

# iUSP158 – Conduct complex assessment for sports massage

URN – R/617/5642

**Guided Learning Hours: 42**

Learning outcome	Assessment criteria	Taught content
LO1 Understand neurological presentations	1.1. Describe the pathways of peripheral nerves	<ul style="list-style-type: none"> <li>• Receptors               <ul style="list-style-type: none"> <li>- Exteroceptors</li> <li>- Interoceptors</li> <li>- Proprioceptors</li> </ul> </li> <li>• Sensory modalities               <ul style="list-style-type: none"> <li>- Somatic senses</li> <li>- Visceral senses</li> <li>- Special senses</li> </ul> </li> <li>• 12 pairs of cranial nerves (sensory, motor, mixed)</li> <li>• 31 pairs of spinal nerves (cervical, thoracic, lumbar, sacral, coccygeal)</li> <li>• Nerve plexuses (cervical, brachial, lumbosacral)</li> <li>• Intercostal nerves</li> <li>• Posterior root and posterior root ganglion</li> <li>• Anterior root</li> <li>• Somatic nerves (motor &amp; sensory)</li> <li>• Autonomic nerves (motor &amp; sensory)               <ul style="list-style-type: none"> <li>- Sympathetic</li> <li>- Parasympathetic</li> </ul> </li> <li>• Enteric nerves (motor &amp; sensory)</li> <li>• Ganglia</li> <li>• Synapses</li> </ul>
	1.2. Define the characteristics of: <ul style="list-style-type: none"> <li>• Dermatomes</li> <li>• Myotomes</li> </ul>	<ul style="list-style-type: none"> <li>• Dermatomes               <ul style="list-style-type: none"> <li>- Spinal nerves and sensation</li> </ul> </li> <li>• Myotomes               <ul style="list-style-type: none"> <li>- Motor supply and muscles:</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>▪ C1/C2, Neck flexion/extension</li> <li>▪ C3, Neck lateral flexion</li> <li>▪ C4, Shoulder elevation</li> <li>▪ C5, Shoulder abduction</li> <li>▪ C6, Elbow flexion/wrist extension</li> <li>▪ C7, Elbow extension/wrist flexion</li> <li>▪ C8, Finger flexion</li> <li>▪ T1, Finger abduction</li> <li>▪ L2, Hip flexion</li> <li>▪ L3, Knee extension</li> <li>▪ L4, Ankle dorsi-flexion</li> <li>▪ L5, Great toe extension</li> <li>▪ S1, Ankle plantar-flexion/foot eversion/hip extension</li> <li>▪ S2, Knee flexion</li> <li>▪ Perineal reflex</li> </ul>
	<p>1.3. Explain the organisation of dermatomes</p>	<ul style="list-style-type: none"> <li>• Cranial nerve <ul style="list-style-type: none"> <li>- Trigeminal nerve <ul style="list-style-type: none"> <li>▪ Anterior scalp and face</li> </ul> </li> </ul> </li> <li>• Spinal nerves <ul style="list-style-type: none"> <li>- C2, Posterior head</li> <li>- C3-T1, Neck, arms and hands</li> <li>- T2-L1, Trunk</li> <li>- L2-S2, Legs and feet</li> <li>- S3-S5, Perineum</li> </ul> </li> </ul>
	<p>1.4. Describe common causes of neurological damage</p>	<ul style="list-style-type: none"> <li>• Nerve lesions</li> <li>• Nerve compression</li> <li>• Inflammation</li> <li>• Diabetes</li> <li>• Ischaemia</li> <li>• Alcoholism</li> <li>• Cancer</li> <li>• Herpes zoster (shingles)</li> <li>• Lyme disease</li> <li>• Chemotherapy</li> <li>• Radiation therapy</li> <li>• Repeated micro-trauma</li> <li>• Parkinson's disease</li> </ul>

