



Australian Government

**Assessment Requirements for SISFFIT019
Incorporate exercise science principles into
fitness programming**

Release: 1

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Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role. This must include period(s) totalling at least five hours comprising at least five different client contact sessions in a mixture of controlled and uncontrolled environments, and:

- effectively use knowledge of exercise science principles to improve own instructional practice to plan and instruct at least five different client sessions
- conduct sessions that individually or cumulatively incorporate:
 - a variety of exercises which are targeted at health- and skill-related components of fitness, for achieving improvements and adaptations in:
 - muscle contractility and force
 - bone strength
 - nervous system activation
 - submaximal and resting heart rates
 - cardiovascular system adaptations
 - variations of exercise
 - with and without equipment
 - exercises to change:
 - joint action
 - stabilisation of the body
 - forces which act on the body during exercise
 - variations in the contribution of energy from three different energy systems
 - consideration of:
 - musculoskeletal anatomy and physiology
 - mechanical principles
 - physiology concepts.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- organisational policies and procedures in relation to:
 - work health and safety/occupational health and safety

- confidentiality of client information
- ethical considerations
- industry endorsed client pre-exercise health screening processes
- industry endorsed risk stratification procedures, exercise implications and referral requirements
- the physiology related to achieving improvements in the following health-related components of fitness:
 - body composition
 - flexibility
 - muscle strength
 - muscle endurance
 - cardiorespiratory endurance
- the physiology related to achieving improvements in the following skill-related components of fitness:
 - balance
 - agility
 - power
 - speed
 - reaction time
 - coordination
 - proprioception
- musculoskeletal anatomy and physiology related to achieving improvements in fitness:
 - structure and function of the skeleton
 - joints in the skeleton
 - cellular structure of muscle fibres
 - sliding filament theory
 - effects of different types of exercises on muscle fibre types
 - muscle attachment sites for the major muscles of the body
 - structure, range of motion and function of muscles, muscle groups and directional terms
 - location and function of skeletal muscle involved in physical activity
 - anatomical axis and planes with regard to joint actions and different exercises
 - joint actions brought about by specific muscle group contractions
 - joints/joint structure with regard to range of motion/movement and injury risk
 - joint movement potential and joint actions
 - the specific roles of the nervous system in controlling skeletal muscle:
 - the central nervous system
 - the peripheral nervous system including somatic and autonomic nervous systems
 - nervous control and transmission of a nervous impulse
 - structure and function of a neuron

- role of a motor unit
- function of muscle proprioceptors and the stretch reflex
- reciprocal inhibition and its relevance to exercise
- the neuromuscular adaptations associated with exercise training
- the benefits of improved neuromuscular coordination/efficiency to exercise performance
- concepts and principles of mechanics relevant to fitness:
 - forces which act on the body during exercise
 - common biomechanical terms
 - lever system in the body
 - structure and function of the stabilising ligaments and muscles of the spine
 - the local muscle changes that can take place due to insufficient stabilisation
 - the potential effects of poor posture on movement efficiency
 - the potential problems that can occur as a result of postural deviations
 - the benefits, risks and applications of the following types of stretching: static (passive and active) and dynamic
 - proprioceptive neuromuscular facilitation (PNF)
 - different exercises that can improve posture
- concepts and principles of the physiology of the body in relation to fitness:
 - the function of heart valves
 - coronary circulation
 - short and long term effects of exercise on blood pressure
 - the effects of exercise on bones and joints including the significance of weight bearing exercise
 - delayed onset muscle soreness (DOMS)
 - exercises or techniques likely to cause delayed onset muscle soreness
 - the short and long term effects of different types of exercise on muscle
 - the benefits and limitations of different methods of monitoring exercise intensity including: talk test, rate of perceived exertion
 - heart rate monitoring and the use of different heart rate zones
 - physiological responses to physical activity in various environmental conditions
- the expected physiological responses, and appropriate action, to:
 - a single bout of exercise
 - physical activity in various environmental conditions
 - long term exercise programs
- scope of practice for a personal trainer.

Assessment Conditions

Skills must be demonstrated in:

- a fitness industry workplace or simulated environment with clients with real or simulated health and fitness goals.

Assessment must ensure access to:

- current industry endorsed best practice for client pre-exercise health screening and risk stratification
- organisational policies and procedures relevant to incorporating exercise science principles into fitness programming.

Assessment must ensure use of:

- informed consent forms
- client record forms
- planning and evaluation documentation with inclusion of identified improvements to professional practice
- clients; these can be:
 - clients in an industry workplace, or
 - individuals who participate in role plays or simulated activities, set up for the purpose of assessment, in a simulated industry environment operated within a training organisation.

Assessment activities that allow the individual to:

- demonstrate ability to incorporate exercise science principles into the instruction of sessions catering for:
 - beginners, intermediate and advanced participants
 - low and high impact.

Assessors must satisfy the Standards for Registered Training Organisation's requirements for assessors, and:

- have achieved a Diploma of Fitness or above; and
- have at least 1 year consecutive post qualification fitness industry experience in the application of the skills and knowledge of the Diploma of Fitness.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1ca50016-24d2-4161-a044-d3faa200268b>