experiences which routinely scheduled over weekends. Due to the nature of the blended model curriculum and to ensure the goals of the program are met, attendance at onsite meetings for any course that has an onsite component is mandatory. Not attending an onsite meeting without prior permission of the Program Director and instructor will result in a failure of that course (for more information see the Attendance Policy section in the University Handbook). Courses

noted "Online" have no on-site days allotted. For all courses, students complete coursework throughout the entire semester. A written qualifying examination and dissertation are required following the didactic portion of the curriculum.

The PhD Health Sciences athletic training program is committed to the development of an individual who can:

- Integrate current literature and evidence-based practices through a systematic review and critical analysis approach into various therapeutic interventions and preventative measures for physically active patients in various age groups and activity levels.
- Analyze, critique, and synthesize literature to prepare manuscripts for publication
- Analyze, critique, and synthesize evidence and apply to advanced clinical practices.
- Conduct independent, methodologically sound research.
- Collect and critically analyze research data.
- Design learner-centered instruction and instructional delivery skills based upon evidence-based practices of the scholarship of teaching and learning.
- Provide leadership to the profession/community through stewardship of the profession.
- Integrate curriculum/leadership theory into professional teaching and administrative practices that guide and direct CAATE accredited programs if a student chooses to take education or administration elective coursework

Concentration Admission Requirements

Students seeking admission to the Athletic Training Concentration must have current Board of Certification for the Athletic Trainer credential

Athletic Training Course Descriptions:

18 credits (6 courses) of concentration courses are required. A minimum of 12 credits must be taken within the AT concentration. Students can select alternative courses for the other 6 credits, with PD/CTD approval.

AT 617 Evidence-based Advanced Therapeutic Interventions **(3 credits; 1.5 days On-site)**

This course provides an advanced analysis of how to search for and appraise published reports on therapeutic modalities and tissue healing. Students will acquire advanced knowledge and skill in interpreting the medical literature to make informed decisions regarding the best therapeutic modality applications, procedures, and protocols to use for individual patients. Integration of a systematic review and standardized patient approach to learning is utilized.

AT 618 Preventative Measures **(3 credits; Online)**

This course will expose students to contemporary topics in athletic training clinical practice such as, mild brain injury, environmental illnesses and musculoskeletal injury. Students will examine and synthesize current research on these topics and present evidence-based preventative measures in order to curb their incidence.

AT 631 Motor Control and Movement Analysis **(3 credits; 1.5 days On-site)**

Discussion and analysis of scientific principles related to the mechanical understanding of motor control and the human body in motion. Review of related literature and research in motor learning and control. The focus of this course will be on qualitative analysis of motor assessment as related to musculoskeletal assessment and physiotherapy interventions. After completing the course students are eligible to take the Selected Functional Movement Assessment Certification examination.

AT 640 Connective Tissue and Injury Repair: An Evidence Based Approach **(3 credits; Online)**

This course provides an evidence based approach to connective tissue injury including degenerative processes, healing, and rehabilitation implications. Understanding of the relationships among connective tissues such as bone, ligaments, cartilage, capsule, tendon and muscle on a micro and macro level will be emphasized. Sports injuries, issues of aging, and rehabilitation principles in special populations will also be included. These principles will be applied to treatment procedure choices in rehabilitation and preventative training.

AT 652 Extensive Therapeutic Exercise **(3 credits; 1.5 days On-site)**

This course will explore the current best evidence related to the continuum of athlete care associated with rehabilitation and return to play decision-making. Evidence-based injury rehabilitation will be instructed through a system of screening, testing, and assessment, as well as a progressive continuum of fundamental movements. The system will serve to guide corrective exercise intervention strategies to restore optimal movement patterns. Students will be exposed to injury prediction/prevention research and gain clinical skills in performance of the Functional Movement Screen, Y Balance Test along with discussing a neurodevelopmental model for corrective exercise progressions. Critical thinking will be emphasized, allowing students to compare and contrast core training program with an emphasis in the motor control model of spinal stabilization. Students will work together to develop return to sport models that build on the basics but also focus on movement constructs that will minimize future injury risk. After completing the course students are eligible to take the Functional Movement Screen Certification examination. *Pre-requisite AT 631.*

AT 700 Athletic Training Seminar **(3 credits; Online)**

The seminar course will help students acclimate, familiarize, and become knowledgeable around their intended dissertation topic. Students will engage in literature review and on-going discussions to facilitate knowledge and understanding of their specific content area as it relates to their dissertation.

