Modification history

| Release | Comments |
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| Release 1 | This version released with the ACM Animal Care and Management Training Package Version 1.0. |

| ACMATE504 | Administer anaesthesia and perform surgery on animals for scientific purposes |
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| Application | This unit of competency describes the skills and knowledge required to prepare personnel, equipment, animals and the facility for anaesthesia and surgical procedures, and to carry out those surgical procedures for scientific purposes.  It applies to individuals working with and caring for animals (all live, non-human vertebrates) used within scientific establishments for scientific purposes and teaching.    No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.  NOTE: The terms 'occupational health and safety' (OHS) and 'work health and safety' (WHS) generally have the same meaning in the workplace. In jurisdictions where the national model WHS legislation has not been implemented, RTOs must contextualise the unit of competency by referring to current OHS legislative requirements. |
| Prerequisite Unit | Nil |
| Unit Sector | Animal Technology (ATE) |

| Elements | Performance Criteria |
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| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element. |
| 1. Prepare facilities equipment and personnel | 1.1 Prepare anaesthetic and surgical facilities  1.2 Select and prepare anaesthetic agents, equipment and supplies  1.3 Select and prepare surgical instruments and equipment  1.4 Maintain aseptic environment at all times  1.5 Follow and comply with safe work practices, including WHS, according to institutional protocols, policies and procedures and legislative requirements |
| 2. Prepare animals for anaesthesia and surgery for scientific purposes | 2.1 Handle and restrain animals according to institutional policies and procedures  2.2 Prepare animals  2.3 Perform pre-anaesthetic and pre-operative evaluations of animals, including indications for the use of tranquillisers, sedatives, analgesics and antibiotics |
| 3. Induce, maintain and monitor anaesthesia in animals | 3.1 Administer pre-anaesthetic and pre-operative medication according to institutional policies and procedures  3.2 Induce anaesthesia in animals  3.3 Monitor and maintain animals during anaesthetic and surgical procedures  3.4 Record and interpret variations in the physiological parameters and signs of anaesthesia  3.5 Comply with institutional protocols for anaesthetic procedures  3.6 Follow anaesthetic emergency procedures according to institutional policies and procedures |
| 4. Identify and handle a range of body parts for surgical procedures | 4.1 Locate, identify and handle integument and facial structures  4.2 Locate, identify and handle musculoskeletal structures  4.3 Locate, identify and handle digestive system structures and organs  4.4 Locate, identify and handle reproductive system, organs and structures  4.5 Locate, identify and handle other structures and organs |
| 5. Perform basic surgery on animals | 5.1 Use surgical equipment and instruments accurately and safety  5.2 Apply surgical materials and medications to animals  5.3 Perform basic surgical procedures according to research, institution and Animal Ethics Committee (AEC) protocols and relevant legislative requirements  5.4 Suture surgical wounds according to the surgical procedure  5.5 Follow agreed policies to complete post-operative anaesthesia procedures |
| 6. Provide post-anaesthetic and post-operative care for animals | 6.1 Use analgesics and other supportive therapies to manage animals post-operatively  6.2 Apply fluid therapy, medication, dressings, bandages and oxygen supplementation to animals as required  6.3 Monitor surgical wounds for signs of healing, inflammation or infection  6.4 Monitor animals post-operatively and respond to abnormalities  6.5 Recognise and respond to emergencies immediately  6.6 Accurately write and maintain monitoring records in line with research requirements and the institution’s AEC |
| 7. Maintain facilities and equipment | 7.1 Clean facilities and equipment and store according to institutional policies and procedures  7.2 Carry out routine maintenance on equipment according to manufacturer requirements  7.3 Maintain anaesthetic and surgical facilities according to institutional policies and procedures |

| Foundation Skills  This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria. | |
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| Skill | Description |
| Oral communication | * Engage in discussions or provide information using appropriate vocabulary and non-verbal features * Use listening and questioning techniques to confirm understanding and to engage team members |
| Numeracy | * Recognise safety parameters and interpret numerical information regarding quantities of tranquillisers, sedatives, analgesics and antibiotics accordingly * Calculate changes to timelines resulting from variations to surgery schedules |

| Unit Mapping Information | | | |
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| Code and title current version | Code and title previous version | Comments | Equivalence status |
| ACMATE504 Administer anaesthesia and perform surgery on animals for scientific purposes | ACMATE504A Administer anaesthesia and perform surgery on animals for scientific purposes | Updated to meet Standards for Training Packages | Equivalent unit |

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| Links | Companion Volumes, including Implementation Guides, are available at VETNet: <https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103> |

| TITLE | Assessment requirements for ACMATE504 Administer anaesthesia and perform surgery on animals for scientific purposes |
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| Performance Evidence | |
| An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has administered anaesthesia and performed surgery for scientific purposes on animals on at least two occasions, including on each occasion:   * prepared facilities, personnel and equipment, including anaesthetic equipment, anaesthetic agents and surgical instruments and equipment * prepared animal and carried out pre-anaesthetic and pre-operative evaluation * complied with institutional protocols, policies and procedures, Animal Ethics Committee and relevant legislative requirements * induced, monitored and maintained anaesthesia in an animal * performed aseptic and basic surgical procedures * recognised and responded to emergencies during and after anaesthesia and surgery * provided post-anaesthetic and post-operative care * recorded and maintained concise, accurate records of the procedure. | |

| Knowledge Evidence |
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| An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:   * principles and practices for administering anaesthesia * anatomical and physiological terminology, and glossary of terms and nomenclature related to the species being examined, anaesthetic processes, equipment and materials * anatomical structures, tissues and organs relevant to basic surgical procedures and the induction and monitoring of animals under anaesthetic * aseptic techniques * biosecurity issues for animals and humans relating to conducting surgical procedures * characteristics of healthy, sick or distressed animals, including indicators of normal and undesirable responses to anaesthetic and related medications * communication procedures and systems, and technology relevant to the organisation and the individual's work responsibilities * methods and equipment used to monitor animals during anaesthesia and surgical procedures * information that should be documented regarding the administration of anaesthetic and related substances and application of surgical procedures * methods used to measure, interpret and record objective measures of animal health * physiological features of animals related to the application of anaesthesia and related medications and the response to surgical procedures * principles of animal welfare and ethics * procedures for managing an anaesthetic overdose * relevant codes of practice, including the Australian Code of Practice for the Care and Use of Animals for Scientific Purposes, or its successor * key requirements of relevant state or territory legislation and regulations relating to the practice of veterinary science, WHS, waste disposal, animal welfare and research * relevant state or territory legislation covering the use of therapeutic and controlled substances * surgical procedures and techniques used in animal technology facilities * safe animal handling techniques, including approved handling methods during the administration of substances and surgical procedures * terminology used to describe anaesthetic processes, equipment, materials and physiological responses * types of information that is to be reported and recorded in relation to anaesthesia and surgical procedures * workplace hygiene standards, including commonly used disinfectants, cleaning agents, cleaning techniques and cleaning equipment and materials. |

| Assessment Conditions |
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| Assessment of skills must take place under the following conditions:   * physical conditions: * a workplace or simulated environment that accurately reflects performance in a real workplace setting * resources, equipment and materials: * animals for administering anaesthesia and performing surgery on * equipment and resources used when administering anaesthesia and performing surgery, including personal protective equipment * specifications: * organisational policies and procedures, legislation, regulations, standards and codes of practice relevant to work undertaken in animal research and technology.   Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. |

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