		<ul style="list-style-type: none"> <li>• Multiple sclerosis</li> <li>• Cerebral palsy</li> <li>• Coeliac disease</li> <li>• Kidney disease</li> <li>• Systemic lupus erythematosus</li> <li>• Rheumatoid arthritis</li> <li>• Neuromas</li> <li>• Human immunodeficiency virus (HIV)</li> <li>• Spondylosis</li> </ul>
	<p>1.5. Describe common peripheral neuropathy patterns</p>	<ul style="list-style-type: none"> <li>• Sciatica</li> <li>• Femoral neuropathy</li> <li>• Obturator neuropathy</li> <li>• Carpal tunnel syndrome</li> <li>• Morton’s neuroma</li> <li>• Piriformis syndrome</li> <li>• Trigeminal neuralgia</li> <li>• Bell’s palsy</li> <li>• Ulnar nerve palsy</li> <li>• Radial nerve palsy</li> <li>• Peroneal nerve palsy</li> <li>• Diabetic neuropathy</li> <li>• Cervical spondylosis</li> <li>• Axillary nerve palsy</li> <li>• Brachial neuritis</li> <li>• Optic neuritis</li> <li>• Vestibular neuritis</li> <li>• Spinal cord injuries</li> <li>• Intervertebral disc prolapse</li> </ul>
	<p>1.6. Describe presentations that warrant neurological testing</p>	<ul style="list-style-type: none"> <li>• Radicular pain</li> <li>• Paraesthesia <ul style="list-style-type: none"> <li>- Pins and needles</li> <li>- Formication</li> <li>- Tingling</li> <li>- Tickling</li> <li>- Pricking</li> <li>- Burning sensations</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>• Muscular weakness</li> <li>• Muscular flaccidity</li> <li>• Loss of mobility</li> <li>• Loss of sensation</li> <li>• Involuntary muscle contractions</li> <li>• Difficulty in masticating</li> <li>• Loss of bladder or bowel control</li> <li>• Tremors</li> <li>• Fasciculation</li> </ul>
	<p>1.7. Describe the pathophysiology of common neurological injuries/soft tissue dysfunction</p>	<ul style="list-style-type: none"> <li>• Ankle/foot/lower leg <ul style="list-style-type: none"> <li>- Sprains: <ul style="list-style-type: none"> <li>▪ Anterior talofibular ligament</li> <li>▪ Calcaneofibular ligament</li> <li>▪ Posterior talofibular ligament</li> <li>▪ Medial ligament (deltoid)</li> </ul> </li> <li>- Syndesmosis injury / high ankle sprain</li> <li>- Osteochondritis dissecans of the talus</li> <li>- Tarsal tunnel syndrome</li> <li>- Entrapment of medial calcaneal nerve</li> <li>- Stress fractures: <ul style="list-style-type: none"> <li>▪ Calcaneus</li> <li>▪ Navicular</li> <li>▪ Metatarsals</li> </ul> </li> <li>- Morton's neuroma</li> <li>- Stress fractures to tibia and fibula</li> <li>- Common peroneal nerve injury</li> </ul> </li> <li>• Thigh/knee <ul style="list-style-type: none"> <li>- Ligament sprains: <ul style="list-style-type: none"> <li>▪ Medial collateral</li> <li>▪ Lateral collateral</li> <li>▪ Anterior cruciate</li> <li>▪ Posterior cruciate</li> </ul> </li> <li>- Meniscal tears</li> <li>- Articular cartilage injuries</li> <li>- Osteochondritis dissecans</li> <li>- Patello-femoral pain syndrome (chondromalacia patellae)</li> <li>- Patella dislocation</li> </ul> </li> <li>• Hip region</li> </ul>

