



Diploma of Paramedical Science (Anaesthesia) HLT50607

Overview

This qualification covers workers who provide assistance to anaesthetists with the safe operation of equipment during induction, maintenance and completion of anaesthesia. It is anticipated that students will complete this qualification over a 12 month period.

Occupational titles for these workers may include:

- Anaesthetic or anaesthesia technician
- Anaesthetic paramedical officer

Pre Entry Requirements

Students are required to be employed in their chosen field to enhance their 'on the job' learning. They need to be supervised by a qualified staff member and working a minimum of 21 Hours per week to meet the qualification requirements.

Units covered in this Qualification

This qualification is grouped into skills clusters to ensure the most relevant and needed skills are undertaken by the student as directed by industry.

<i>Module Title</i>	<i>Unit Codes</i>
COMMUNICATION AT WORK	HLTHIR301A Communicate and work effectively in health BSBCMN302A Organise personal work priorities and development HLTHIR501A Maintain an effective health work environment
BODY SYSTEMS: STRUCTURES AND FUNCTIONS	HLTAP401A Confirm physical health status HLTCOM408B Use specific health terminology to communicate effectively
OHS COMPLIANCE & MONITORING	HLTOHS300A Contribute to OHS processes HLTOHS400A Maintain OHS processes in the health industry
INFECTION CONTROL	HLTIN301B Comply with infection control policies and procedures HLTIN302A Process reusable instruments and equipment in health work HLTTH303B Identify and move to maintain a sterile field
ANAESTHETIC MACHINE 1	HLTAN408A Provide basic care and maintenance of anaesthetic and monitoring equipment
PREPARATION FOR ANAESTHESIA	HLTAN401B Prepare the anaesthetic environment HLTAN402B Prepare and assist with the preparation of the client for anaesthesia
INDUCTION, MAINTENANCE, EMERGENCY AND RECOVERY FOR ANAESTHESIA	HLTAN403B Provide assistance during the induction and maintenance of anaesthesia HLTAN404B Provide assistance during the emergence phase of anaesthesia
PROVIDE ASSISTANCE DURING AN EMERGENCY	HLTAN405B Provide assistance during an emergency
BODY SYSTEMS: STRUCTURES & FUNCTIONS 2	HLTAP501A Analyse health information HLTAN510A Use advanced medical terminology in a professional context
PHARMACOLOGY AND MEDICATION	HLTAN509A Monitor medication in an anaesthetic environment
ANAESTHETIC MACHINE 2	HLTAN506B Provide advanced care and maintenance of anaesthetic equipment
ANAESTHESIA IN SPECIALITIES	HLTAN507B Provide assistance in anaesthetic related procedures

Module Descriptor

Modules have been designed to allow the individual needs and specific requests of your organisation to be met, while maintaining the requirements of a nationally accredited qualification.

Communication At Work

- Working as an anaesthetic officer
- Introduction to the qualification
- Understand organisations policies, plans and procedures
- Demonstrate and apply ethical standards and legal issues in relation to patient/client care
- Understand context of organisation in the health industry
- Knowledge of boundaries of responsibilities
- Quality and continuous improvement processes and standards
- Communication methods (written, verbal and non-verbal)

Body Systems: Structures and Functions

- Common and medical anatomical terminology
- Concepts underpinning human anatomy and physiology, including:
 - Structure, physiology of normal functioning of body systems
 - Processes of metabolism, nutrition, body temperature regulation, biological maturation, inheritance and aging
 - Causes of disease:
 - Defence systems and immunity responses in relation to the whole body and the individual body systems.
- Common disorders, problems and complaints associated with each body system and its components, especially where relevant to specific health care services to be provided.
- Potential impacts of a range of factors, both internal (such as physical, mental, emotional factors) and external (e.g. in relation to specific health interventions) in relation to identified body systems and their components.

Anaesthesia In Specialities

- Understand the delivery of anesthesia in various locations within the hospital environment
- Assisting in anesthesia delivery in trauma cases
- Humidification, tracheotomy, lung ventilation, long term ventilation/ICU
- ENT, neuro, EEG, paed, orthopedics, burns, obstetrics, neonate resus, entonox, lasers, laparoscopy with CO2 insufflators
- Cardio-thoracic surgery and cardiopulmonary bypass and balloon pumps
- Pacemakers, defribbing plates
- Extracorporeal circulation
- Rapid infusion equipment
- Cell salvage, platelet gel, rapid transfusion equipment
- Blood conservation and autologous transfusion
- Underwater seal drainage and other drains
- Anesthesia outside operating theatre (MRI, radiology etc)
- Trauma
- Major organ surgery
- Major vascular surgery
- Cardio-thoracic

