



New Zealand  
**Anaesthetic Technicians'**  
**Society**

## **TRAINING GUIDELINES**

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In this document the New Zealand Anaesthetic Technicians' Society Incorporated will be referred to as NZATS. The training status for any person – Trainee Technician, Registered or Enrolled Nurse, is defined in this document as the 'Trainee'.

## 1.0 Anaesthetic Technician Qualification

The Medical Sciences Council of New Zealand (MSC) requirements for registration on completion of training are as follows:

### 1.1 Diploma students only

- Completion of the Diploma of Applied Science (Anaesthetic Technology). The MSC approved provider for this programme is Auckland University of Technology (AUT)
- Completion of the MSC required number of clinical hours, in an MSC accredited training hospital. With supporting documentation of these hours
- Successful completion of the NZATS Anaesthetic Technicians' Registration Examination (Registration Exam)

### 1.2 Graduate certificate students:

Those studying Anaesthetic Technology who have a degree qualification in a relevant speciality such as nursing will require:

- Completion of the Graduate Certificate of Applied Science (Anaesthetic Technology). The MSC approved provider for this programme is Auckland University of Technology (AUT)
- Completion of the MSC required number of clinical hours, in an MSC accredited training hospital. With supporting documentation of these hours
- Successful completion of the NZATS Anaesthetic Technicians' Registration Examination (Registration Exam)

For further details on this programme refer to sections 6.0 and 6.2.

## 2.0 Clinical Training Requirements for Anaesthetic Technicians

- All trainees must be members of NZATS upon commencement of training. To be eligible for membership applicants **must have New Zealand Residency or Citizenship**.
- Trainees must be employed in the clinical setting of an operating room suite in an MSC accredited training hospital throughout their training and are required to complete a specified number of hours of clinical experience providing assistance to the Anaesthetist.
- Trainees will work with and learn from Registered Anaesthetic Technicians, Anaesthetists, Nurses and other staff employed within the clinical setting, following the MSC levels of Supervision. (see appendix A page 12)

## 3.0 Clinical Learning Outcomes of the Training Programme

On completion of the clinical training component, the Trainee will:

- Gain an understanding of clinical anaesthetic practice.
- Understand and recognise the roles and responsibilities of all members of the operating room team.

- Develop advanced communication skills in clinical practice, which are appropriate to both the patients and the clinical team.
- Gain an understanding and knowledge of good practice in medico – legal and ethical aspects of the profession and apply this to their daily work.
- Gain an understanding of the function, application and care of anaesthetic ancillary, monitoring, intravenous, investigative and other relevant equipment.
- Gain an understanding of the function and application of appropriate sterilization techniques and methods of disinfection.
- Develop clinical practice that is culturally appropriate.
- Apply relevant clinical policies, procedures and protocols to anaesthetic assistance.

#### **4.0 Training Hospitals**

All hospitals applying for accreditation as a training hospital for Anaesthetic Technicians must make this application to Medical Sciences Council NZ (MSC).

#### **5.0 Supervisor of Training**

The Head of Department of Anaesthesia will be responsible for the clinical supervision of trainees in the hospital. This responsibility may be delegated to another suitably trained person if appropriate. This person shall be known as the Supervisor of Training (SoT) and will be a designated, experienced clinician with an interest in training and teaching. The SoT may delegate some of their duties to the Charge Anaesthetic Technician or Educator as deemed appropriate by them.

##### **5.1 The Supervisor of Training (SoT) will:**

- Be appointed to this position by the Head of the Department of Anaesthesia.
- Be a vocationally Registered Anaesthetist.
- Act as a professional role model.
- Arrange for the selection of trainees giving due consideration to the pre requisite requirements of the theoretical programme
- Organise and administer the Anaesthetic Technician training programme.
- Ensure that the ratio of Trainee Anaesthetic Technicians to Registered Anaesthetic Technicians meets the requirements set by MSC.
- Ensure that the MSC levels of Supervision are adhered to.
- Report as required to NZATS, MSC and Health Workforce New Zealand.
- Liaise with AUT on the formal academic programme.
- Arrange placements as required at other hospitals for extended clinical experience and teaching if required.
- Ensure completion of assessments and competencies.
- Appoint and support Work Place Assessors.
- Organise the release of the Trainees to attend the formal academic programme.
- Be accountable for the organisation of the teaching and training programmes in the hospital, including accreditation
- Ensure recommended texts and access to the internet is available to support learning.

- Ensure that there is a regular review of Trainees' training objectives which include an assessment of their progress and skill development.
- Ensure that the Trainee is competent and has the personal confidence and the confidence of the Department to progress through all the MSC Levels of Supervision (refer appendix A). Clinical audits and assessments should support the decision of the SoT to progress the Trainee onto the next level of supervision. Support documentation will provide evidence of this.
- Provide educational guidance and learning support to assist Trainees to integrate theory and practice.
- Arrange preparation for Trainees' for the Registration Examination and ensure all necessary documentation is completed.

## 6.0 Training Programmes

### Diploma of Applied Science (Anaesthetic Technology)

Auckland University of Technology (AUT)

- Completion of the theoretical requirements – Anaesthesia I, Biophysics5, Human Anatomy and Physiology 1, Anaesthesia II, Anaesthesia III and Anaesthesia IV
- Completion of assessments, audits, task and competencies in both Anaesthetic Technology I and Anaesthetic Technology II manuals.

It is the Trainee's responsibility to ensure that the above requirements for the manuals are complete.

