

Title	Describe the structure and function of horses' body systems and associated problems		
Level	4	Credits	8

Purpose	People credited with this unit standard are able to describe: the components and function of horses' body systems; common problems that can occur in horses' body systems; the ways in which microbes cause infectious diseases; the signs, treatment and vaccination schedules for common bacterial diseases; the importance of biosecurity, the signs of common viral conditions, and vaccination schedule for EHV 1; and the immune system and the ways in which immunity is achieved.
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Classification	Equine > Equine Health
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Available grade	Achieved
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Guidance Information

- 1 Legislation relevant to this unit standard includes but is not limited to:
 - Health and Safety at Work Act 2015; and any subsequent amendments.
- 2 Definition

Workplace procedures are the documented policies and practices for safety and procedures within a particular workplace, and are consistent with veterinary guidelines and the Code of Welfare: Horses and Donkeys (2018) available at <https://www.mpi.govt.nz/dmsdocument/11003-horses-and-donkeys-code-of-welfare>.
- 3 For the purposes of assessment:
 - evidence for the practical components of this unit standard must be supplied from the workplace.

Outcomes and performance criteria

Outcome 1

Describe the components and function of horses' body systems.

Range circulatory, lymphatic, respiratory, reproductive and hormonal cycle for mating, endocrine, digestive, nervous and eye, common integumentary system, musculoskeletal.

Performance criteria

- 1.1 Describe the individual organs which make up each body system in terms of the order in which they are mobilised.
- 1.2 Describe the primary function of each body system in terms of their inter-relationships.

Outcome 2

Describe common problems that can occur in horses' body systems.

Performance criteria

- 2.1 Describe problems that can occur in the digestive system in terms of the signs, causes, and workplace procedures for treatment options.
- Range may include but is not limited to – spasmodic colic, flatulent/gas colic, impaction colic, sand colic, twisted gut, displacement/entrapment, colic, choke, hernia, stomach bots; stomach worms – redworm, roundworm; intestinal threadworm, tapeworm, diarrhoea, constipation, ulcers; evidence of six is required.
- 2.2 Describe problems that can occur in the respiratory system in terms of the signs, causes, and workplace procedures for treatment options.
- Range may include but is not limited to – viruses, pneumonia, laryngeal hemiplegia (roaring), exercise induced pulmonary haemorrhage (EIPH), recurrent airway obstruction/heaves/severe asthma, inflammatory disease or mild asthma (IAD) epiglottic entrapment, arytenoid chondritis, sub-epiglottic cysts, cough, equine influenza, travel sickness; evidence of six is required.
- 2.3 Describe problems that can occur in the circulatory, coronary, and lymph systems in terms of the signs, causes, and workplace procedures for treatment options.
- Range may include but is not limited to – anaemia, aortic aneurysm, cardiac arrhythmia, atrial fibrillation, cardiac murmurs, dehydration, septicaemia, haematoma, filled legs lymphangitis, tying up, endocarditis; evidence of four is required.
- 2.4 Describe skin problems in terms of the signs, causes, and workplace procedures for treatment options.
- Range may include but is not limited to – cracked heels, rain scald, mud fever, ecto parasites, ringworm, urticaria (hives), photosensitivity and/or sunburn, warts and sarcoids; evidence of five is required.

- 2.5 Describe problems that can occur in the nervous, eye and endocrine system in terms of the signs, causes, and workplace procedures for treatment options.
- Range includes but is not limited to – wobbler syndrome, stringhalt, botulism, tetanus, staggers, Cushings disease (PPID), equine metabolic syndrome (EMS), insulin resistance, corneal ulcers, entropion, cataract, wounds, conjunctivitis, Equine Recurrent Uveitis (ERU) or moon blindness or night blindness or anterior uveitis;
evidence of seven is required.
- 2.6 Describe problems that can occur in the reproductive system in terms of the signs, causes, and workplace procedures for treatment options.
- Range may include but is not limited to – vulval aspiration, cryptorchidism, endometritis, equine venereal disease, sheath infection;
evidence of three is required.
- 2.7 Describe problems that can occur in the musculoskeletal system in terms of the signs, causes and workplace procedures for treatment options.
- Range may include but is not limited to – shin sore, fractures, splints, bowed or strained tendons, suspensory ligament strain, windgalls, tying up, laminitis, deviations, navicular syndrome, growth abnormalities, bone chips, fragments and cysts, epiphysitis, osteoarthritis, osteochondritis dissecans (OCD);
evidence of eight is required.

Outcome 3

Describe the ways in which microbes cause infectious diseases.

Range microbes – bacteria, virus, fungus.

Performance criteria

- 3.1 Describe the ways in which microbes enter the body.
- Range inhalation, swallowing, movement through mucous membrane, open wounds, body contact.
- 3.2 Describe factors which affect the severity of infection.
- Range number present, condition of host, present level of immunity, age of host.

Outcome 4

Describe the signs, treatment and vaccination schedules for common bacterial diseases.

Range may include but is not limited to – strangles, tetanus, salmonella; evidence of two is required.

Performance criteria

- 4.1 Describe the visual signs and workplace procedures for treatment of bacterial diseases.
- 4.2 Describe vaccination schedules for bacterial diseases.

Outcome 5

Describe the importance of biosecurity, signs of common viral conditions, and vaccination schedule for EHV 1.

Performance criteria

- 5.1 Describe the visual signs and workplace procedures for treatment of viral conditions.
- Range may include but is not limited to – Equine Herpes Virus (EHV), EHV I, EHV II, EHV III, EHV IV, Hendra virus; evidence of two is required.
- 5.2 Describe the vaccination schedule for EHV I for viral conditions in broodmares.
- 5.3 Describe the importance of biosecurity to New Zealand's equine industry.

Outcome 6

Describe the immune system and the ways in which immunity is achieved.

Performance criteria

- 6.1 Describe the way in which the immune system functions to conquer infection.
- 6.2 Describe ways in which types of immunity are achieved.
- Range active, passive, natural.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	28 October 1994	31 December 2022
Review	2	23 October 1996	31 December 2022
Review	3	24 June 1998	31 December 2022
Review	4	25 September 2003	31 December 2022
Review	5	17 October 2008	31 December 2022
Review	6	28 May 2020	N/A

Consent and Moderation Requirements (CMR) reference

0018

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

Comments on this unit standard

Please contact the Primary ITO standards@primaryito.ac.nz if you wish to suggest changes to the content of this unit standard.