Healthcare Leadership & Administration Concentration

Jennifer Austin, PhD, LAT, ATC, GTS
Concentration Track Director

The doctoral program in Healthcare Leadership and Administration prepares scientific scholars and stewards of the discipline who can function as administrators, researchers and scholars in a variety of healthcare settings including the public and private sectors, higher education, and other diverse healthcare settings. The program allows healthcare leaders to maintain professional obligations while receiving training and a terminal degree that will distinguish them as our future's senior leaders and scholars. As healthcare continues to transform and demand fiscally responsible health outcomes Rocky Mountain University aims to prepare its future leaders and scholars. This is accomplished through advanced training by nationally diverse faculty in strategic change management for healthcare, healthcare delivery science, and organizational change. Also addressed are research theory to enhance evidence-based practice, health systems, communication, and healthcare law and ethics.

The central element of the program is the completion of a dissertation that incorporates experimental research and advances knowledge in the area of healthcare leadership and administration. Evidence-based practice, quantitative and qualitative research, biostatistics, survey mixed methods research and professional writing courses provide the core foundation to prepare scholars for the discipline.

The program is designed to enable students to continue professional work obligations during the didactic portion of the program while completing eight semesters, consisting of online and blended course work. Students engage in readings, assignments, threaded discussions, group activities as well as attend on campus face-to-face interaction with peers and mentors in a traditional classroom setting. During the blended terms students travel to campus for 4-6 days of immersion experiences. Due to the nature of the blended model curriculum and to ensure the goals of the program are met, attendance at onsite meetings for any course that has an onsite component is mandatory. Not attending an onsite meeting without prior permission of the Program Director and instructor will result in a failure of that course (for more information see the Attendance Policy section in the University Handbook). Courses noted "Online" have no on-site days allotted. For all courses, students complete coursework throughout the entire semester. A written qualifying examination and dissertation with a full dissertation committee are required following the didactic portion of the curriculum.

The PhD Health Sciences—Healthcare Leadership and Administration academic terminal degree program is committed to the development of an individual who can:

- Conduct independent, methodologically sound research and prepare manuscripts for publication.
- Collect and critically analyze research data.
- Integrate current literature and evidence-based practices through a systematic review and critical analysis approach to leading and administering the purveyance of healthcare.
- Build, adapt, and improve healthcare organizations for a dynamic healthcare society.
- Integrate leadership theory into administrative practices.
- Mediate and manage communication at every level within organized health system

Concentration Admission Requirements

There are no additional admission requirements for this concentration other than what is required for general admission to the PhD Health Sciences degree program.

Healthcare Leadership & Administration Course Descriptions:

18 credits (6 courses) of concentration courses are required. A minimum of 12 credits must be taken within the HLA concentration. Students can select alternative courses for the other 6 credits, with PD/CTD approval.

HLA 620 Healthcare Leadership **(3 credits; Online)**

Concepts of leadership related to current healthcare organizations are examined. Specific concepts including communications, public relations, team building, negotiation, and conflict resolution are explored. Strategic aspects such as vision, viewpoint, admission included. Managing uncertainty is discussed in relation to healthcare organizations. Contemporary leadership challenges, communication strategies and crisis communication are explored. Leadership functions and decision-making are analyzed.

HLA 670 Organizational Behavior & Management in Healthcare **(3 credits; 1.5 days On-site)**

This course supports knowledge of the theories of organizations, the use of leadership, management processes, and organizational structures and outcomes. Specific topics include governance, strategic management and marketing, human resources management, recruiting, training, process improvement, management theory, and employee wellbeing. This course is designed for future managers and leaders of healthcare organizations and those who expects to have extensive involvement with each from the perspective buyers, insurers, or policymakers. The course provides students with knowledge about how the best healthcare provider organizations deliver high quality, cost-effective healthcare, how the response to their environment, and how they reach and implement decisions about future activities.

HLA 680 Strategic Change Management for Healthcare Organizations **(3 credits; 1.5 days On-site)**

This course offers student opportunities to investigate and integrate change management practices to strategically position healthcare organizations for the future. Organization strategic position will be discussed with application to relevant theoretical models, and necessary change management practices resulting in development of organizational adaptability.

HLA 700 Healthcare Legal & Ethical Issues **(3 credits; Online)**

This course offers an exploration of the legal and ethical issues and dilemmas in the delivery of healthcare. The principles and practical application of laws and regulations affecting operational decisions of healthcare providers, health plans, and third-party payers are discussed. Social, moral, and ethical issues encountered in the balance of patient interests, needs and rights are also addressed.

HLA 710 Management & Entrepreneurship in Healthcare **(3 credits; Online)**

Introduces current and aspiring healthcare leaders to key dimensions of effective management and entrepreneurship. Explores professional, legal, and ethical aspects of development as healthcare professionals seeking to develop management and entrepreneurship opportunities. Synthesize of entrepreneurial and management competencies to plan and implement a simulated interdisciplinary business venture are explored.

