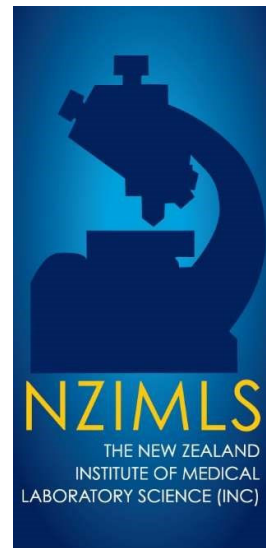


# QUALIFIED MEDICAL LABORATORY TECHNICIAN

## MORTUARY

### 2023 CURRICULUM



#### **Part One: Common Curriculum**

#### **Part Two: Discipline Specific Curriculum in Mortuary**

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## Introduction

### Definition of a Medical Laboratory Technician

A Medical Laboratory Technician (MLT) is a person employed to perform routine tasks by following established protocols under the supervision or direction and control of a Registered Medical Laboratory Scientist. A MLT may only practise within their area of competence, in a health service that forms part of the medical laboratory science profession. During training, supervision would be direct. However, after suitable assessment of competency, it may be replaced with direction\* by a Registered Medical Laboratory Scientist or another registered health practitioner with an appropriate scope of practice, other than a Medical Laboratory Technician.

The QMLT candidate has two syllabi to study:

- **The Common Curriculum** which is common to all NZIMLS technician qualifications.
- **The Discipline Specific Curriculum** which is common only to the discipline in which the candidate is sitting the QMLT exam.
- This document combines both the **Common Curriculum (Part One)** and the **Discipline Specific Curriculum (Part Two)**.

## Objectives

### 1. Education of Medical Laboratory Technicians and Medical Laboratory Pre-Analytical Technicians

- To provide an employer recognisable qualification in a New Zealand Medical Laboratory/Blood Service.
- To provide a qualification that is recognised by the Medical Sciences Council of New Zealand for the Registration of Qualified Medical Laboratory Technicians (QMLT) and Qualified Medical Laboratory Pre-Analytical Technicians (QMLPAT).
- To provide sufficient theoretical training to enable a medical laboratory technician or medical laboratory pre-analytical technician to perform their practical work with accuracy, reliability and efficiency.
- To enable them to appreciate the reasons for, and the importance of the procedures and the tests that they perform.
- To enhance interest in their work and increase job satisfaction and self-esteem.

### 2. QMLT and Common Curricula

- To prescribe the course of study for the QMLT examination.
- To define the composition of the examination.

The Mortuary Special Interest Group (MORTSIG) has prepared both a curriculum and practical assessment for use by Trainee Medical Laboratory Technicians preparing for the NZIMLS QMLT examinations.

The Practical Assessment **is compulsory** and has been included to aid candidates preparing for the QMLT examinations and to be a record of training or practical competency, accomplished by mastery assessment.

**NOTE - The Practical Assessment is a requirement and must be presented as part of the examination and qualifying process.**

The Mortuary SIG has taken significant steps to limit the theoretical knowledge required, to be sufficient to perform bench procedures and understand the importance of recognising abnormal or anomalous results for referral to a supervisor.

The request for specific numbers of points and the reduction in the number of tests to be performed in the practical assessment is an endeavour to limit the quantity of information to learn and examine.

***This does not preclude employers training their laboratory assistants for their own needs.***

## Competence Standards

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Competence standards are a description of the ability of a medical laboratory science practitioner to practise safely and effectively in a variety of contexts and environments. Competence is influenced by many factors including, but not limited to, the practitioner's qualifications, clinical experience, professional development and his/her ability to integrate knowledge, skills, attitudes, values and judgements within a practice setting. A critical value of competence standards is the capacity to support and facilitate professional practice and growth.

The standards set out in this document are expressed as entry-level competencies and behaviours. However, it is expected that all practitioners will successively build on these competence standards to levels expected of experienced practitioners.