		<ul style="list-style-type: none"> <li>- Osteoarthritis</li> <li>- Hip dislocation</li> <li>- Stress Fractures to neck and shaft of femur</li> <li>- Inguinal hernia</li> <li>- Sciatica</li> <li>- Femoral neuropathy</li> <li>- Obturator neuropathy</li> <li>- Sacroiliac inflammation and dysfunction</li> <li>- Osteitis pubis</li> <li>• Shoulder region <ul style="list-style-type: none"> <li>- Shoulder dislocation</li> <li>- Acromioclavicular injury</li> <li>- Sternoclavicular injury</li> <li>- Glenoid labrum tear (SLAP)</li> <li>- Nerve injuries <ul style="list-style-type: none"> <li>▪ Suprascapular nerve</li> <li>▪ Axillary nerve</li> <li>▪ Long thoracic nerve</li> </ul> </li> <li>- Axillary nerve palsy</li> </ul> </li> <li>• Elbow injuries <ul style="list-style-type: none"> <li>- Entrapment to radial, ulnar and median nerves</li> <li>- Elbow dislocation</li> <li>- Osteochondritis dissecans</li> </ul> </li> <li>• Wrist and hand injuries <ul style="list-style-type: none"> <li>- Collateral ligament sprains</li> <li>- Finger-dislocations</li> <li>- Phalangeal ligament sprains</li> <li>- Volkemanns contractures</li> <li>- Dupuytren’s contractures</li> </ul> </li> <li>• Spine <ul style="list-style-type: none"> <li>- Brachial plexus lesions</li> <li>- Spondylolysis</li> <li>- Spondylolisthesis</li> <li>- Sciatica</li> <li>- Ankylosing spondylitis</li> <li>- Ligament sprains</li> </ul> </li> </ul>
	<p>1.8. Explain the importance of referral for neurological testing</p>	<ul style="list-style-type: none"> <li>• Radiating pain and/or paraesthesia on objective testing</li> <li>• Aggravated by objective testing</li> </ul>

		<ul style="list-style-type: none"> <li>• Does not fit a specific peripheral nerve pattern</li> <li>• Always refer with positive SLR slump or Valsalva test</li> <li>• Presence of red or yellow flags</li> </ul>
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LO2 Understand sports specific posture and gait	2.1. Explain the phases of the gait cycle	<ul style="list-style-type: none"> <li>• Stance phase <ul style="list-style-type: none"> <li>- Heel strike</li> <li>- Foot flat</li> <li>- Mid-stance</li> <li>- Toe off</li> </ul> </li> <li>• Swing phase <ul style="list-style-type: none"> <li>- Acceleration</li> <li>- Mid-swing</li> <li>- Deceleration</li> </ul> </li> </ul>
	2.2. Outline the different methods used to analyse gait	<ul style="list-style-type: none"> <li>• Visual</li> <li>• Recording</li> <li>• Pressure mats</li> </ul>
	2.3. Describe foot deformities and their effects on gait	<ul style="list-style-type: none"> <li>• Pes planus</li> <li>• Pes cavus</li> <li>• Plantar-flexed first ray</li> <li>• Hammer toes</li> <li>• Congenital talipes equinovarus</li> </ul>
	2.4. Describe gait abnormalities	<ul style="list-style-type: none"> <li>• Spastic gait</li> <li>• Circumduction gait</li> <li>• Hip hiking</li> <li>• Steppage gait (foot drop or ankle equinus)</li> <li>• Waddling gait</li> <li>• Forward trunk bending</li> <li>• Backward trunk bending</li> <li>• Lateral trunk bending</li> <li>• Pigeon (in-toing gait)</li> <li>• Duck foot (out-toing gait)</li> </ul>
	2.5. Explain how postural deviations can affect sporting performance	<ul style="list-style-type: none"> <li>• Range of motion</li> <li>• Centre of gravity</li> <li>• Balance and vestibular function</li> <li>• Coordination</li> <li>• Head and eye position</li> </ul>