HLA 740 Healthcare Delivery **(3 credits; Online)**

This course will train healthcare leaders to implement or teach principles of delivering better healthcare at lower costs through improving clinical and non-clinical processes. This course will introduce methods and tools for conducting quality improvement projects. Also discussed will be methods of health services research, teams and teamwork, outcome measurement, and medical informatics. A key learning experience of this course will be developing and implementing a quality improvement project.

Healthcare Professions Education Concentration

Jennifer Austin, PhD, LAT, ATC, GTS
Concentration Track Director

The concentration program in healthcare professions education prepares scholars and stewards of the discipline who can function as academicians and researchers in the scholarship of teaching and learning. Graduates can become leaders in the healthcare professions education community through the completion of the doctoral program. The curriculum offers a variety of courses with an adult learning theory emphasis including practical applications for the development of healthcare professions education students. The adult learning emphasis affords students an interactive environment focusing on the designing and assessment of learning for healthcare professions education. Coursework

includes instructional theory, design/delivery, and assessment of learning, experiential and inter-professional education content, education technology and curriculum development focused specifically on healthcare professions.

Evidence-based practice, quantitative and qualitative research, biostatistics, epidemiology, survey mixed methods research along with professional writing courses provide the core foundation to prepare scholars for the discipline. The curriculum is intended to increase the student's abilities to utilize research theory to enhance evidence-based practices, scholarship and prepare manuscripts for publication.

The program is designed to enable individuals to continue professional work obligations during the didactic portion of the program while completing eight semesters, consisting of online and blended course work. Students engage in readings, assignments, threaded discussions, group activities as well as attend on campus face-to-face interaction with peers and mentors in a traditional classroom setting. During the blended terms students travel to campus for 4-6 days of immersion experiences. Due to the nature of the blended model curriculum and to ensure the goals of the program are met, attendance at onsite meetings for any course that has an onsite component is mandatory. Not attending an onsite meeting without prior permission of the Program Director and instructor will result in a failure of that course (for more information see the Attendance Policy section in the University Handbook). Courses noted "Online" have no on-site days allotted. For all courses, students complete coursework throughout the entire semester. A written qualifying examination and dissertation with a full dissertation committee are required following the didactic portion of the curriculum.

The PhD Health Sciences Healthcare Professions Education concentration is committed to the development of an individual who can:

- Conduct independent, methodologically sound research and prepare manuscripts for publication.
- Collect and critically analyze research data.
- Integrate current literature and evidence-based practices through systematic process and critical analysis approach into various areas of education based upon the best practices of the scholarship of teaching and learning.
- Design learner-centered instruction, assessment and instructional delivery skills based upon evidence-based practices of the scholarship of teaching and learning.
- Integrate adult learning theory into professional teaching practices through an inter-professional education approach.
- Integrate curriculum/leadership theory into professional teaching and administrative practices that guide and direct healthcare professions accredited programs.
- Establish themselves as leaders in healthcare professions academic settings.

<u>Concentration Admission Requirements</u>

There are no additional admission requirements for this concentration other than what is required for general admission to the PhD Health Sciences degree program.

Healthcare Professions Education Course Descriptions:

18 credits (6 courses) of concentration courses are required. A minimum of 12 credits must be taken within the HPE concentration. Students can select alternative courses for the other 6 credits, with PD/CTD approval.

HPE 620 Clinical Education Experiential Design & Application for Healthcare Professions **(3 credits; Online)**

This course addresses the many issues germane to experiential or clinical education in the healthcare professions by reviewing the design, implementation and assessment of clinical experience in the healthcare fields. Among the topics to be covered include supervisory policies and practices, communication, feedback, developing clinical expertise and reasoning skills, professionalism, student learning documentation and mapping, preceptor/supervisor training and development, and the role of entrust able professional activities, competencies and milestones in student clinician development.

HPE 670 Learning Assessment & Evaluation **(3 credits; 1.5 days On-site)**

This course examines a variety of assessment models and techniques used to evaluate student classroom performance, student clinical performance, instructor performance and educational programs. Students will design and execute assessment plans, interpret assessment data and develop continuous improvement plans: *Prerequisite: HS 740*

HPE 700 Design & Implementation of Inter-Professional Education **(3 credits; 1.5 days On-site)**

Students will acquire the best evidence available and comprehensive appreciation for the many challenges, limitations, and opportunities in designing and implementing interprofessional education. This class will investigate the available literatures on IPE from around the world and across healthcare professions: what works, what doesn't, what to expect, how to go about tackling the IPE challenge, and what to expect in the way of challenges.