The competence standards identify the minimum knowledge, skills and professional attributes necessary for practice. During any one procedure it is expected practitioners will demonstrate elements of practice across a number of broadly defined domains of competence. This recognises that competent professional practice is more than a sum of each discrete part. It requires an ability to draw on and integrate the breadth of competencies to support overall performance.

## Context of the Competence Standards

*(Reproduced with permission from the Medical Sciences Council of New Zealand)*

The competence standards are directly linked to the three medical laboratory science scopes of practice defined by the Council under the Act.

Medical laboratory science practitioners in Aotearoa New Zealand practise within a legislated regulatory framework under the Health Practitioners Competence Assurance Act 2003. Defining scopes of practice serves to protect the health and safety of the public through the use of protected professional titles. Only individuals who hold current registration with the Medical Sciences Council are permitted to use the professional titles of:

- Medical Laboratory Scientist
- Medical Laboratory Technician
- Medical Laboratory Pre-Analytical Technician

## Competence Standards for Medical Laboratory Science Practitioners in Aotearoa New Zealand An Overview of the Competencies Domains

*(Reproduced with permission from the Medical Sciences Council of New Zealand)*

Key competencies are arranged within a number of integrated themes called *Domains*. There are five domains of competence that apply to each of the scopes of practice for medical laboratory science practitioners. In addition, competencies specific to each scope of practice are articulated in a number of subsets (5A to 5C) of the fifth domain.

### Domain 1: Professional and Ethical Conduct

This domain covers practitioners' responsibility to be professional and ethical and to practise within the current medico-legal framework. Includes their responsibility for ensuring patient confidentiality/privacy is maintained at all times while recognising the potential role as a patient advocate.

### Domain 2: Communication and Collaboration

This domain covers practitioners' responsibility in utilising appropriate, clear and effective communication and their responsibility for ensuring they function effectively as a member of a health team at all times.

### Domain 3: Evidence-Based Practice and Professional Learning

This domain covers practitioners' responsibility to engage in evidence-based practice and to critically monitor their actions through a range of reflective processes. It includes their responsibility for identifying, planning and implementing their ongoing professional learning needs.

### Domain 4: Safety of Practice and Risk Management

This domain covers practitioners' responsibility to protect patients, others and the environment from harm by managing and responding to the risks inherent in both healthcare and medical laboratory science practice. It includes their responsibility for ensuring high quality professional services are provided for the benefit of patients and other service users.

**Domain 5: Medical Laboratory Science Practice**

This domain covers the knowledge, skills and capabilities practitioners need to practise the profession of medical laboratory science. Elements in this domain are common to all medical laboratory science practitioners, taking into account the different requirements of each scope of practice.

**Domain 5A: Medical Laboratory Scientist**

This domain covers the additional knowledge, skills and capabilities specific to the Medical Laboratory Scientist scope of practice.

**Domain 5B: Medical Laboratory Technician**

This domain covers the additional knowledge, skills and capabilities specific to the Medical Laboratory Technician scope of practice.

**Domain 5C: Medical Laboratory Pre-Analytical Technician**

This domain covers the additional knowledge, skills and capabilities specific to the Medical Laboratory Pre- Analytical Technician scope of practice.

More detailed information on these Standards can be found on the Medical Sciences Council website under “Competence Standards for Medical Laboratory Science Practitioners in Aotearoa New Zealand(revised February 2018).

## Part One

### Common Curriculum

#### Definitions

1. **Quality assurance**  
All those planned and systematic actions necessary to provide adequate confidence that a product or service will satisfy a given requirement for quality.
2. **Quality Control**  
The monitoring and control of the process producing the product and service.
3. **Total Quality Management (TQM)**  
Management philosophy of continual incremental improvement through total involvement. Seeks, through the utilisation of fully trained, informed and involved employees, participating and working with management to satisfy customer requirements, to improve overall quality, productivity, efficiency and company viability.  
  
