

## **Sports Performance Graduate Comprehensive Exam in Kinesiology KINE 585**

The graduate comprehensive exam in Kinesiology is a four-hour written exam that consists of two sections. The focus of the comprehensive exam is to have students synthesize and apply information they have gained throughout their coursework. The first section is focused on application and synthesis of content knowledge in the Sports Performance concentration. The second section is focused on application and synthesis of research knowledge.

The comprehensive exam will take place on Friday afternoon during the 6<sup>th</sup> week of the quarter the student is enrolled in KINE 585. The particular date and time will be provided to you by the Comprehensive Exam Coordinator for the Department of Kinesiology.

Here is some information that will be helpful in preparing for your written comprehensive exam.

### **Content Section:**

The content section of the exam is focused on application, so you will be given scenarios of two different individuals and provided several questions that ask you to address specific issues that go along with the scenarios.

The following topics from the “Foundational Courses” in the Sports Performance concentration are relevant and will be included only for the Foundational Courses you have taken as a part of your Plan of Study.

1. Theories of motor control and learning, motor development across the lifespan, neurophysiology of motor control, motor skill acquisition and retention, perception-action coupling, and measurement and assessment in motor behavior
2. Skeletal muscle physiology, cardiopulmonary physiology, bioenergetics and metabolism, and endocrinology and exercise
3. Factors affecting muscular force, EMG, gait analysis, inverse kinematics/dynamics, joint mechanics, equipment used in biomechanics, and simulation
4. Psychological factors influencing performance, motivation, focus, and mental toughness, techniques for managing stress and anxiety in athletes, and goal setting and visualization

The following topics from the “Specialization Courses” in Sports Performance are relevant and will be included only for the Specialization Courses you have taken as a part of your Plan of Study.

1. Appropriate physiological field and lab tests to run for different individuals
2. ACSM/NSCA guidelines for flexibility, cardiovascular fitness, muscular strength, power, and power endurance
3. Physiological (skeletal muscle, cardiopulmonary, metabolic) adaptations to sport conditioning and resistance training programs
4. Metabolic adaptations to exercise, such as oxygen deficit, lactate threshold, aerobic capacity, and recovery
5. Neuromuscular, cardiovascular, and physiological responses to performing in a sport situation
6. Exercise performance and environmental stress (hot and humid or cold)

**Research Section:**

The second section of the comprehensive exam is focused on research. For this section, you should be able to identify and/or critique limitations, independent and dependent variables, methodology including appropriate statistical analyses for different research questions and data, and threats to validity for a sample study. Thus, you need to be able to understand and interpret research in terms of methods as opposed to doing calculations. Article critiques in your coursework have provided you with experience for this part of the comprehensive exam. In the interest of time, we provide a copy of a research poster for this section of the comprehensive exam. One way to prepare for this section is to review/critique research posters that are on the walls in Memorial Gym. *The research poster we provide you will be reduced to 8.5" x 11" paper. If you require contacts or glasses for reading small print, you will need to wear those for the exam.*

\*Students are sometimes challenged by time. You need to be able to use your time efficiently and appropriately so that you can answer all questions in an effective manner.

**Grading:**

Each section is graded by two graduate faculty in areas of their expertise. The grading scale is as follows:

- 3 = A: An A response is excellent. It demonstrates clear mastery of the material and provides an excellent level of depth and detail. The response exhibits excellent understanding of the topic of focus, makes excellent arguments, and responds in a logical, well-organized, and well-written manner.
- 2 = B: A B response is adequate. It demonstrates an acceptable mastery of the material and provides some depth and detail. The response exhibits acceptable understanding of the topic of focus, makes acceptable arguments, and responds in a logical and organized manner.
- 1 = C: A C response is unacceptable. It does not demonstrate mastery of the material and little or no detail. The response exhibits poor understanding of the topic of focus, makes simple or weak arguments, and in a disorganized, poorly written manner.
- 0 = D: A D response is incomplete or does not address the material or topic of focus.

If you have questions about the exam, please feel free to contact the faculty in your concentration area and/or the Comprehensive Exam Coordinator for the Department of Kinesiology.