

<b>Title</b>	<b>Describe the human musculoskeletal system</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>2</b>

<b>Purpose</b>	People credited with this unit standard can describe the structure and function of human bones, joints, and muscles.
----------------	----------------------------------------------------------------------------------------------------------------------

<b>Classification</b>	Health, Disability, and Aged Support > Core Health
-----------------------	----------------------------------------------------

<b>Available grade</b>	Achieved
------------------------	----------

---

### Guidance Information

- 1 Assessment note  
Evidence generated for assessment against this standard must reflect descriptions and principles in, *Essentials of human anatomy and physiology*, or another current medical text that describes human anatomy.
- 2 Reference  
Marieb, E.N. (2017). *Essentials of human anatomy and physiology, Global Edition* (12th ed.). Harlow, United Kingdom: Pearson Education Limited.

---

### Outcomes and performance criteria

#### Outcome 1

Describe the structure and function of human bones.

#### Performance criteria

- 1.1 The structure and function of human bones are described.
 

Range	bone structure – long, irregular, short, flat, sesamoid; functions – support, protection, levers for movement, attachment points, blood formation, mineral storage.
-------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------
- 1.2 The locations of the axial skeleton bones are identified.
 

Range	skull, ribs, sternum; spine – cervical, thoracic, lumbar and sacral vertebra, coccyx.
-------	------------------------------------------------------------------------------------------

1.3 The locations of the appendicular skeleton bones are identified.

Range shoulder girdle – clavicles, scapulae;  
arm bones – humerus, ulnar, radius, carpals, metacarpals,  
phalanges; pelvic girdle;  
leg bones – femur, tibia, fibula, patella, tarsals, metatarsals,  
phalanges.

## Outcome 2

Describe the structure and function of human joints.

### Performance criteria

2.1 The structure and range of motion of joints are identified and described.

Range structure – fibrous, cartilaginous, synovial;  
motion – freely moveable, slightly moveable, immovable.

2.2 The types of synovial joints are identified according to their movements.

Range one example of each type – ball and socket, hinge, gliding, pivot,  
condyloid, saddle joints;  
movements – flexion, extension, abduction, adduction, rotation,  
circumduction, gliding.

## Outcome 3

Describe the structure and function of human muscles.

### Performance criteria

3.1 The similarities and differences in the characteristics and functions of muscle types are described.

Range muscle types – skeletal, smooth, cardiac;  
location, cell shape and appearance, voluntary control, involuntary control.

3.2 The characteristics of muscle tissue types are described.

Range excitability, contractility, extensibility, elasticity.

3.3 The structure of skeletal muscle and associated tissue is described.

Range muscle fibres, endomysium, perimysium, epimysium, tendons,  
blood vessels, nerves.

3.4 The mechanism of skeletal muscle contraction is described.

Range nerve impulse, neurotransmitters, synapse, actin, myosin heads,  
calcium, binding sites, contraction, relaxation.

3.5 The location and one principal movement are identified for each major superficial skeletal muscle.

Range ten principal skeletal muscles.

<b>Planned review date</b>	31 December 2026
----------------------------	------------------

#### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	23 October 1998	31 December 2012
Review	2	26 May 2004	31 December 2012
Review	3	20 March 2008	31 December 2012
Review	4	20 September 2012	31 December 2023
Rollover and Revision	5	26 September 2019	31 December 2023
Review	6	30 September 2021	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0024
------------------------------------------------------------	------

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

#### Comments on this unit standard

Please contact Careerforce [info@careerforce.org.nz](mailto:info@careerforce.org.nz) if you wish to suggest changes to the content of this unit standard.