OHS Compliance & Monitoring

- Relevant infection control codes of practice, Australian hospital standards, regulations and guidelines
- OH&S – risk assessment identification and management
- Electrical safety
- Medical gases

Infection Control

- Personal hygiene and environmental practices
- Microbiology
- Process of infection, prevention and control of infection
- History of antibiotics
- Avoiding cross-infection
- Gowning and gloving and scrubbing
- Identify and move to maintain a sterile environment
- Skin preparation
- Dressing/bandaging/needles/sutures/care of specimens
- Disease causing microbes
- Equipment infection minimization
- Sterilisation and decontamination of reusable medical devices
- Operating theatre techniques
- Understand and apply organisations infection control policy to work area and practices
- Safe waste handling and management procedures

Preparation For Anaesthesia

- Clinical and operative procedures and the interrelationship with anaesthesia
- Anaesthetic equipment requirements for clinical procedures and anaesthetist's preferences
- Basics of equipment
- Basic anaesthesia machine (gas pathway, checking, preparation, breathing systems)
- Hazards in the use of anaesthetic equipment
- Preparation of environment for administration of anaesthesia
- Local and regional anaesthesia
- Practical fault finding level I
- Airway management equipment (ET tubes, laryngoscopes, bronchoscopies)
- Fault finding in airway management equipment
- Gas delivery systems (cylinders, regulators, flow meters, safety, compressors, gas laws)
- Oxygen therapy, monitoring oxygen saturations, suction equipment, clinical measurement- body temperature, IV access, cannula infection, dangers of long term CVP, ECG, BP

Induction, Maintenance, Emergence And Recovery For Anaesthesia

- Pre-assessment for anaesthesia
- Anaesthesia gaseous induction
- IV anaesthesia induction
- Rapid sequence induction
- Patient positioning
- Patient transfer and transport
- Fluid therapy
- Monitor patient condition during emergence

Body Systems: Structures & Functions 2

- Physiological parameters
- Functional Anatomy as it relates to assisting during anaesthesia
- Blood components

Anaesthetic Machine 2

- expired CO2 monitoring, manage difficult airways, advanced resus – adult, paed, drug trolley, cardiac trolley, defib
- clinical measurement – accuracy, IV pressure management, pressure transducer, invasive monitoring, neuro muscular monitoring
- Clinical measurement – acid base, blood gases, ECG, Swann-ganz, cardiac output
- Trauma instrumentation
- Cut downs for intra-vascular access
- Blood transfusions, problems, clotting factors, blood components
- Blood giving equipment
- Scenarios involving massive blood loss and fluid resuscitation

Provide Assistance During An Emergency

- Identify and respond to clinical emergencies
- Identify the need for and perform cardiopulmonary resuscitation (CPR)
- Prepare drugs and fluids for administration in emergency situations under the direction of the anaesthetist/medical officer

Pharmacology And Medication

- Pharmacology relevant to state and territory legislation
- Pharmacology- pre-meds, opioids, antagonists, muscle relaxants
- Transfusion pumps, syringe pumps, IV drugs
- Pain and pain relief
- Pain pathway and drugs PCA

Anaesthetic Machine 1

- Current range and use of anaesthetic and monitoring equipment
- Application of anaesthetic and monitoring equipment and the contraindications, complications and limitations associated with their use
- Principles of safe operation of equipment
- Basic electronic knowledge and electrical safety requirements
- Principles of measurement e.g. thermodynamics, gas laws, fluid dynamics, potentiometry and optics
- Safe handling of gases
- Boundaries of responsibilities and ability to refer problems to supervisor, anaesthetist or other appropriate health professional
- Anaesthetic and monitoring equipment cleaning procedures

Our Role

Our flexible and innovative delivery of this qualification means that we will:

- Provide each student with materials that support learning and assessment.
- Provide work based assessment activities that engage students in “on the job” learning.
- Provide each student’s supervisor with checklists to enable the supervisor to contribute evidence in relation to the student’s competency.
- Provide face-to-face coaching and mentoring sessions in locations where there sufficient numbers of students who wish to attend.
- Provide telephone or email support as necessary to ensure satisfactory completion of all required assessments.

Integrated Care Management will negotiate the skills to be covered, learning modules required to support skill development, assessment tasks and sequencing of training with your organisation prior to commencement of training.

Qualified assessors and trainers, with current industry experience have designed the learning materials and assessment tools used for this qualification. All assessments comply with the guidelines from the relevant training package.



Contact Us

For more information on how we can assist your organisation or to enrol in this qualification contact our office.

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DIPLOMA OF PARAMEDICAL SCIENCE (ANAESTHESIA) HLT50607 Pathways to Attainment



This Nationally recognized qualification covers the knowledge and skills required by those workers providing assistance to Anaesthetists with the safe operation of equipment during induction, maintenance and completion of anaesthesia.