HPE 710 Advanced Methods in Cyber-Andragogy **(3 credits; Online)**

This course provides an opportunity to develop advanced online teaching and course design skills. This course is a continuation of instructional technology and will focus on enhanced online teaching/learning tools, resources, concepts, and challenges. Emphasis will be on designing active learning experiences for online learners. Students will revise and upgrade preexisting online courses, investigate relevant online learning topics and issues, and develop strategies for assessing online courses and student learning. *Prerequisite HPE 760*

HPE 718 Climate of Higher Education **(3 credits; Online)**

This course will focus on presenting and analyzing contemporary social, political and economic issues surrounding higher education and the effects these issues have on healthcare education programs. Current challenges in healthcare education programs will also be explored. Students will learn how to successfully navigate the role of a faculty member in the higher education environment. A brief history of higher education will be included.

HPE 752 Curriculum Design for the Healthcare Professions **(3 credits; Online)**

Students will learn how effective health professions curricula must integrate the basic and clinical sciences, connect didactic to experiential learning, be competency-based and time-variable, include andragogic underpinnings and approaches of delivery, and create meaningful program outcomes and assessment opportunities that verify quality and excellence. In addition, timely issues such as the curricular incorporation of clinical experiences/education, the sociocultural aspects of healthcare, and pertinent accreditation issues and constraints for healthcare professions will be addressed.

Health Promotion & Wellness Concentration

Mary Shotwell, PhD, OT/L, FAOTA
Concentration Track Director

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 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 theories of behavior change, principles of health promotion, wellness coaching, population health and ecological issues. The curriculum also includes coursework in risk factors and risk reduction strategies, motivational interviewing and resilience, integrative therapies, controversial topics in health promotion. Students who complete the curriculum will be eligible to sit for the International Consortium of Health & Wellness Coaches examination to become a National Board Certified Health & Wellness Coach (NBC-HWC).*

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 eight 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 two online only semesters) is required in each semester. The number of on-site days is course dependent. Due to the nature of the blended model curriculum and to ensure the goals of the program are met, attendance at onsite meetings for any course that has an onsite component is mandatory. Not attending an onsite meeting without prior permission of the Program Director and instructor will result in a failure of that course (for more information see the Attendance Policy section in the University Handbook). 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 Concentration is committed to the development of the healthcare professional who can:

- Access, evaluate, and integrate best evidence in health promotion and wellness programs, design guidelines and to provide current best practice to positively influence the health and quality of life of all people;
- Implement effective behavior change and motivational interviewing strategies for a variety of populations and settings;
- Contribute to the evidence in health promotion and wellness by designing, conducting, and disseminating original research or case studies;
- Develop learner-centered instruction and instructional delivery methods based upon best practices of the scholarship of teaching and learning.
- 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 and within healthcare.

<u>Concentration Admission Requirements</u>
There are no additional admission requirements for this concentration other than what is required for general admission to the PhD Health Sciences degree program.

<u>Health Promotion & Wellness Course Descriptions:</u>
18 credits (6 courses) of concentration courses are required. A minimum of 12 credits must be taken within the HPW concentration. Students can select an alternative course for the other 6 credits, with PD/CTD approval.

WE 610 Population Health Issues **(3 credits; 1.5 days On-site)**

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.

WE 623 Wellness Promotion & Programming **(3 credits; Online)**

This course provides the business and human rationale for wellness promotion, health education, and public health programs. Best practice for program design, implementation, and evaluation are examined as is the development and use of needs analyses, health risk assessments, and biometric measures to educate clients/patients and guide programming. Evidence based group and individual motivational strategies are included.

WE 700 Theories of Behavior Change **(3 credits; Online)**

This course explores the principal theories of behavior that drive evidence based practice in health/wellness education and coaching. Emphasis is placed on the determinants of group and individual behavior and behavioral economics in the context of health and wellness is included. Effective application of various theories to create education and/or interventions to alter behaviors of targeted groups or individuals is examined. Some synchronous sessions are required.

WE 710 Theories & Application of Wellness Coaching **(3 credits; Online)**

This course explores the theoretical basis and the evidence supporting health and wellness coaching. The concept and structure of the coaching approach for facilitating sustainable behavior change is examined. The major tenets of coaching strategies including motivational interviewing, appreciative inquiry, and positive psychology are explained and practiced. The coaching process is emphasized with focus placed on developing one-on-one practical coaching skills. Several synchronous sessions are required.

WE 711 Advanced Wellness Coaching **(3 credits; Online)**

This course provides an opportunity to practice and develop the health/wellness coaching competency required for teaching and practicing coaching. Knowledge and skills developed in prerequisite courses are synthesized and expanded. Emphasis is placed on the application of coaching skills, and practice sessions with feedback are included. Also included is the business of health/wellness coaching including ethics and legalities. A practical skills exam and several synchronous sessions are required. Pre-requisite: WE 710.

WE 717 Integrative Therapies in Health Promotion **(3 credits; 1.5 days 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.