Reference ISO 15189
4. **Ethics**  
The rules or principles that govern right conduct.
5. **Confidential information**  
Information (written or spoken) given on the understanding that it will not be passed on to others.
6. **Patient/Donor confidentiality**  
Non-disclosure of patient's/donor's personal information, other than to his or her clinician, unless authorised by that patient/donor.
7. **Informed consent**  
Agreeing to something once provided with all the facts, understanding them fully and knowing one's rights as an individual.
8. **Cultural Competence**  
A set of congruent behaviours, attitudes and policies that enables effect interaction in cross-cultural situations. 'Culture' refers to integrated patterns of human behaviour that include language, thoughts, communications, actions, customs, beliefs, values and institutions of racial, ethnic, religious or social groups. 'Competence' implies having the capacity to function effectively as an individual and an organisation within the context of the cultural beliefs, behaviours and needs presented by patients and their communities.  
(Adapted from Cross 1989).

## Word Definition

The following word definitions will be used to describe the level of knowledge a QMLT shall be required to achieve. Examination questions will also use these words.

WORD DEFINITIONS	
CALCULATE	Perform a mathematical process to get the answer
CLASSIFY	Designate to a group
COMPARE	Detail both the differences and the similarities
COMPLETE	Finish, have all the necessary parts
CONVERT	Express in alternative units
DEFINE	State meaning clearly and concisely
DESCRIBE	Give a complete account demonstrating a thorough practical knowledge in a logical sequence
DISCUSS	Give details, explaining both the positives and negatives
DISTINGUISH	Briefly point out the main differences
EXPAND	To express at length or in greater details
INDICATE	Briefly point out
IDENTIFY	Recognise according to established criteria
INTERPRET	Express the results of a test or series of tests in a meaningful format
LABEL	Give a name to
LIST	Headings only
MATCH	Find one that closely resembles another
NAME	A word or group of words used to describe or evaluate
OUTLINE	Write brief notes incorporating the essential facts
STATE	Give the relevant points briefly

## Dilution Factor Definitions (where applicable)

Due to inconsistencies in nomenclature associated with dilution expression the following will be used for calculations in the examination:

**½ and 1 in 2:** implies 1 part added to 1 part making a total of 2 parts,  
ie. A dilution factor of x2.

**1 to 2:** implies 1 part added to 2 parts making a total of 3 parts,  
ie. A dilution factor of x3.

Because of the dual meaning of the expression 1:2, it will not be used in the examinations.

## 1.0 What is Medical Laboratory Science?

Describe the role and understand the definition of medical laboratory science within the context of sample collection and analysis to aid the diagnosis and monitoring of disease, medical conditions and treatments thereof and in the testing and accreditation of donated blood and blood products to ensure the health of the donor and the safety of the blood supply.

Describe the concept of cultural competence, professional behaviour and attitude within a Medical Laboratory or Blood Service pertaining to:

- Patients, clinicians and colleagues.
- Patient fluid, tissue and body parts.
- Blood donors.
- Donated blood, blood components, or tissue.
- Be familiar with the MSCNZ statement of Cultural Competence, December 2007, and the attitudes, knowledge and skills expected of a QMLT or QMLPAT in their dealings with patients and colleagues.

1.3 Outline the role of the professional/legislative bodies representing, training and governing Medical Laboratory Science in New Zealand.

- NZIMLS (New Zealand Institute of Medical Laboratory Science).
- MSCNZ (Medical Sciences Council New Zealand).
- Universities that train Medical Laboratory Scientists.
- Understand the five codes of competencies (practise as a professional, practise as a technician, safe practice, communication and culturally competent practice) and associated standards as outlined in the Medical Sciences Council New Zealand's Code of Competencies and Standards for the Practice of Medical Laboratory Science.

1.4 Outline the major functions of the following departments / sections and their interrelationships within a laboratory.