Integrated Care Management has designed two pathways that can lead students to successful attainment of the Diploma of Anaesthetic Technology.

The two pathways, described in more detail over page, are:

- Recognition of Prior Learning Pathway
- Supported Workplace Learning Pathway

Students are encouraged to consult with their employers and Integrated Care Management regarding the pathway that suits their individual needs and fits into the design and organisation of their workplace and team.

Qualified assessors and trainers, with current experience as Anaesthesia Officers have designed the learning material and assessment tools for this qualification. All assessment complies with the guidelines from the National Health Training Package (HLT07)

Recognition of Prior Learning Pathway (RPL)

This pathway is suited to existing anaesthesia officers wishing to obtain a National qualification that recognizes their current skills and training.

Requirement

Student must have at least 2000 hours of supervised and appropriate clinical experience related to the conduct of anaesthesia. Experience must be current, having been achieved in the last three years. Student must have an appropriately qualified workplace supervisor/mentor.

Outline

Student prepares, in accordance with ICM package, a portfolio of evidence, including:

- Log Book of current experience
- Workplace Evidence
- Employment History
- Training and Education history
- Documentary evidence against each national competency unit

Student is also required to participate in an oral viva and observation assessment. Gap training for candidate and/or reassessment of student against some or all of the competency units may be required in this pathway.

Course Length: **Candidates should aim to complete in six to nine months.**

Course Cost: All candidates - \$2000 (gap training will be charged if necessary)

Supported Workplace Learning Pathway

This pathway is for new entrant anaesthesia officers, or student/trainee officers.

Requirements for enrolment in Diploma of Paramedical Science (Anaesthesia)

Pre-requisite: Nationally accredited Statement of Attainment covering competencies (or equivalent competencies) below:

HLTAN401A Confirm physical health status
HLTCOM408B Use specific health terminology to communicate effectively

Students who are not able to demonstrate evidence of above should consider applying for enrolment into Certificate IV in Anaesthetic Technology (HLT42607) first, and upon completing this qualification, progressing to the Diploma qualification. The Certificate IV qualification is “nested” within the Diploma qualification and students who choose to complete the Certificate IV qualification first will gain considerable credit towards the Diploma. It is anticipated that a student could complete both qualifications in a two year period.

Student must:

- Be employed for at least 20 hours a week in a position that optimises on the job learning and exposes them to appropriate clinical experience related to the conduct of anaesthesia.
- Maintain this employment in appropriate position over the duration of qualification attainment.
- Students must have a clinical supervisor in the workplace who is suitably qualified and who is prepared to assist student with on the job learning for the duration of the training. The clinical supervisor will be required to submit periodic reports to ICM. These will form part of the evidence being gathered by the ICM assessor who will make all judgements about the student’s competency against the national competency standards for this qualification.

Outline

Student is issued individual and comprehensive printed learning material, as well as tutorial support (face to face, by phone or email), towards achievement of each national competency. This pathway requires successful completion of all assessment tasks and at least 2000 hours of appropriate clinical experience. Assessment includes written tasks, observation in the workplace, log books etc.

Student can complete the qualification by distance.

Student prepares a range of evidence on an ongoing basis over the course of their training, as directed by ICM, to demonstrate competency and to allow progression from one module to the next. Range of evidence includes:

- Log Book of practical skills maintained over three year period
- Workplace Evidence collected over a three year period
- Training and Education history
- assessment tasks completed over a two to three year period
- Presentation / Research Assignment
- Observation assessments

Students in supported workplace learning pathway can apply for Recognition of Prior Learning, gaining credit towards qualification.

Course Length: **Two years**

Course Cost: **\$4000**

General Considerations for all Pathways

Pre-Requisite Education

For admission to either pathway students require a Higher School Certificate or equivalent, with satisfactory results in English, Maths, and Science. Students who have not completed their HSC or equivalent but who have undertaken further studies with other learning institutes are also eligible to apply. In these instances ICM will make individual assessment of candidate's application.

Visits to other hospitals

Students may be asked to attend a major teaching hospital or other hospital during the course of their training to expose them to specialised surgeries not encountered in their own workplaces. The amount of time students may have to devote to external hospitals will vary from student to student. These visits must be arranged through Integrated Care Management.

Fees

For recognition of prior learning pathway students are required to pay 50% of base fee on enrolment and remainder of base fee on receipt of ICM assessment result. Certificates will only be issued after all fees have been paid. Additional gap training, if required, will be charged on commencement. The cost of supported workplace learning pathway is invoiced on a schedule agreed with each student or group of students. Generally the payments may be spread over 12 months.

Assessment Judgment is at all times made by Integrated Care Management Assessors.