Human & Sport Performance Concentration

Michael G. Miller, PhD, CSCS*D, FNATA, FNSCA
Concentration Track Director

The Human and Sport Performance concentration includes a multidisciplinary focus with courses designed to increase the student's competency and knowledge base in the various disciplines of exercise science, injury prevention, health, and sport or occupational performance. The core courses and directed independent study courses are designed to expand scientific inquiry and outcomes assessment, enhance research and consultation skills, and improve teaching and administrative skills, and offers expanded study in the advanced skills of applied sport science, human performance evaluation, strength and conditioning methods, training program design for various populations, the use of advanced coaching theories and strategies, advanced nutrition, and the development and use of technology in various areas of sport and occupational performance.

The program is designed to enable practitioners to continue professional work obligations during the didactic portion of the program while completing eight semesters, consisting of online and blended course work. Students engage in readings, assignments, threaded discussions, group activities well as attend on campus face-to-face interaction with peers and mentors in a traditional classroom setting. During the blended terms students travel to campus for 4-6 days of immersion experiences. Due to the nature of the blended model curriculum and to ensure the goals of the program are met, attendance at onsite meetings for any course that has an onsite component is mandatory. Not attending an onsite meeting without prior permission of the Program Director and instructor will result in a failure of that course (for more information see the Attendance Policy section in the University Handbook). Courses noted "Online" have no on-site days allotted. For all courses, students complete coursework throughout the entire semester. A written qualifying examination and dissertation are required following the didactic portion of the curriculum.

The Human and Sport Performance is committed to the development of an individual who can:

- Integrate current best practices into the evaluation of sport performance
- Modify practice strategies to optimize changing practice environments;
- Effectively educate patients/clients, families, students, other healthcare professionals and the general public;
- Effectively interact with other members of the healthcare system and/or performance team to support human performance enhancement;

- Review, use and critique research literature;
- Conduct methodologically sound clinical and applied research;
- Impact the future to enhance and ensure quality human performance intervention strategies.

Concentration Admission Requirements

A Master's degree in an area related to human performance, exercise science, kinesiology, or other allied health programs.

Human & Sport Performance Course Descriptions:

18 credits (6 courses) of concentration courses are required. A minimum of 15 credits must be taken within the HSP concentration. Students can select an alternative course for the other 3 credits, with PD/CTD approval.

HP 610 Advanced Sport Performance Technology **(3 credits; Online)**

This course will focus on technologies that have been developed to reach human interests or goals related to a particular sport. It will focus on the types, and appropriate selection and use of technology by which sport performance coaches attempt to improve training and competitive surroundings and enhance overall athletic performance. The course will provide knowledge and application of using specialized equipment and the latest modern technologies to perform tasks more efficiently, such as equipment, athletic sports gear (clothing and footwear), advanced computer stimulations and motion capture.

HP 702 Applied Sports Science **(3 credits; Online)**

This course reviews the various disciplines that play important roles in sports performance enhancement including biomechanics, motor learning, exercise physiology, and sport psychology. In addition, sociological aspects will be discussed regarding applications of science to different populations including athletes and tactical personnel. Applied projects will assist the student in taking foundational knowledge and applying it to real world sports scenarios to solve problems, enhance training, reduce injuries, or improve performance. Lecture, discussion, and presentation by student.

HP 704 Methods & Programming in Strength & Conditioning **(3 credits; 1.5 days On-site)**

This course will expose students to advanced methods in various venues of strength and conditioning. Current research and practice are examined for advanced training strategies in use at different levels of competition. Students will examine different methods currently in use in the field and discussed in the literature on selected topics and demonstrate appropriate implementation of advanced training methods. Additionally, this course will refine the students' ability to construct an advanced training program designed to enhance performance in specific ways. The student will demonstrate the ability to critically analyze and alter a training program.

HP 706 Sports Nutrition for Human Performance **(3 credits; Online)**

This course will discuss, in detail, scientific and practical applications of nutrition for sports. Integrated discussions spanning exercise physiology and nutrition on topics that relate to aerobic and anaerobic performance, health, weight gain, weight loss and recovery will be covered. Class assignments will broaden the student's knowledge, writing ability and competence at both retrieving and summarizing scientifically-based information.

HP 710 Applications of Exercise Science in Tactical Fitness & Performance **(3 credits; 1.5 days On-site)**

This course will introduce students to the various methods and strategies for improving performance in military, law enforcement, and fire department venues. Topics such as injury prevention and tactical job preparation will be discussed with students completing applied projects in selected tactical operations. Tactical fitness research and literature will serve as the content for developing professionals capable of supporting the tactical field with evidence-based practice.

HP 714 Recovery and Regeneration **(3 credits; 1.5 days On-site)**

This course will examine the science and history behind various advanced methods of recovery and regeneration techniques for the human body. The evidence will be reviewed in numerous topics including nutritional strategies, sleep habits, hydrotherapies, cryotherapy, sports supplementation, nutrient timing, and massage therapy. Through an evidence led approach, students will demonstrate the ability to evaluate and identify various types of fatigue, prescribe the appropriate regeneration modality, and periodize a recovery program based upon the principles learned in HP 704 (Methods and Programming in Strength and Conditioning).

