

<b>Title</b>	<b>Demonstrate knowledge of advanced exercise concepts and principles and their application to exercise prescription</b>		
<b>Level</b>	<b>5</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	People credited with this standard are able to demonstrate knowledge of: motor control and motor learning and their application to exercise prescription; analyse concepts and strategies to promote exercise adoption and adherence in exercise participants; and, demonstrate knowledge of exercise psychology principles.
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<b>Classification</b>	Exercise > Fitness Assessment and Exercise Instruction
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<b>Available grade</b>	Achieved
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## Guidance Information

- All learning and assessment within this unit standard must be carried out in accordance with the following, as relevant to their role:
  - relevant legislation including Health and Safety at Work Act 2015, Privacy Act [19932020](#), Consumer Guarantees Act 1993, Accident Compensation Act 2001, and any subsequent amendments;
  - guidelines and codes of practice applicable to this standard include Code of Ethical Practice endorsed by Exercise New Zealand, and the New Zealand Pre-Screening Guide, November 2014 available from Register of Exercise Professionals website <http://www.reps.org.nz/>;
  - organisational policies and procedures including Emergency Action Plans (EAPs) and Standard Operating Procedures (SOPs).
- This unit standard covers advanced exercise concepts and principles and their application to exercise prescription. These include the coverage of concepts and principles of motor control and motor learning; theories, concepts and strategies in exercise adoption and adherence; and exercise psychology principles and techniques.

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## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of motor control and motor learning and their application to exercise prescription.

**Performance criteria**

- 1.1 Explain motor control and motor learning concepts.
- Range information processing, attention, memory, feedback, elements of the peripheral nervous system, reflexes, motor patterns, muscle recruitment, skill acquisition.
- 1.2 Describe how the interaction of the nervous system components generate movement.
- Range neocortex, cerebellum, spinal cord, motor (efferent) nerves, sensory (afferent) nerves, visual system, auditory system, proprioception (kinaesthesia), proprioceptors (muscle spindles, Golgi tendon organs, joint receptors).
- 1.3 Explain different movement types with reference to motor control.
- Range gross, fine, discrete, serial, continuous, open chain, closed chain.
- 1.4 Apply motor learning principles to analyse skill acquisition.
- Range learning and performance variables, stages of motor learning, retention, specificity, transfer.
- 1.5 Explain how instructional and environmental factors can facilitate motor learning in terms of rate, frequency, duration, and type.
- 1.6 Explain how motor control and learning principles can be incorporated into the design of exercise programmes in terms of skill requirements, learning environment, exercise content, and assistance requirements.

**Outcome 2**

Analyse concepts and strategies to promote exercise adoption and adherence in exercise participants.

**Performance criteria**

- 2.1 Analyse current theories and concepts in exercise adoption and adherence and identify strategies for promoting exercise adherence in participants.
- Range may include but is not limited to – self-determination theory, life-course theory, trans-theoretical model, health-belief model, physical literacy theory.

2.2 Analyse theories and concepts in motivation and identify strategies for promoting exercise adherence in participants.

Range may include but is not limited to – intrinsic and extrinsic motivation, behaviour modification, reinforcement guidelines, expectations, attributions, self-confidence, social reinforcement, social facilitation (audience effect, coaction).

2.3 Describe how psychological skills can be used to improve the motivation and technique of exercise participants.

Range affirmations, mental imagery, mental rehearsal, focusing, planning use of psychological skills.

2.4 Explain how exercise adoption and adherence strategies can be incorporated into the design of exercise programmes.

### Outcome 3

Demonstrate knowledge of exercise psychology principles.

#### Performance criteria

3.1 Identify general and activity-related stress and describe exercise psychology techniques for recognising, assessing and managing stress.

3.2 Describe the psychological effect of loss of physical function and recovery of function for exercise participants.

Range loss - illness, overuse injury, traumatic injury; stages – shock and denial, acceptance, psychological readiness to resume training.

3.3 Describe psychological mechanisms of exercise addiction and overuse.

Range overtraining, endorphins, self-control, external pressures.

3.4 Describe the professions and professional roles involved in the psychology of exercise in terms of disciplinary strengths and limitations.

Range may include but is not limited to – clinical sport psychologist, educational sport psychologist, sports medicine physician, personal trainer, exercise instructor (group and individual).

<b>Planned review date</b>	<u><a href="#">31-December-2022 to be updated</a></u>
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	23 November 2017	N/A
	<del>2</del>		

**Consent and Moderation Requirements (CMR) reference**

0099

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Comments on this unit standard**

Please contact Toi Mai WDC [qualifications@toimai.nz](mailto:qualifications@toimai.nz) if you wish to suggest changes to the content of this unit standard.