- Haematology
- Biochemistry
- Microbiology
- Immunology
- Virology
- Histology
- Cytology
- Cytogenetics
- Forensic Science / Mortuary Practice
- Molecular Diagnostics / Genetics
- New Zealand Blood Service
- Collection services (Phlebotomy)
- Call Centre for helpline, results & enquiries
- Specimen Services

1.5 Outline the major functions / roles of the following laboratory staff:

- Laboratory Clinical Director.
- Pathologist, general and specialist.
- Laboratory Manager.
- Technical Head / Head of Department.
- Section Leader / Technical specialist / Supervisor.
- Scientific Officer.
- Registered Medical Laboratory Scientist.
- Registered Medical Laboratory Technician (QMLT).
- Registered Medical Laboratory Pre-Analytical Technician (QMLPAT).
- Registered Nurse within the New Zealand Blood Service.
- Clerical / Administration staff.



- 1.6 Outline the role of the Laboratory with referring health professionals such as General Practitioners, specialists/ consultants, nurses and patients.
- 1.7 Identify and expand basic medical terminology and general abbreviations that relate to the laboratory. To include common prefixes and suffixes (e.g. hyper, hypo, -itis, neuro, -philia).

## **2.0 Ethics and Legislation**

- 2.1 Outline:
- Patient/Donor confidentiality.
  - Informed consent.
  - Duty of care (do no harm).
  - Statutory requirements for release of body parts to patients / families.
  - Statutory obligations for the release of samples (to referral laboratories, chain of evidence parties, patients).
  - Laboratory policies for the release of information / results to patients/donors.
  - A Medical Laboratory's organisation's obligations to the Treaty of Waitangi.
  - The Code of Health & Disability Services and Consumer Rights.
  - The NZIMLS code of ethics.
  - Knowledge of Health Practitioners Competence Assurance Act (2003).
- 2.2 Outline how the Health Practitioners Competence Assurance (HCPA) Act 2003 and following amendments relates to Medical Laboratory Science and the Health sector.
- 2.3 Describe the legal obligation for technicians to be registered and to hold an annual practicing certificate.
- 2.4 Define scope of practice.

## **3.0 Describe the scope definitions for a medical laboratory technician and medical laboratory pre-analytical technician, including the difference between provisional and full registration.**

### **Human Anatomy and Physiology**

- 3.1 Identify the position of the major organs of the human body.
- 3.2 Outline their basic function.
- 3.3 Identify the specimen types (and their origin) encountered in Medical Laboratories.

## **4.0 Specimens**

- 4.1 Outline procedures for the packaging and transport of specimens for delivery to a laboratory (from the patient to a laboratory, and between laboratories).
- 4.2 Outline the procedures for the selection, preparation and storage of specimens within the laboratory.
- 4.3 Describe appropriate specimen labelling requirements including those for New Zealand Blood Service.

## 5.0 Safety

List your personal duties as a worker under the Health and Safety at Work Act 2015.

- 5.1 Define, with examples, a notifiable injury or illness, notifiable incident, and notifiable event, according to the Health and Safety at Work Act 2015.
- 5.2 Describe safety precautions and emergency procedures for incidents involving the following:
- Fire
  - Electrical apparatus
  - Chemical (poisons, carcinogens, corrosive and volatile substances, gases, radioactive substances, liquid nitrogen)
  - Spillages of blood and other biological fluids
  - Earthquakes
- 5.3 Outline an accident reporting procedure for the workplace.
- 5.4 Outline the role of a health and safety representative.
- 5.5 Describe the safe handling of biological material under the following headings:
- Identification of routes of infection
  - Types of infectious material
  - Safety equipment
  - Handling
  - Disposal
  - Decontamination
  - Transportation
- 5.6 Identify international safety symbols that are used in the workplace.
- 5.7 Describe the concept of safe practice within the workplace.
- 5.8 Describe the prevention and emergency treatment of the following:
- Eye splashes
  - Cuts and bleeding
  - Needle or sharps injury
  - Blood and Body Fluid exposure
  - Burns
  - Poisoning
  - Electric shock
  - Loss of consciousness
- 5.9 Outline Hazard Identification and Management including the use of Material Safety Data Sheets.
- 5.10 Outline the concept of occupational health and the role of self-protection through staff vaccination programmes, e.g., Hepatitis B vaccination.
- 5.11 Outline the principle of Occupational Overuse Syndrome/Gradual Process Injuries and its relevance in the laboratory, including some prevention strategies.