Integrated Health Sciences Concentration

Mary P. Shotwell, PhD, OTR/L, FAOTA
Concentration Track Co-Director

Michelle Webb, EdD, OTD, OTR/L
Concentration Track Co-Director

The Integrated Health Sciences concentration includes a multidisciplinary focus and the option to explore multiple facets and content knowledge across the health sciences. The curriculum is designed to provide the student a multidimensional exploration of health sciences including the fields of Athletic Training, Health & Wellness Promotion, Healthcare Professions Education, Healthcare Leadership & Administration, Human & Sports Performance, Neurologic Rehabilitation and Pediatric Science leading to the ability to conduct creative scholarly inquiry advancing the body of knowledge in an interdisciplinary sense. The central element of the program is the completion of a dissertation that incorporates clinical research and advances knowledge in the area of professional interest.

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 Integrated Health Sciences concentration in Health Science allows the student to tailor their concentration courses to meet professional and academic goals that cross disciplines offered within the PhD program at large. This concentration is designed to address a critical need for doctoral-prepared persons in the health sciences that have an interdisciplinary focus. Program graduates will be able to fulfill local, regional, and national shortages in academic positions and improve the ability to educate more health clinicians at the community college, bachelor, masters, and doctoral levels. The concentration adds research acumen and expands existing content knowledge individualized to each student's interests so that graduates are prepared to fulfill faculty and other professional leadership positions in clinical, research, or other professional settings. For example, an applicant that is a practicing nurse may wish to develop community-based wellness programming and research the efficacy of that programming; they may take courses within the Health Promotion & Wellness concentration as well as the Healthcare Leadership and Administration concentrations. An applicant with clinical experience in physical or occupational therapy who seeks an academic position may take courses in the Healthcare Professions Education and Neurologic Rehabilitation concentrations.

The program is designed to be completed with minimal lifestyle disruption. It 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 eight 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 two online-only semesters), is required in each semester. The number of on-site days is course dependent. Due to the nature of the blended model curriculum and to ensure the goals of the program are met, attendance at onsite meetings for any course that has an onsite component is mandatory. Not attending an onsite meeting without prior permission of the Program Director and instructor will result in a failure of that course (for more information, see the Attendance Policy section in the University Handbook). 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 a dissertation are required.

The PhD Health Sciences integrated health sciences concentration is committed to the development of an individual who can:

- Access, evaluate, and integrate best evidence in the health sciences, design guidelines and to provide current best practice to positively influence the health and quality of life of all people;

- Approach health care issues from multiple perspectives and through the integration of knowledge from various professions
- Contribute to the evidence across health professions by designing, conducting, and disseminating original research or case studies;
- Develop learner-centered instruction and instructional delivery methods based upon best practices of the scholarship of teaching and learning.
- Provide leadership and service in healthcare research, academia, and the community at the local, regional, national, and international levels:
- Become a leader in the integration of evidence-based practice within traditional health disciplines and within healthcare.

Concentration Admission Requirements
There are no additional admission requirements for this concentration other than what is required for general admission to the PhD Health Sciences degree program.

Integrated Health Sciences Concentration Courses:
There is a requirement of 18 credits (6 courses) of courses from available concentrations, which include Athletic Training, Health Promotion & Wellness, Healthcare Professions Education, Healthcare Leadership & Administration, Human & Sports Performance, Neurologic Rehabilitation, and Pediatric Science. Elective research or elective support options are required (if courses chosen have prerequisites, then prerequisites must be met, or if courses require prerequisite knowledge or skills, then permission must be granted by relevant CTD). There must be at least two courses of the six required taken from the same concentration area.

Neurologic Rehabilitation Concentration

Kristen Johnson, PT, EdD, MS, NCS
Concentration Track Director

The Neurologic Rehabilitation concentration includes a diverse curriculum designed to aid the professional in the development of further knowledge, skills and abilities essential for obtaining maximum recovery or acquisition of function for individuals with neurological deficits. The curriculum builds upon each professional's clinical degree and expertise with rigorous coursework in evidence-based practice, rehabilitation systems physiology, applied neuroscience/neurophysiology, motor control and learning, clinical technology, and advanced neurologic interventions. This concentration is committed to the development of lifelong scientific scholars who can conduct, evaluate and integrate research findings into their daily academic agenda and/or clinical practice; act in leadership roles in their discipline and community; provide the highest level of intervention to their patients/clients; and participate in graduate education environments to teach the next

generation of clinical scientists and educators. This doctoral program will prepare scientific scholars that can function as clinicians, researchers, or academicians.

