

## How Bond University Doctor of Physiotherapy Students have been prepared for their Neurorehabilitation Clinical Placement

**Previous learning:** In addition to completing previous coursework in the core areas of Cardiorespiratory and Musculoskeletal physiotherapy, students have also completed the following coursework subject:

- *Physiotherapy: Neurological and Rehabilitation (PHTY71-405)*

The main knowledge and skills covered in this subject are outlined below.

The main knowledge areas covered	The main practical skills covered
<ul style="list-style-type: none"> <li>• Common neurological disorders, with particular focus on: <ul style="list-style-type: none"> <li>○ Stroke</li> <li>○ Traumatic brain injury</li> <li>○ Parkinson's disease</li> <li>○ Spinal cord injury</li> <li>○ Multiple sclerosis</li> <li>○ Vestibular disorders</li> <li>○ Polyneuropathy (GBS and CIPD)</li> <li>○ Functional Neurological disorder</li> </ul> </li> <li>• Non-neurological disorders that are often encountered within the rehabilitation setting, including: <ul style="list-style-type: none"> <li>○ Amputees</li> <li>○ Older adults with / without vestibular disorders</li> <li>○ Falls</li> </ul> </li> <li>• Symptomatology and neurological impairments following CNS disorders and their clinical implications inclusive of: <ul style="list-style-type: none"> <li>○ Muscle weakness and motor fatigue</li> <li>○ Tone / Spasticity</li> <li>○ Visual, sensory and vestibular deficits</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Identification of key information within the client's medical files and history taking</li> <li>• Physical examination for a client with a neurological disorder, including utilisation of appropriate outcome measures (impairment, function and condition based).</li> <li>• Application of clinical reasoning including formulating a prioritised problem list and identifying goals of treatment with the client.</li> <li>• Recording patient specific information and planning treatment using the ICF framework</li> <li>• Observation and analysis of functional movement, with emphasis on the identification of abnormal movement patterns, in clients with acquired brain injury / disease, spinal cord injury, neuropathies and lower limb amputations.</li> <li>• Retraining and facilitation of functional movements including: <ul style="list-style-type: none"> <li>○ Bridging / rolling</li> <li>○ Side-lying to sitting</li> <li>○ Sitting alignment / balance</li> <li>○ Standing-up and sitting down</li> <li>○ Standing alignment &amp; balance</li> </ul> </li> </ul>

<ul style="list-style-type: none"> <li>○ Unilateral Spatial Neglect</li> <li>○ Lateropulsion</li> <li>○ Cerebellar Ataxia</li> <li>○ Motor Apraxia</li> <li>○ Secondary complications</li> <li>• Foundational principles underlying neurological and rehabilitative physiotherapy including: <ul style="list-style-type: none"> <li>○ Neuroanatomy / neurophysiology</li> <li>○ Recovery mechanisms following damage to the CNS</li> <li>○ Neuroplasticity and an understanding of how physiotherapists can influence it</li> <li>○ Motor control, motor learning and motor skill acquisition</li> </ul> </li> <li>• Normal components of functional movement</li> <li>• Two-dimensional gait analysis and disordered gait</li> <li>• The evidence base for treatment selection including knowledge of relevant Clinical Practice Guidelines. Common outcome measures used within rehabilitation settings for neurological and aged clients</li> <li>• Basic wheelchair prescription</li> <li>• Role of the multi-disciplinary team in the management of neurological and rehabilitative clients</li> </ul>	<ul style="list-style-type: none"> <li>○ Walking and gait re-education</li> <li>○ High level mobility including running</li> <li>○ Upper limb function</li> <li>○ Transfers</li> <li>• Methods and techniques to elicit muscle activity, facilitate movement return and prescribe therapeutic exercise.</li> <li>• Retraining movement with the use of task and context specific practice, applying knowledge of the principles of motor learning.</li> <li>• Formulating appropriate and thorough exercise programs for neurological, aged and amputee clients, facilitating independent practice, self-management, physical activity and health promotion.</li> <li>• Examination and management of a patient with a vestibular disorder with particular focus on management of BBPV and unilateral vestibular hypofunction.</li> <li>• Examination and management of patient with a lower limb amputation.</li> </ul>
---	--