		<ul style="list-style-type: none"> <li>• Kinaesthetic awareness and proprioception</li> <li>• Risk of injury</li> <li>• Strength and power</li> </ul>
	2.6. Understand the principles of sports specific posture analysis	<ul style="list-style-type: none"> <li>• Review of specific sport and exercise programme</li> <li>• Sports-specific stresses and injury patterns</li> <li>• Asymmetrical usage and development</li> <li>• Other occupations of athletes</li> <li>• Hereditary and genetic factors</li> <li>• Indicators of illness and pathology</li> <li>• Post-injury atrophy and stiffness</li> <li>• Acute and chronic imbalances</li> <li>• Primary, secondary, adaptation and compensatory dysfunctions</li> </ul>
LO3 Be able to undertake assessment of sports specific postures and gait	3.1. Carry out gait analysis	<ul style="list-style-type: none"> <li>• Walking <ul style="list-style-type: none"> <li>- Front</li> <li>- Rear</li> <li>- Side view</li> </ul> </li> <li>• Base width</li> <li>• Swing width</li> <li>• Step length</li> <li>• Stride length</li> <li>• Abnormalities</li> <li>• Pelvic tilts</li> <li>• Pelvic hitch</li> <li>• Movement in the lumbar spine, hip, knee and ankle</li> <li>• Pronation</li> <li>• Supination</li> <li>• Strike</li> </ul>
	3.2. Interpret findings identifying strengths and areas for improvement	<ul style="list-style-type: none"> <li>• Asymmetry of stride</li> <li>• Pathologic gait pattern</li> <li>• Dysfunctional gait pattern (in the absence of pathology)</li> <li>• Swing of arms</li> <li>• Heel strike</li> <li>• Toe off</li> <li>• Spinal motion</li> <li>• Adaptation of shoulders</li> </ul>

<p>LO4 Understand the principles and practice of complex assessment methods for sports massage</p>	<p>4.1. Critically evaluate the range of complex assessment methods used to gather information:</p> <ul style="list-style-type: none"> <li>• Subjective</li> <li>• Range of movement (active/passive)</li> <li>• Resisted (isometric)</li> <li>• Postural analysis</li> <li>• Special tests (ligamentous/neural)</li> </ul>	<ul style="list-style-type: none"> <li>• Hip motion</li> </ul> <ul style="list-style-type: none"> <li>• Subjective assessment <ul style="list-style-type: none"> <li>- Nature and purpose of subjective assessment</li> <li>- Validity and reliability of data</li> <li>- Accuracy of information</li> <li>- Possibility of deception</li> <li>- Interpretation of symptoms</li> </ul> </li> <li>• Range of movement <ul style="list-style-type: none"> <li>- Reproducibility of testing</li> <li>- Use of visual estimation versus goniometry</li> <li>- Purposes of active and passive testing</li> <li>- Role of palpation and end feel</li> <li>- Concepts of ease and bind</li> <li>- Elastic, anatomic, physiologic, restrictive barriers</li> <li>- Tissues involved in the creation of barriers</li> <li>- Perception and apprehension of client</li> <li>- Range and quality of motion</li> </ul> </li> <li>• Resisted testing <ul style="list-style-type: none"> <li>- Assessment of strength</li> <li>- Elicitation of pain on resisted testing</li> <li>- Reliability of testing</li> <li>- Bilateral comparison</li> </ul> </li> <li>• Postural analysis <ul style="list-style-type: none"> <li>- Use of palpation with observation</li> <li>- Bilateral comparison in lateral gravity line</li> <li>- Deviation from the anteroposterior gravity line</li> <li>- Use of bony landmarks</li> <li>- Role of postural muscles</li> <li>- Anomalies in coronal, sagittal and horizontal planes</li> <li>- Bases of support <ul style="list-style-type: none"> <li>▪ Sacral base</li> <li>▪ Feet</li> </ul> </li> <li>- Centre of gravity</li> <li>- Patterns of fascial stress</li> </ul> </li> <li>• Special tests</li> <li>• Ankle and lower leg <ul style="list-style-type: none"> <li>- Talar tilt test</li> </ul> </li> </ul>
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- Anterior drawer test
- Squeeze test
- Tinel's sign test
- Pes planus test
- Morton's (interdigital neuroma) test
- Knee
  - Collateral ligament stress tests
  - Apley compression and distraction test
  - McMurray test
  - Anterior drawer test
  - Posterior drawer test
  - Patellar compression test
  - Patellar glide test
  - Sag sign
- Hip
  - FABERS (Patrick) test
  - Sacroiliac mobility (Gillet's) test
  - Sacroiliac 'squish' test
  - Sacroiliac gapping test
- Spine
  - Straight leg raise
  - Slump test
- Shoulder
  - Apprehension test
  - Relocation test
  - Yergason test
  - Acromioclavicular cross arm test (Scarf test)
  - Sulcus sign
  - O'Brien's test
  - Anterior/posterior dislocation test
  - AC spring test
- Elbow
  - Tinel's sign
  - Varus and valgus stress tests
  - Ulna /median/radial nerve tests
- Wrist and hand
  - Tinel's sign
  - Long finger flexion test
  - Allen test for wrist and hand