## 6.0 Equipment

- 6.1 Describe the use and routine maintenance (where applicable) of the following equipment:
- Thermo-regulated apparatus (Incubators, water baths, heating blocks, refrigerators, freezers)
  - Balances
  - Distilled/deionised water apparatus
  - Glassware
  - Pipetting devices - manual and automated/mechanical liquid handling devices
  - Biohazard cabinets
  - Fume hoods/fume cupboards
  - Transport systems (including pneumatic tubes, couriers)

(NOTE: "**Maintenance**" in the context of this curriculum refers to daily good house-keeping practices required to keep equipment clean and functioning at peak efficiency. Laboratory technicians are encouraged to recognise faults in equipment but must refer them to their supervisor for corrective action.)

- 6.2 Centrifuges:
- Outline the principle of centrifugation.
  - Describe the use and maintenance required.
  - Describe the safety precautions necessary including specimen breakage.
- 6.3 Computers:
- Outline basic computer components including hardware and software.
  - Describe the role of computers in the laboratory / workplace.
- 6.4 Barcodes and Scanners:
- Describe the use of barcodes and barcode scanners

## 7.0 Quality Assurance

- 7.1 Define quality assurance and total quality management.
- 7.2 Describe quality control.
- 7.3 Define and distinguish accuracy and precision.
- 7.4 Define a Biological Reference Interval.
- 7.5 Describe the role of ISO 15189 within the Medical Laboratory.
- 7.6 Outline Harmonisation as it relates to Laboratory Medicine.
- 7.7 Outline internal and external audit processes including the assessment bodies (e.g. International Accreditation New Zealand (IANZ), Ministry of Primary Industries (MPI)).
- 7.8 Outline the concept of Documentation Control within the Medical Laboratory.
- 7.9 Outline quality feedback by customers (patients, donors and health professionals).

## 8.0 Calculations

The student shall be able to perform basic laboratory calculations including:

- Converting units – for example:  $\mu\text{mol}$  to  $\text{mmol}$ ,  $\text{ml}$  to  $\text{L}$ ,  $\text{g}$  to  $\text{kg}$ , fractions to percentage.
- Define SI units – pico, nano, mili, micro, kilo as they relate to the power of 10.
- Common laboratory calculations for dose time and urine volume.
- Define pH and use this understanding to differentiate between acidic and basic solutions.

### 8.1 Dilutions:

- Calculate volumes required to make a working solution from a stock solution.
- Calculation of patient results post dilution.

### 8.2 Statistics:

- Calculation of average, mean, standard deviation and coefficient of variation using a calculator.
- Creation of and plotting results onto a Levy Jennings graph.
- Basic interpretation of Levy Jennings graphs.

### 8.3 Calculation of Molarity from molecular weight (note molecular weight to be supplied in examination).

Other calculations specific to your discipline.

See Guide to Calculations on the NZIMLS website under Education.

## 9.0 Reference Texts

Below are listed suggested reference texts. The latest versions are recommended. This is not an exhaustive list.

### 9.1 Specimens

Diagnostic Samples: From the Patient to the Laboratory: The Impact of Preanalytical Variables on the Quality of Laboratory Results

Guder W.G, Narayansan S, Wisser H, Zawta B  
Wiley-Blackwell

Clinical Diagnostic Technology – The total Testing Process, Volume 1: The Preanalytical Phase  
Ward-Cook K.M, Lehmann C.A, Schoeff L.E, Williams R.H  
AACC Press, Washington DC

IATA Infectious Substances Guidelines Manual 2015 edition  
IATA Dangerous Goods Regulations Manual 2016 edition

Land Transport Rule Dangerous Goods 2005  
<https://www.nzta.govt.nz/resources/rules/dangerous-goods-2005/>

### 9.2 Human Anatomy and Physiology

Phlebotomy Handbook  
Garza d, Becan-McBride K  
Pearson Educational, New Jersey USA

Phlebotomy Essentials  
McCall R.E, Tankersley C.M  
Lippencott, Williams & Wilkins, Philadelphia, USA

