

RHB-Rehabilitation Science

RHB 500. Introduction to Rehabilitation Science. 3 Hours.

Encapsulating science from the level of the cell and body structure to the person, family, community and society level, rehabilitation science serves as a foundation and the body of knowledge by which individuals may develop and evaluate current and emerging approaches to enhancing enablement and minimizing disability.

RHB 575. Special Topics in Rehabilitation Science. 1-4 Hour.

Exploration of current topics in Rehabilitation Sciences.

RHB 590. Quantitative Biomechanics of Injury and Rehabilitation. 3 Hours.

Material, mechanical, electrophysiological and energetic principles of human movement. Comparison of non-impaired versus impaired systems in relation to injury/disability.

RHB 704. Analysis of Human Movement for Rehabilitation Science. 3 Hours.

Study of human movement through an examination of the movement patterns during common motor skills (e.g., walking). The kinematics and kinetics related to movement across the lifespan.

Prerequisites: RHB 780 [Min Grade: C]

RHB 706. Neuroscience I for Rehabilitation Science. 3 Hours.

Study of the structure and function of the human nervous system with emphasis on sensory/motor function in Rehabilitation Science.

Prerequisites: RHB 780 [Min Grade: C]

RHB 707. Neuroscience II for Rehabilitation Science. 3 Hours.

Study of the theories of motor control and motor learning will serve as a foundation for the understanding of how the central nervous system is organized in relation to human movement. Assists students in integrating knowledge with human anatomy, physiology, and biomechanics in relation to the production of human movement.

Prerequisites: RHB 780 [Min Grade: C]

RHB 720. Pathology and Pharmacology for Movement Disorders I for Rehabilitation Science. 3 Hours.

Overview of clinical medicine related to management of movement disorders. Basic principles of pathology and pharmacology. Exploration of physical therapy/rehabilitation implications associated with medical and surgical management of disorders with emphasis on clinical manifestations, management, and physical therapy/rehabilitation implications.

Prerequisites: RHB 780 [Min Grade: C]

RHB 721. Pathology and Pharmacology for Movement Disorders II for Rehabilitation Science. 3 Hours.

Exploration of medical and surgical disorders with emphasis on clinical manifestations, management, and rehabilitation implications.

Prerequisites: RHB 780 [Min Grade: C] and RHB 720 [Min Grade: C]

RHB 730. Essentials of Human Physiology for Rehabilitation Science. 3 Hours.

Fundamental principles and concepts of human physiology are covered regarding cell physiology, the cardiovascular, endocrine, gastrointestinal, pulmonary, renal, and skeletal muscle systems. Both cellular and systemic issues are addressed with an emphasis on a mechanistic and integrative approach to understanding function.

Prerequisites: RHB 780 [Min Grade: C]

RHB 731. Human Performance Physiology for Rehabilitation Science. 3 Hours.

Course provides fundamental knowledge about the adaptability of human physiological systems in meeting a range of exercise demands. Areas covered include energy transfer during rest and exercise, physiologic and performance adaptations, exercise prescription for healthy adults, and body composition. Research evidence regarding how exercise and physical activity impact health, wellness, and disease is included as related to rehabilitation science.

Prerequisites: RHB 780 [Min Grade: C]

RHB 740. Teaching Practicum. 1-3 Hour.

Individually designed, directed teaching experience in focus area appropriate to student's background, needs, and goals under guidance of faculty preceptor.

Prerequisites: RHB 780 [Min Grade: C] and RHB 781 [Min Grade: C] and RHB 782 [Min Grade: C] and RHB 783 [Min Grade: C] and RHB 784 [Min Grade: C]

RHB 746. Rehabilitation Science Journal Club. 1 Hour.

Student-led, facilitated discussion of current, impactful published research in rehabilitation science. Interaction with scientists and clinicians from multiple disciplines contributing to the rehabilitation science.

RHB 770. Systematic Review Protocol Development. 3 Hours.

Provides knowledge of formalized methods to plan and execute a systematic review on a topic of choice.

RHB 775. Special Topics in Rehabilitation Sciences. 1-4 Hour.

Exploration of current issues in Rehabilitation Sciences.

RHB 780. Principles of Rehabilitation Science: Movement Science. 3 Hours.

Interdisciplinary discussion of concepts, theories, principles, and research literature underlying the understanding of neural control, biomechanics, motor learning, and motor development and how purposeful and functional body movements are accomplished under a variety of health conditions and disease processes.

RHB 781. Principles of Rehabilitation Science: Exercise Science. 3 Hours.

Interdisciplinary discussion of concepts, theories, principles, and research literature underlying the understanding of cardiac and pulmonary physiology, exercise physiology, and health behaviors and how important activities are accomplished under a variety of health conditions and disease processes.

RHB 782. Principles of Rehabilitation Science: Occupation Science. 3 Hours.

Interdisciplinary discussion of concepts, theories, principles, and research literature underlying the understanding of occupation science and how work and play activities are accomplished under a variety of health conditions and disease processes.

RHB 783. Research Design/Measurement in Rehab Sci. 3 Hours.

A detailed overview of research design and methodologies used in rehabilitation science, including quantitative and qualitative methods.

RHB 784. Res Design/Measure Rehab Sc II. 3 Hours.

A detailed overview of research design and methodologies used in rehabilitation science, including quantitative and qualitative methods. A continuation of Research Design and Measurement in Rehabilitation Science I.

RHB 785. Principles of Behavior Change in Rehabilitation Science. 3 Hours.

Scientific and theoretical principles underlying health behavior change in the context of rehabilitation science; health behavior from an ecological perspective; seminal behavior change theories; key elements required for design, implementation, and analysis of rigorous health behavior change research.

RHB 789. Rehab Science Seminar. 1-2 Hour.

Varied discussion of rehabilitation science topics to help students explore research questions in preparation for their dissertation.

RHB 795. Rehabilitation Science Research Proposal. 3 Hours.

Instruction and support for writing a Rehabilitation Science research proposal. Topics to be covered include but are not limited to: developing the Specific Aims, Abstract, Narrative, Significance, Innovation, and Research Strategy sections; creating figures and tables; planning and writing the training and career development sections; developing the biosketch; understanding other grant sections and the scientific review process.

Prerequisites: RHB 780 [Min Grade: C]

RHB 798. Non Dissertation Research. 1-9 Hour.

Development of research proposal.

RHB 799. Dissertation Research. 1-9 Hour.

Dissertation Research.

Prerequisites: GAC Z