		<ul style="list-style-type: none"> <li>- Radial and ulna collateral stress tests</li> </ul>
	4.2. Explain yellow flags and their potential impact on prognosis	<ul style="list-style-type: none"> <li>• Necessity for cognitive and behavioural intervention</li> <li>• Depression</li> <li>• Withdrawal from social contact</li> <li>• Negative thought pattern</li> <li>• Loss of motivation</li> <li>• Poor coping strategies: <ul style="list-style-type: none"> <li>- Avoidance</li> <li>- Alcohol</li> <li>- Drug use</li> </ul> </li> <li>• Agoraphobia</li> <li>• Panic attacks</li> </ul>
	4.3. Explain red flags and the importance of urgent medical referral	<ul style="list-style-type: none"> <li>• Fever</li> <li>• Neurological deficit</li> <li>• Significant weakness</li> <li>• Unexplained swelling or deformity</li> <li>• Sudden or inexplicable loss of weight</li> <li>• Persistently feeling unwell</li> <li>• Loss of appetite</li> <li>• Pain at night</li> <li>• Bladder or bowel incontinence</li> <li>• Increased muscle tone</li> <li>• Previous history of cancer</li> <li>• Morning stiffness</li> </ul>
	4.4. Explain the process of clinical reasoning and stages of problem solving	<ul style="list-style-type: none"> <li>• Hypothetico-deductive model of reasoning</li> <li>• Pattern recognition model of reasoning</li> <li>• Inferential process <ul style="list-style-type: none"> <li>- Collecting and evaluating subjective and objective data</li> </ul> </li> <li>• Interaction between therapist, client and others involved in client care</li> <li>• Ethical reasoning</li> </ul>
LO5 Be able to conduct complex assessment	5.1. Carry out subjective assessments of clients	<ul style="list-style-type: none"> <li>• Questions establish <ul style="list-style-type: none"> <li>- Personal details</li> <li>- Type of sport or physical activity</li> </ul> </li> </ul>

methods for sports massage		<ul style="list-style-type: none"> <li>- Level of sport or physical activity (novice, club, county, national, international, elite)</li> <li>- Frequency of training or competition</li> <li>- Previous injuries</li> <li>- Medical history and medication</li> <li>- Details of presenting complaint or injury</li> <li>- Consideration of yellow and red flags</li> <li>- Verbal and non-verbal communication</li> <li>- Contra-indications</li> </ul>
	5.2. Obtain consent for objective assessment	<ul style="list-style-type: none"> <li>• Personal or written permission from client, parent, guardian, carer</li> <li>• GP permission</li> <li>• Record keeping and signatures</li> </ul>
	5.3. Carry out objective assessments of clients	<ul style="list-style-type: none"> <li>• Posture analysis</li> <li>• Range of movement testing</li> <li>• Strength testing</li> <li>• Special testing</li> <li>• Consideration of yellow and red flags</li> </ul>
	5.4. Analyse subjective and objective findings	<ul style="list-style-type: none"> <li>• Discernible reasoning strategy</li> <li>• Eliminate red and yellow flags</li> <li>• Objective data used as a means to confirm or refute subjective data</li> <li>• Formulation of a working hypothesis</li> </ul>
	5.5. Complete clinical reasoning forms	<ul style="list-style-type: none"> <li>• Record subjective and objective data</li> <li>• Log hypothesis and reasoning: <ul style="list-style-type: none"> <li>- Probable condition with predisposing factors</li> </ul> </li> <li>• Identify treatment parameters</li> <li>• Recommend referral</li> </ul>
	5.6. Record clients' information in accordance with professional practice requirements	<ul style="list-style-type: none"> <li>• First point of contact <ul style="list-style-type: none"> <li>- Personal and GP details</li> <li>- Attain informed consent</li> </ul> </li> <li>• Assessment and re-assessment <ul style="list-style-type: none"> <li>- Subjective data</li> <li>- Objective data</li> <li>- Indications</li> <li>- Contra-indications</li> <li>- Referral</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>- Hypothesis/analysis</li> <li>- Treatment plan</li> <li>- Treatment and aftercare details logged</li> <li>- Evaluation</li> </ul>
	5.7. Store clients' information as legally required	<ul style="list-style-type: none"> <li>• Data Protection Act/GDPR</li> <li>• Legislation</li> <li>• Security</li> <li>• Organisation's standards and procedures</li> </ul>