### 9.3 **Equipment**

Clinical Chemistry: Theory Analysis and Correlation  
Kaplan L.A., Pesce A.J.  
Mosby; Missouri, USA

TIETZ: Textbook of Clinical Chemistry and Molecular Diagnostics  
Carl A Burtis, Edward R Ashwood and David E Bruns Saunders; Philadelphia, USA  
TIETZ: Fundamentals of Clinical Chemistry and Molecular Diagnostics  
Carl A Burtis and David E Bruns Saunders; Philadelphia, USA

### 9.4 **Safety**

Clinical Microbiology Procedures Handbook  
Isenberg H.D. Chief Editor  
American Society Microbiology Washington DC

Laboratory Safety Principles and Practices  
Fleming D.O., Richardson I.H., Tulis I.1, Vesley D.  
American Society Microbiology Washington DC.

### 9.5 **Legislation and Standards**

Health Practitioners Competence Assurance Act (2003)

*ISO 15189:2012 Medical laboratories – Requirements for quality and competence*

*AS/NZS 2243 Safety in laboratories*

*Clinical and Laboratory Standards Institute (CLSI) guidelines*  
[www.legislation.govt.nz](http://www.legislation.govt.nz)

Code of Ethics of the New Zealand Institute of Medical Laboratory Science  
[www.nzimls.org.nz](http://www.nzimls.org.nz)

Competence Standards for Medical Laboratory Science Practitioners in Aotearoa New Zealand (revised 2018). [www.msccouncil.org.nz](http://www.msccouncil.org.nz)

Statement of Cultural Competence (2007)  
[www.msccouncil.org.nz](http://www.msccouncil.org.nz)

## Part Two

### Discipline Specific Curriculum

### Mortuary

#### 1. Anatomy and Physiology

**Learning outcome:** Can identify and name relevant human anatomy and physiology:

- 1.1 Use and understand the correct terminology and the relevant basic medical terminology in the:
- a. Musculo-skeletal system: Identify and name the main parts of the skeleton and muscles of the body.
  - b. Central Nervous system: Identify and name the external features of the brain and its membranes.
  - c. Cardio-vascular system: Identify and name the heart chambers, valves. Explain the functions of the circulatory system.
  - d. Respiratory system: Identify, name and describe the main parts, and explain the functions, of the respiratory tract and muscle of respiration.
  - e. Alimentary system: Identify and name the main parts and explain the functions of the digestive tract.
  - f. Urinary system: Identify and name the main parts and explain the functions of the urinary tract.
  - g. Genital system: Identify, name and describe the main parts and the functions of the male genital tract and the female genital tract.
  - h. Endocrine system: Identify and name the main parts of the endocrine system and explain the functions of the endocrine organs.
  - i. Immune system: Identify and name the main parts and explain the functions of the spleen and lymphoid tissues.
  - j. Special senses: Identify, name and explain the main functions of the eye and ear.

#### 2 Post Mortem Techniques

**Learning outcome:** Can describe how to apply appropriate techniques in post-mortem examinations (refer to the Mortuary Practical Assessment).

- 2.1 Carry out assignments 1-11 from the Qualified Mortuary Technicians Practical Assessment 2019.
- 2.2 Describe how to prepare a body for post-mortem examination according to instructions from the pathologist.
- 2.3 Describe correct techniques to use when photographing the deceased, including prior to and during the post mortem, taking into account factors to consider when photographing injuries/pathology.
- 2.4 Describe the evisceration techniques of En Masse (Letulle), En Bloc (Ghon) and Virchow. Be able to explain the differences between the techniques and advantages and disadvantages of each.
- 2.5 Describe how to and the need for techniques such as opening the skull, removing the brain and pituitary gland, stripping the dura mater, exposing and removing the spinal cord using both anterior and posterior approaches, layer by layer neck dissection. Describe the need for removing a neck block and when this technique would be used.
- 2.6 Describe what pathological findings you might find during evisceration, using the case scenario provided, and what you would do if you found an abnormality.