Due to the nature of the blended model curriculum and to ensure the goals of the program are met, attendance at onsite meetings for any course that has an onsite component is mandatory. Not attending an onsite meeting without prior permission of the Program Director and instructor will result in a failure of that course (for more information see the Attendance Policy section in the University Handbook).

Concentration Admission Requirements

There are no additional admission requirements for this concentration other than what is required for general admission to the PhD Health Sciences degree program.

Neurologic Rehabilitation Course Descriptions:

18 credits (6 courses) of concentration courses are required. A minimum of 15 credits must be taken within the Neuro concentration. Students can select an alternative course for the other 3 credits, with PD/CTD approval. If student is in the Integrated Health Sciences concentration they must receive permission from the Neurologic Rehabilitation CTD to take any of these concentration courses.

WE 623 Wellness Promotion & Programming **(3 credits; Online)**

This course provides the business and human rationale for wellness promotion, health education, and public health programs. Best practice for program design, implementation, and evaluation are examined as is the development and use of needs analyses, health risk assessments, and biometric measures to educate clients/patients and guide programming. Evidence based group and individual motivational strategies are included.

N 720 Neuroscience Systems **(3 credits; Online)**

This course will focus on the structure and function of the central nervous system. It is designed to provide a survey of the functional components of the nervous system and an understanding of the functional brain at a systems level; specifically integrate aspects of neuroanatomy with physiology to allow association of brain areas with the various functions. Items to be discussed include the areas and mechanisms of the brain that process sensory and motor information. The brain's reaction to sensory input as well as the ability of the brain to adapt and change as a result of input will be highlighted. In addition, various diseases/injuries will be explored to provide an understanding of normal and pathophysiological brain function.

N 722 Clinical Neuroscience and Contemporary Motor Models **(3 credits, Online)**

This course will serve to review, update, and synthesize evidence from the neurosciences as a foundation for clinical practice, as well as explore the fundamental principles, limitations, and clinical implications of the theories of motor control and motor learning influencing clinical practice. It will include the incorporation of constructs from motor learning and motor control theories into therapeutic intervention for individuals with a

variety of movement problems resulting from neurological dysfunctions. Trends in models of service delivery: medical, educational, community, and social models, will be analyzed and approached from a modern evidence-based perspective.

N 724 Neurological Screenings and Outcomes Assessment **(3 credits, Online)**
This course will explore the selection, utilization, and interpretation of screening and outcome assessments within the current healthcare environment including standardized tools for assessment of health status based on the validity, reliability and responsiveness of the instrument, and how the assessments relate to the International Classification of Functioning, Disability, and Health (ICF) model.

N 727 Advanced Neurologic Practice Part I **(3 credits; Online)**
This course will focus on comprehensive management of the individual with stroke, traumatic brain injury, brain tumor, and neurodegenerative disorders. The pathophysiology, pharmacology, and imaging will be used to design evidence-based interventions, grounded in the International Classification of Functioning, Disability, and Health (ICF) framework, that foster advanced clinical decision making for prediction, prevention, plasticity, and participation in physical therapy practice.

N 729 Advanced Neurologic Practice-Part II **(3 credits; 1.5 days On-site)**
This course will focus on the comprehensive management of the individual with spinal cord injury, demyelinating and vestibular disorders. The pathophysiology, pharmacology, and imaging will be used to design evidence-based interventions, grounded in the International Classification of Functioning, Disability, and Health (ICF) framework, that foster advanced clinical decision making for prediction, prevention, plasticity, and participation in physical therapy practice.

Pediatric Science Concentration

Jane Sweeney, PhD, PT
Concentration Track Director

The Pediatric Science Concentration curriculum prepares pediatric therapists to develop and conduct research related to children or families and to teach in academic and clinical settings. This program involves faculty from varied Universities sharing expertise in pediatrics and participating in dissertation research committees. Academic teaching, scientific writing, and professional leadership development are highlighted throughout the program. Professionals with pediatric clinical experience in physical therapy, occupational therapy, or speech-language pathology are invited to join a multidisciplinary cohort in the concentration area.

The central element of the program is the completion of a dissertation that incorporates experimental research and advances knowledge in the area of pediatric therapies. Evidence-based practice, quantitative and qualitative research, biostatistics, survey mixed methods research and professional writing courses provide the core foundation to prepare scholars for the discipline.

The program is designed to enable students to continue professional work obligations during the didactic portion of the program while completing eight semesters, consisting of online and blended course work. Students engage in readings, assignments, threaded discussions, group activities as well as attend on campus face-to-face interaction with peers and mentors in a traditional classroom setting. During the blended terms students travel to campus for 4-6 days of immersion experiences. Due to the nature of the blended model curriculum and to ensure the goals of the program are met, attendance at onsite meetings for any course that has an onsite component is mandatory. Not attending an onsite meeting without prior permission of the Program Director and instructor will result in a failure of that course (for more information see the Attendance Policy section in the University Handbook). Courses noted "Online" have no on-site days allotted. For all courses, students complete coursework throughout the entire semester. A written qualifying examination and dissertation with a full dissertation committee are required following the didactic portion of the curriculum.