LO6 Be able to devise sport massage treatment plans from information gathered	6.1. Devise treatment plan	<ul style="list-style-type: none"> <li>• Indications for massage</li> <li>• Adapting the treatment to meet the needs of the client</li> <li>• Soft tissue techniques</li> <li>• Aftercare/home care advice</li> </ul>
	6.2. Explain rationale for chosen massage strategies	<ul style="list-style-type: none"> <li>• Aims and objectives</li> <li>• Procedures</li> <li>• Techniques</li> <li>• Adaptations</li> </ul>
	6.3. Present massage strategies and rationale to clients	<ul style="list-style-type: none"> <li>• Nature</li> <li>• Purpose</li> <li>• Process</li> </ul>
	6.4. Obtain consent to treatment	<ul style="list-style-type: none"> <li>• Personal or written permission from the parent/guardian/carer is recommended if treating a client under 16 years of age</li> <li>• From a guardian/carer if a client is too ill to consent themselves</li> <li>• Having a chaperone present if necessary</li> <li>• Organisational procedures and policies regarding approved guidelines for the presence of a chaperone</li> <li>• From a GP if the client is taking medication or contra-indicated in any way</li> <li>• Adequate disclosure of information: e.g. nature and purpose of treatment, its risk and consequences, alternative course of treatment</li> <li>• Competency</li> <li>• Welfare of client</li> <li>• Capacity for decision making</li> <li>• Client choice</li> <li>• Good practice</li> </ul>

		<ul style="list-style-type: none"> <li>• Ethical principles</li> <li>• Code of conduct</li> <li>• Integrity</li> <li>• Respect</li> <li>• Professionalism</li> <li>• Consultation form (an example of a consultation form can be downloaded from <a href="http://www.itecworld.co.uk">www.itecworld.co.uk</a>)</li> <li>• Client signature</li> </ul>
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<b>Assessment</b>	
<p>Portfolio of evidence containing:</p> <ul style="list-style-type: none"> <li>• 5 treatment evidence of client consultation/assessments carried out on 5 different clients</li> <li>• Assignment – Research and critically evaluate complex assessment techniques</li> </ul>	<p>Consultation/assessment evidence: Assessment should be carried out on 5 different clients relevant to the client’s condition and needs to include all joints of the body. This should be evidenced through the use of signed and dated consultation/assessment evidence forms which can be downloaded from the website.</p> <p>Assignment guidance form and assignment assessment form may be downloaded from the iTEC website <a href="http://www.itecworld.co.uk">www.itecworld.co.uk</a>.</p>

<b>Guide to taught content</b>
<p>The content contained within the unit specification is not prescriptive or exhaustive but is intended to provide helpful guidance to teachers and learners with the key areas that will be covered within the unit, and, relating to the kinds of evidence that should be provided for each assessment objective specific to the unit learning outcomes.</p>

**Document History**

<b>Version</b>	<b>Issue Date</b>	<b>Changes</b>	<b>Role</b>
v1	16/08/2019	First published	Qualifications and Regulation Co-ordinator