Nipissing University
Job Description

Job Title: School of Physical and Health Education Research Intern (Biomechanics and Ergonomics)

Department: School of Physical & Health Education

Length of Employment: Full-Time Contract (1 Year)

Supervisor: Dr. Alison Schinkel-Ivy

Summary of Functions:

Based on-site in the Nipissing University Biomechanics & Ergonomics Lab, the research intern will report to Dr. Alison Schinkel-Ivy. The activities of the intern will support the operations of Dr. Schinkel-Ivy's research program, centered within the field of clinical biomechanics. The specific focuses will be the supervisor's NSERC-funded project, *towards an improved understanding of aging: Quantifying changes in movement during healthy aging using an integrated biomechanical approach*.

The intern will be involved in a wide range of research activities, spanning the research process from project conceptualization to dissemination. These may include (but are not limited to) tasks related to study planning; literature review; ethics applications; data collection, processing, and analysis; research dissemination (both scientific and to the public); assisting undergraduate and graduate research students; coordinating lab operations; and managing the lab website and/or social media. Additional opportunities may include attending and presenting at conferences, co-authoring manuscripts for submission to peer-reviewed journals, and helping with grant writing. Training for all responsibilities will be provided by the supervisor.

This opportunity is proudly supported by Northern Ontario Heritage Fund Corporation and is funded through the Workforce Development stream of the People & Talent Program.

Eligibility requirements of the program can be found here: https://nohfc.ca/en/pages/programs/people-talent-program/workforce-development-stream

Duties and Responsibilities:

1. Study planning and preparation 25%
   - Review literature to assist in study design
   - Assist with developing research questions and study protocols
   - Prepare ethics applications
   - Assist with grant applications

2. Data collection 25%
   - Become proficient in the use of relevant laboratory equipment
   - Conduct pilot testing and data collection
   - Recruit and schedule participants

3. Data processing and analysis 25%
   - Prepare collected data for further processing
   - Develop and run custom scripts for data processing

4. Research dissemination 15%
   - Attend and present at scientific conferences (as opportunities arise)
   - Prepare and revise manuscripts for submission to peer-reviewed journals
   - Develop materials to disseminate research findings to the public (e.g., blog posts, YouTube videos, infographics, workshops/webinars)

5. Coordination of lab activities and training of/assisting highly qualified personnel 10%
   - Train undergraduate and graduate students with hardware and software
   - Assist undergraduate and graduate students with data collection and processing
   - Coordinate day-to-day lab operations
   - Update and manage lab website and/or social media

Qualifications:

Education:

An undergraduate degree in Physical & Health Education, Kinesiology, Human Kinetics, or a related field. A strong interest in biomechanics and ergonomics, as well as successful completion of an introductory undergraduate course in biomechanics, are also required. Advanced training in biomechanics and/or ergonomics will be considered an asset.

Training, Experience, Knowledge & Skills Required:

- To be eligible for an NOHFC internship, candidates must:
  - Be a new entrant into the workforce, transitioning to a new career, or unemployed/underemployed and entering a new field;
  - Have not previously participated in an NOHFC-funded internship;
  - Be at least 18 years of age;
  - Reside, and be legally entitled to work, in Canada
- Comfort with Microsoft Office Suite (Word/Excel)
- Experience with statistical (e.g., SPSS) or programming software (e.g., Visual3D, MatLAB, Python) is considered an asset
- Knowledge of the scientific method and standard laboratory protocols is considered an asset
- High degree of diligence, attention to detail, and accuracy in all tasks
- Strong oral/written communication skills and interpersonal skills
- Ability to work as part of a team, and to balance multiple projects/aspects of projects concurrently
- Advanced training in biomechanics and/or ergonomics is considered an asset

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Relationships/Contacts:

Supervised by: Dr. Alison Schinkel-Ivy, Associate Professor, School of Physical & Health Education

Internal Contacts: Staff, students, faculty

Materials Utilized:

- Biomechanical data collection instrumentation (force platforms, motion capture, electromyography)
- Consumables for data collection (e.g., electrodes)
- Computers, software (MS Office Suite, Qualisys QTM, Visual3D, Matlab, Python, SPSS)
- Journal articles

Physical/Mental Demands & Working Conditions:

- Intense mental concentration
- Intense work at computer stations
- Standing, walking, kneeling, and/or squatting during data collection
- Typically, work will be conducted in the Biomechanics & Ergonomics Lab in the Center for Physical & Health Education