The following professional outcomes are expected for Pediatric Science Concentration graduates of the PhD in Health Sciences program:

- Provide clinical teaching and advanced practice consultation on selected evidence-based clinical examination and intervention in pediatric specialty settings
- Demonstrate leadership and professional service in community, regional, or national levels for advocacy or advancement of respective pediatric therapy professions
- Design, conduct, and present research of high scientific merit and clinical relevance involving children or families

<u>Concentration Admission Requirements</u>

Students seeking admission to the Pediatric Science Concentration must have a minimum of two (2) years in pediatric practice (physical therapy, occupational therapy, or speech-language pathology).

<u>Pediatric Science Course Descriptions:</u>

18 credits (6 courses) of concentration courses are required. A minimum of 12 credits must be taken within the PEDS concentration. Students can select alternative courses for the other 6 credits, with PD/CTD approval. If student is in the Integrated Health Sciences concentration they must have two years of pediatric therapy experience and receive permission from the Pediatric Science CTD to take any of these concentration courses.

P 608 Assistive Technology for Children with Motor, Behavioral, & Communication Impairment **(3 credits; Online)**

Theoretical frameworks and evidence are analyzed to guide the application of technology for children with disabilities in early intervention, school, and home environments. Strategies are examined for evaluating, designing, and selecting technology systems to facilitate participation across life activities. Practitioner competencies are reviewed and research gaps are analyzed with emphasis on outcome studies of assistive technology effects on practice. Specific assistive technologies options for review are technologies for learning, computer access, cognitive aids and communication, electronic aids for daily living, and environmental modification.

P 704 Pediatric Pathological & Genetic Conditions: Etiology, Pathophysiology, Clinical Course, & Pediatric Therapy Examination & Intervention **(3 credits; Online)**

Overview and evidence- based practice analyses are presented on etiology, pathophysiology, clinical course, and key pediatric therapy management issues. Family dynamics and stressors are addressed in the context of trauma-informed care and grief processes.

P 707 Oral-motor & Feeding Impairments in Infants & Children With Medical Fragility **(3 credits; Online)**

Examination and management of feeding and swallowing disorders are explored for infants and children with respiratory, neuromuscular, and oral structural impairments. Evidence refuting or supporting practice approaches are analyzed, and related practice guidelines examined. Current research gaps and clinical questions are identified for future dissertation projects.

P 710 Pediatric Research Seminar **(3 credits; Online)**

Explore research team and/or lab setting: conduct site visit(s) to a research lab or research team and present post-site visit reflection and analysis; investigate feasibility of study settings and methods for infant or child participants; identify strategies for adapting research procedures for children (motivation, endurance, and safety); review options for study participant recruitment and consent; obtain designs of recruitment brochures and flyers; identify topic(s), potential settings, content experts, and methods for dissertation-related pilot study; attend research team meeting.

P 719 Family Studies & Research Process **(3 credits; 1.5 days on-site)**

Multiple topics are analyzed on family system theories, theoretical frameworks of family development and functioning, extrinsic and intrinsic factors influencing family functioning, and ecological / transactional models of child development. Concepts of family assessment, family-centered care, culture, stress, and coping are included. A synthesis paper is

submitted involving literature analysis and application to a pediatric therapy and family topic. Research questions, variables, and theoretical mapping are discussed.

P 740 Lifespan Participation from Infancy to Adulthood: Complex Integration of Mobility, Sensory Processing, & Communication **(3 credits; 1.5 days On-site)**

This course is centered on analyzing the process and outcome of participation in children to age 21 years. Components of sensory processing, mobility, and communication are explored in promoting or limiting participation in daily life. Case analyses and research evidence are used to examine effects and interaction of the following factors: pathomechanics, developmental kinesiology, sensory processing, respiration – communication, fatigue, pain, and resiliency.

P 750 Neuroscience in Pediatric Rehabilitation **(3 credits; Online)**

Neuroanatomy and neurophysiology are reviewed with application to pediatric neurological conditions and neural control of human movement. An overview of key concepts in motor control, motor learning, and neural plasticity is included with emphasis on movement and sensory dysfunction in children with neuropathology.

P 755 Pediatric Research Independent Study **(3 credits; Online)**

A directed independent study option is offered to support a focused component in pediatric studies or pediatric research process not directly addressed in other courses. The focus, objectives, and activities are individually designed between the student and pediatric science concentration area director. The independent study option is offered during two online semesters but can be taken only once.

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