KNES 441/443/445 – PRACTICUM COURSE

Practicum Position Title: Exercise Physiology (Applied) Assistant

Number of Positions Available: One per term

Industry/Company Description: Clinical & Translational Exercise Physiology (CTEP) Lab, University of Calgary Foothills Campus

The purpose of the Clinical & Translational Exercise Physiology (CTEP) Lab is to foster a healthier Canada by advancing the field of exercise physiology for the prevention and management of disease. Specifically, the CTEP lab aims to facilitate innovative exercise physiology research by using state-of-the-art testing equipment and certified exercise technicians. We are currently involved in research projects on healthy aging, as well as cardiovascular, cerebrovascular, and neurodegenerative diseases.

Beyond research goals, we want to develop educational and translational opportunities within the Faculty of Kinesiology, the Cumming School of Medicine, the wider Calgary community, and with other exercise physiology labs nationwide to promote proper exercise prescription and evidence-based strategies for lasting behavior modifications for health. This will be done by implementing multifaceted communication and education strategies.

Location: Clinical Translation Exercise Physiology Lab, Faculty of Medicine, University of Calgary, Foothills Campus (TRW Building)

Required Hours: 60-72 hours per term – evenly distributed throughout term:
- 5-6 hours per week during fall and winter terms (13 weeks)
- 10-12 hours per week during spring term

Academic Session: Fall, winter or spring

Specified Schedule: The normal CTEP Lab hours are from 8am to 5pm, Monday to Friday with occasional evening testing for specific projects. Willing to work around the academic schedule of student.

Student Duties/Responsibilities:

Under supervision of the exercise physiologist, the student will:

Prepare and calibrate testing equipment:
- Assist with the preparation and calibration of VO2max testing equipment, gait analysis equipment, bioelectrical impedance analysis system, grip dynamometer, skinfold calipers
- Learn how to identify and interpret prior ECG tracings (on file) and identify abnormal rhythms
- Assist in implementing safety measures when testing clinical populations
- Assist in cleaning and stowing equipment properly following testing
- Assist in quarterly testing of treadmill, cycle ergometer, and metabolic measurement cart using bionorms to ensure validity and reliability of equipment

Assist in exercise testing:
- Interact with clinical study populations (explain testing procedure, address any concerns, present oneself as an exercise professional while still working within scope of practice)
- Become proficient in resting blood pressure and heart rate, height, weight, waist and hip circumference measures
- Learn to administer bioelectrical impedance analysis
- Assist in the preparation of participants with 12-lead ECG setup prior to exercise test
- Assist in monitoring participant during VO2max testing
- Become familiar with test termination criteria and emergency procedures for VO2max testing
- Assist in administering walking gait testing with dual-task component
Assist in data analysis
- Learn to identify and determine ventilatory thresholds
- Learn to identify VO2peak or max values
- Learn to interpret basic gait variables
- Assist in the interpretation of grip strength, BMI-Waist circumference, body fat %, and VO2max values by comparing against normative data

Required student qualifications:
- Required: KNES 373 Exercise Physiology – Mandatory Requirement
- Asset: KNES 375 Tests and Measurements in Kinesiology
- Asset: KNES 479 Advanced Fitness Appraisal & Exercise Prescription
- Asset: CPR and First Aid

On-Site Supervisor and Head Exercise Physiologist:

Michaela Chadder, CSEP-CEP
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