Undergraduate Intern –The Vital Posture™ Clinic

KNES 441/443/445 – PRACTICUM COURSE

Practicum Position Title: Undergraduate Intern

# of Positions Available: One

Industry/Company Description: The Vital Posture™ Clinic – NUCCA Practice (National Upper Cervical Chiropractic Association)

At the Vital Posture™ Clinic, we recognize that your posture is vital to your health. The position of the head and neck has a profound influence on your body’s posture and general health.

If an individual’s head and neck are exposed to imbalanced forces, it may result in an acute traumatic cervical strain, sprain and subluxation complex to the complex upper cervical region of the spine. If the injury forces are sufficient enough to create a disturbance in the normal structure and mechanical makeup of the spine, the result can be significant postural asymmetry. This postural imbalance is demonstrated clinically as a functionally long or short leg, high or low hip, and/or twisting in the body framework. This abnormal structural balance of the spine leads to asymmetrical movement, and this imbalanced movement creates a chronic irritation and exacerbation of the spinal joints, peripheral joints, surrounding musculature, and associated neurological components.

The NUCCA procedure focuses on restoring the appropriate biomechanical and positional relationship between the head and neck. NUCCA practitioners are interested in the upper cervical spine and its influence on the central nervous system and brain stem function.

New research is showing just how vital proper positioning of the upper cervical spine is to general autonomic functions because of the hemodynamic changes that appear to occur in the body system following an injury to this crucial region of the spine. Within this field of chiropractic, investigations are ongoing into relationships between an injury to the upper cervical spine (the craniocervical junction or CCJ) and diseases ranging from chronic pain and migraine headaches to post-concussion syndrome and neurodegenerative disease. The NUCCA procedure supports healing by restoring body balance to optimize health. More information on NUCCA research can be found at www.ucrf.org.

Location: Northland Professional Centre, Suite 104 4600 Crowchild Trail NW

Required Hours: 60-72 hours per term – evenly dispersed throughout term:

- 5-6 hours per week during fall and winter terms (13 weeks)

Academic Session: Fall and winter terms only

Specified Schedule: Hours to be worked out to best fit the schedule of the accepted practicum student.

Clinic Hours: Monday and Wednesday 9 AM-6 PM, Tuesday and Friday 8 AM-5 PM, Thursday 2 PM-6 PM, Saturday 9 AM-2 PM

Project Duties/Responsibilities:

50% time spent interacting with clients in the clinic as outlined below and 50% of their time spend on literature reviews/research (work space is available in clinic).

Clinical Component (50%)

During the practicum the student will observe examinations such as:
Paraspinal Thermography (scans/heat readings)

- The student will run a thermocouple device on either the upper cervical or full spine of the client before or after intervention in order to measure radiant infrared heat relating to level of blood flow in the subcutaneous capillaries. The resulting body surface image will indicate points on the spine which have autonomic imbalances and clinical correlation will be investigated.

Surface electromyography (sEMG) scans of the full spine

- The student will place electrode(s) on client in order to assist with the understanding of levels of paraspinal muscle over/under-activity.

Postural analysis

- Position client on Gravity Stress Analyzer (GSA) in order to determine postural imbalances. Calculate vertical/horizontal alignment of the spine, head, shoulders and hips.

Observe radiographic (x-ray) analysis

- NUCCA radiographic analysis includes screening for pathology as well as biometric analysis and adjusting vector calculation based on an understanding of typical and atypical spinal biomechanics and lever systems.

Bilateral blood pressure tests

Observe and study case appropriate testing (orthopedic, neurological and gait analysis).

*The practicum student may, under strict supervision, assist with performing the paraspinal thermography scans, bilateral blood pressure tests and EMG scans.*

Research Component (50%)

- Complete literature reviews by summarizing articles of interest to the student and the clinic.
- Assist with ongoing research projects by data entry, prepare documents for grant applications, monitor budgets, recruit/interview subjects, acquire necessary supplies for project and investigate appropriate standardized outcomes assessments.
- Projects or research topics may be created based on the mutual interest of the selected intern and the supervisor.
- Based on the student’s desire and availability of the supervisor, working towards potential publication of the research paper is a possibility.
- Past research topics by other practicum students have included:
  - Degenerative Changes in the Cervical Spine and its Relationship to Contact Sports
  - Neurodegenerative Disease, Inflammation and the CCJ
  - Migraines and the Neck
  - Balance and the Neck
  - Posture and the Impacts of Modern-Day Society

Required Student Qualifications:

- KNES 373 (Exercise Physiology) required
- KNES 375 (Tests and Measurements) required

We are looking for Kinesiology students with an interest in posture, spinal mechanics and the craniocervical junction (CCJ) and the relationship to health and symptom resolution. We have an intern office available for use (5-6 hours/week) during our clinical hours noted above.

Contact for initial interview:
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On-Site Supervisor:
Jeffrey N. Scholten, DC, DCCJP, FCCJP, BSc, PgCPain