



Doctor of Philosophy in Interdisciplinary Health Sciences Kinesiology Sub Plan

Students must complete 24 credits in the interdisciplinary health sciences core—12 of which are dissertation credits—and must complete 36 credits in the sub-plan core. The minimum credit total in the program is 60 credits.

In the interdisciplinary health sciences core, students will be required to take all of the following courses:

- HSC 710 Seminar (1 credit, to be taken three times)
 - Example topics: global healthcare, health policy, health systems, health innovations
- HSC 799 Dissertation (12 credits minimum required)
 - Two committee members will be from faculty who are in other sub-plans.

In the interdisciplinary health sciences research core, students will be required to take three of five of the following courses:

- HSC 701 Interdisciplinary team science (3 credits)
- HSC 702 Translational research design (3 credits)
- HSC 703 Interdisciplinary grant writing for health sciences (3 credits)
- HSC 704 Statistics for health sciences (3 credits)
- HSC 705 Clinical trial design and analysis (3 credits)

Students must complete 36 credits in the kinesiology sub plan.

Two of the following four courses (6 credits total):

- KIN 736 Biomechanical Applications in Kinesiology (3)
- KIN 740 Advanced Exercise Physiology (3)
- KIN 760 Motor Skill Learning & Performance (3)
- KIN 765 Neurophysiology of Movement (3)

Both of the following courses (6 credits):

- KIN 752 Selected Applications in Statistics 2 (or other advanced stat course) (3)
- KIN 789 Dissertation Prospectus (3)

Students then select an area of emphasis—biomechanics, exercise physiology, or motor learning/control—and take 24 credits within that area:

Biomechanics electives (24 credits)

- KIN 700 Special Problems (up to 9 credits)
- KIN 736 Biomechanical Applications in Kinesiology (3 credits)
- KIN 737 Biomechanics of Strength (3 credits)
- KIN 743 Research Techniques in Biomechanics (3 credits)
- KIN 746 Computational Biomechanics (3 credits)
- KIN 656 Biomechanics of Endurance Performance (3 credits)
- KIN 760 Motor Skill Learning & Performance (3 credits)
- KIN 765 Neurophysiology of Movement (3 credits)
- KIN 788 Independent Study (up to 9 credits)
- KIN 790 Guided Research in Health Sciences (3 credits)
- PTS 710 Neuroplasticity (3 credits)
- PTS 711 Pathobiomechanics (3 credits)
- EGG 747 Orthopedic Biomechanics (3 credits)
- EGG 750 Analysis of Human Movement (3 credits)
- EGG 651 Ergonomics (3 credits)
- Other graduate level courses relevant to course of study

Exercise Physiology electives (24 credits)

- KIN 607 Comp & Integrative Med. Nutr Therapy (3 credits)
- KIN 657 Physiology of Endurance Performance (3 credits)
- KIN 700 Special Problems (up to 9 credits)
- KIN 720 Issues & Trends in Exercise Physiology (3 credits)
- KIN 738 Human Physiology (3 credits)
- KIN 739 Evaluation of Physical Work Capacity (3 credits)
- KIN 744 Thermoregulation during Physical Work (3 credits)
- KIN 745 Human Energy Metabolism (3 credits)
- KIN 754 Epidemiology of Nutrition and Physical Activity (3 credits)
- KIN 765 Neurophysiology of Movement (3 credits)
- KIN 788 Independent Study (up to 9 credits)
- KIN 790 Guided Research in Health Sciences (3 credits)
- Other graduate level courses relevant to course of study

Motor learning/Control electives (24 credits)

- KIN 614 Enhancing Mental and Motor Abilities (3 credits)
- KIN 700 Special Problems (up to 9 credits)
- KIN 743 Research Techniques in Biomechanics (3 credits)
- KIN 746 Computational Biomechanics (3 credits)
- KIN 760 Motor Skill Learning & Performance (3 credits)
- KIN 762 Motor Learning Applications (3 credits)

- KIN 788 Independent Study (up to 9 credits)
- KIN 790 Guided Research in Health Sciences (3 credits)
- EGG 750 Analysis of Human Movement (3 credits)
- PSY 620 Psychology of Learning (3 credits)
- PSY 701 Biological Bases of Behavior (3 credits)
- PSY 702 Sensation and Perception (3 credits)
- PSY 703 Cognitive Psychology (3 credits)
- PSY 719 Behavioral Neuroscience (3)
- PSY 720 Systems and Cognitive Neuroscience (3 credits)
- PSY 741 Psychology and Health (3 credits)
- PSY 742 Psychopharmacology (3 credits)
- PSY 744 Neuropsychology (3 credits)
- Other graduate level courses relevant to course of study