KNES 441/443/445 – PRACTICUM COURSE

Practicum Position Title:  Biomechanics & Performance Analysis in Sport

Number of Positions Available:  3

Industry/Company Description:  Centre for Video & Performance Analysis (CVPA) / Canadian Sport institute Calgary (CSIC)

The Centre for Video & Performance Analysis (CVPA) is home to cutting edge technology that has the potential to revolutionize the sporting world in Canada. The CVPA specializes in research, development, and implementation of new, innovative video and technology analysis tools for sport from grassroots to elite levels. In collaboration with the Canadian Sport Institute Calgary (CSIC) the CVPA works to implement technologies for use with elite/Olympic athletes.

The CVPA’s and CSIC’s objective is to use technology to enhance athletic performance and be on the forefront of novel technological applications in sport. Such technological applications include visualization, virtual reality, biomechanical analysis, video database storage, technology integration/implementation and virtual coaching.

Location:  Canadian Sport Institute Calgary (Canada Olympic Park) and/or Fac of Kinesiology, University of Calgary

Terms:  Fall, Winter or Spring

Required Hours Per Week:  60-72 hours per term
  - 5-6 hours/week during fall and winter
  - 10-12 hours/week during spring

Specified Schedule:  TBA

Project Duties/Responsibilities:
  - Students will become familiarized with the application of video analysis and technology techniques that can be applied with a variety of sports. Students will be partnered with a member of Biomechanics & Performance Analysis team at CSIC and work on various ongoing projects related to improving athlete performance.
  - Students will become proficient with video analysis software, such as Dartfish, and various other technologies and their application to a specific sport.
  - Students will learn how to use video cameras and other motion measuring technologies to record sport actions and analyze the data using video analysis software and other data analysis methods.
  - Students will assist athletes and/or coaches with their video analysis/technology needs including, but not limited to:
    o Filming and collecting data of practices and competitions
    o Analyzing and summarizing the video and other data
    o Using various different athlete measurement technologies (i.e., accelerometers, hear rate monitors, pressure sensors, force platforms…) for the collection and assessment of data related to athlete performance

Student Qualifications:
  - Students must be able to work independently or in a group
  
  The following courses are an asset but not required:
    - KNES 263 – Quantitative Biomechanics
    - KNES 381 - Computer Applications in Kinesiology

On-Site Supervisor:  Pro Stergiou – pstergio@ucalgary.ca – 403-999-4121