- 2.7 Describe the indications/conditions found during evisceration which need to be notified to the pathologist/the pathologist needs to be made aware of.
- 2.8 Describe the measurements and weights to be recorded in adult autopsies.
- 2.9 Describe how to, and the need, for reconstruction after a post-mortem examination to a standard suitable for viewing and release to a funeral director.
- 2.10 Describe the principles of tissue fixation and name the various fluids used in preserving and storing tissue in this way.
- 2.11 Describe the pre-analytical requirements including various collection techniques, order of draw, tube types, labelling requirements, documentation and tracking requirements of tissue and body fluids obtained during the post-mortem for processing and analysis. Describe the potential pitfalls/mitigation of risk and packaging requirements for toxicology samples and dangerous goods handling for biological samples.
- 2.12 Describe the differences between an adult and a paediatric post mortem.
- 2.13 Describe what the major differences are between an adult and a paediatric reconstruction following a post mortem.
- 2.14 Describe how to complete the different collections of trace evidence from the deceased and the precautions to be taken.
- 2.15 Describe the requirements for performing brain retrievals and infectious cases.
- 2.16 Describe the cultural requirements for providing a mortuary/forensic pathology service. Be able to provide examples.
- 2.17 Describe the procedures for tissue and organ donations.

### 3. Health and Safety

**Learning outcome:** The candidate will have a comprehensive knowledge and understanding of potential hazards to health and measures to minimize or eliminate risk in the mortuary, by being able to:

- 3.1 Describe the nature of infective agents, including bacteria, viruses, fungi, protozoa and parasites and how they spread and gain access to the body.
- 3.2 Describe the purposes and principles of refrigeration.
- 3.3 Describe the basic principles of disinfection by autoclaving and by using chemicals. List the main disinfectants required in the post-mortem room, their uses and concentrations in the cleaning/sterilizing of instruments and other equipment.
- 3.4 List the items of protective clothing needed for a post-mortem examination, including the special requirements in high-risk and infectious cases.
- 3.5 Discuss how good infection control contributes to the prevention of infection and apply the main principles of infection control measures.
- 3.6 Outline the main infective diseases that can be contacted in the post-mortem room. State the specific precautions taken against them, including immunization, precautions with potentially infective bodies, special clothing and special disinfection procedures.

- 3.7 Describe how irradiation can affect health and the how procedures used during x-ray and CT examinations and scanning incorporate precautions to minimize this risk.
- 3.8 Describe the practical procedures for the safe disposal of all types of waste including infective, toxic and radioactive. **Practical Assessment.**
- 3.9 Describe how to perform First aid, including care of wounds and artificial respiration.
- 3.10 Demonstrate knowledge of the Health and Safety Acts and the OSH Regulations as they apply to the mortuary, including procedure in cases of spillage of harmful fluids.
- 3.11 Describe the risks involved and the requirements to minimize these risks for receiving and releasing of deceased to transport providers.

#### 4. **Ethics and Legality**

**Learning outcome:** The candidate will have comprehensive knowledge and understanding of practice relating to the mortuary and implementing legal requirements in relation to the dead, by being able to:

- 4.1 Describe the requirements of the Code of Practice for safety in the mortuary. Refer "Managing Health and Safety Risks in New Zealand Mortuaries 2000" Copy in the reference section below.
- 4.2 Describe the legal requirements and written authority necessary for a hospital and a Coroner directed post-mortem. Demonstrate a basic knowledge of the types of death about which a Coroner must be informed. Refer "Coroners Act 2006" and the candidates local DHB policy documents for minimum hospital post mortem requirements.
- 4.3 State the Laws in respect of death certification.
- 4.4 Describe the legal requirements and documents necessary for cremation and explain the necessity for removal of cardiac pacemakers and radioactive implants.
- 4.5 Describe the procedure for reporting occupational illness and injury, including the reporting line and who must be informed.
- 4.6 Describe the importance of medical confidentiality.
- 4.7 Describe and explain the legal requirement for the acceptance of a deceased identification and how these can be carried out
- 4.8 State the ethical standards for mortuary staff including Annex 5 of the WHO document.
- 4.9 State the process for following up unclaimed deceased, including storage requirements.
- 4.10 State the requirements for accreditation of mortuaries showing a basic understanding of ISO, NPAAC, WHO, Health and Safety in NZ Mortuaries and the mortuary levels.



