

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

Purpose	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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Classification	Exercise > Fitness Assessment and Exercise Instruction
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Available grade	Achieved
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Guidance Information

- 1 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 1993, 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).

- 2 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.

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).

Planned review date	31 December 2022
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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

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 Skills Active Aotearoa Limited info@skillsactive.org.nz if you wish to suggest changes to the content of this unit standard.