## 5. Chain of Custody and Cultural Competency

**Learning outcome:** The candidate will have the ability and cultural competence to carry out the appropriate administrative procedures for body receipt and release from the mortuary. To be able to deal correctly with visitors to the post-mortem suite, by being able to:

- 5.1 State the requirements and procedures for the identification of deceased arriving in the mortuary and for releasing bodies to funeral directors or authorized persons.
- 5.2 Describe the correct procedures for registration of bodies whilst in the mortuary, including the mortuary register, autopsy register and register of property from the deceased, As aligned with contractual requirements and IANZ accreditation. **Practical Assessment.**
- 5.3 State the arrangements for safeguarding of valuables and other property of the deceased.
- 5.4 Outline the provisions for all visitors to the post-mortem suite and ensure that they wear the correct protective clothing and follow correct procedures.
- 5.5 In relation to a mortuary service, describe the role of the New Zealand Police, including the Police photographer and specialist police teams, for e.g., members of the serious crash unit, the Coroner, the Coronial Service and NIIO, the funeral director, the coronial transport provider and tissue donation coordinator.
- 5.6 Describe the requirements of tissue collection and documentation, tracking, return, storage and disposal as described and required in the Coroners Act 2006 and the Human Tissue Act 2008.
- 5.7 Describe dealing empathetically with, and offering advice to, relatives and other bereaved persons who may visit the mortuary for identification or viewing. **Practical Assessment.**
- 5.8 State the situations in which access should be facilitated for ministers or religion and the procedures to be followed.
- 5.9 Describe the requirements of ethnic minorities with regard to death, including comprehensive knowledge of principles of Tikanga.
- 5.10 Describe the role and need for the whanau / family room associated with a New Zealand mortuary and the cultural protocols and requirements for its use, especially for Maori and Polynesian families.
- 5.11 Describe what you understand to be culturally competent and what cultural considerations, especially to Maori, should be made in relation to post-mortems and the respective protocols associated with death. (Please note: These are usually found in the respective District Health Board Policy Documents "Tikanga Recommended Best Practice" of the DHB managing the mortuary services. If unavailable, a copy of Auckland District Health Board document is embedded at the reference section of this syllabus.)

## 6. Quality Assurance and Administrative Procedures within a Mortuary

**Learning outcome:** The candidate will have the ability to carry out the appropriate day to day administration and management duties within a Mortuary facility, by being able to:

- 6.1 Describe the correct procedure for checking stock, inclusive of expiry dates, and equipment and describe the infection control precautions necessary for the disinfection, care, storage and maintenance of instruments. **Practical Assessment.**

- 6.2 Describe the need for regular maintenance, calibration, spatial checks and servicing of equipment such as microscopes, storage refrigerators, De-Soutter saws, people lifts/hoists and trolleys, scales, camera's, air-filters and air-conditioning units, computers, printers, fume cabinets and other equipment.
- 6.3 Describe the importance of document control and health and safety audits, Fire audits, and other audits completed within the Mortuary for ISO15189 assessment and accreditation.
- 6.4 Describe the principles behind document management.
- 6.5 Describe the need for annual competency sign-off, an annual practicing certificate and the role of the Continuing Professional Development programme.
- 6.6 Describe the need for prevention of psychological harm to self and colleagues and ways in which this workplace hazard can be managed.
- 6.7 Describe the role the New Zealand Institute of Medical Laboratory Science, Medical Sciences Council of NZ and that of the Mortuary Technician Special Interest Group.

### **References:**

- Coroners Act 2006
- Human Tissue Act 2008
- Health Practitioners Competency and Assurance Act 2003
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- Auckland District Health Board – Tikanga Recommended Best Practice