### Diploma of Applied Science (Anaesthetic Technology)

For New Zealand Registered Anaesthetic Technicians who wish to upgrade from the Certificate of Proficiency qualification to the diploma qualification:

- Completion of Anaesthetic Technology II and Anaesthesia IV

### Graduate Certificate Applied Science (Anaesthetic Technology)

For health professionals who have a degree qualification that has been approved as relevant to the practise of anaesthesia by Medical Sciences Council New Zealand. For clinical training hour requirements refer section 6.2.

- Completion of Anaesthesia III and Anaesthesia IV, Anaesthetic Technology II manual and an Independent learning paper with a biophysics component.

MSC also require completion of Anaesthetic Technology I manual as an orientation into anaesthesia. Although the student does not have to enrol in this paper, the manual must be completed to the satisfaction of MSC and the Machine Check Audit must be passed prior to the student commencing the Anaesthetic Technology II manual.

### Diploma of Applied Science (Anaesthetic Technology)

For Registered Nurses who are Diploma qualified. For clinical hours refer section 6.2.

- Completion of Anaesthetic Technology I, Biophysics 5, Anaesthetic Technology II, Anaesthesia II, Anaesthesia III, and Anaesthesia IV. The nurse can apply to AUT to have their Human Anatomy and Physiology I cross credited. If this request is declined, then this paper must also be completed in addition.

It is the trainee's responsibility to ensure that the stated requirements for the Anaesthetic Technology clinical manuals are completed.

Work place safety issues are the responsibility of the training hospital and will apply to all trainees.

Trainees shall be released from clinical service to attend formal and informal teaching programmes. Non clinical teaching and private study time will equal a minimum of 3 hours per week during the academic year (or equivalent) for those trainees completing Anaesthesia theory papers. For trainees sitting Technology I and Technology II practical papers, 1 hour per week during the academic year (or equivalent) should be allocated.

Work rosters should provide an adequate break before attendance at a formal teaching session, test or examination so that students can achieve their learning objectives.

### **6.1 Duties of Trainees**

The trainee will be responsible to the Charge Anaesthetic Technician for daily duties. The trainee will provide direct assistance to the Anaesthetists as well as assistance to other members of the theatre team as required within the limits of their scope of practice and their assessed skill level.

The minimum duties of a Trainee will be (but are not limited to):

- Assistance with induction, maintenance, and emergence of anaesthesia.
- Providing mental and physical support for the patient including assistance in peri-operative procedures.
- Checking and preparing of anaesthetic machines and ancillary equipment.
- Preparation, establishment and operational assistance of monitoring equipment with continued assistance in its operation, where appropriate.
- Preparation of intravenous administration equipment.
- Assisting with patient positioning and transfer of patients.
- Stocking and preparation of anaesthetic equipment rooms and procedural lockers.
- Cleaning and ensuring decontamination and sterilisation processes of all anaesthetic and ancillary equipment.
- Preventative maintenance, assembly and usage of anaesthetic equipment, including but not limited to: anaesthetic gas delivery equipment, ventilators, monitors, humidifiers, resuscitation equipment etc. (Maintenance refers to minor day-to-day preventative maintenance and not to any specialised engineering or electrical maintenance that would require the services of qualified tradesmen).
- Other duties depending on the circumstances, and to some extent upon the discretion of the Charge Anaesthetic Technician or the designated Anaesthetic Team Leader.
- During clinical practice hospital policies and procedures must be followed at all times.
- Ensure Anaesthetic Technology manuals and other related workbooks are up to date
- Attend all tutorials and lectures provided by both the employing hospital and AUT.

### **6.2 Duration of Clinical Training**

- Clinical training is conducted over 1.5 to 3 years full time employment according to the NZATS guidelines.
- Trainees must be members of NZATS at the commencement of their training programme and for each year of their training. A penalty fee will be incurred for late registration. Ongoing, a penalty fee will be incurred if the annual membership fee is not paid by 1<sup>st</sup> September each year.
- Trainees who have previous health professional training may require a lesser amount of supervised clinical practice.
- Registered Nurses will qualify for reduced training times if, prior to commencing their Anaesthetic Technician Training, they have a minimum of 1 years full time clinical practice

(or part time equivalent) in either the Peri-operative, Post anaesthetic care unit, Emergency dept., Intensive Care or Surgical ward nursing specialities.

- a) A Registered Nurse with a degree qualification with the relevant clinical practise (as stated above) who undertakes training and enrolls in the Graduate Certificate in Anaesthetic Technology, must complete a minimum of 3120 hours (18 months).
  - b) Any Registered Nurse wishing to apply for a reduction in clinical hours, which would result in less clinical hours than stated above must apply for approval of reduced clinical training hours to the Registration / Recertification Committee of the Medical Sciences Council
  - c) A Registered Nurse with a Diploma qualification with the relevant clinical practice (as stated above) who undertakes training and enrolls in the minimum of 4160 hours (2 years) of clinical practice during the programme.
  - d) An Enrolled Nurse with relevant clinical experience (as stated above) or a health professional with relevant clinical experience (as approved by MSC) whom have also completed a suitable anatomy and physiology paper (as assessed by AUT) must complete a minimum of 4,160 hours (2 years) clinical practice.
  - e) Other Trainees without previous health professional training employed as a Trainee must complete 6240 hours (3 years) of clinical practice.
- Any person deemed to have relevant experience who wishes to become a Trainee but does not have a nursing background, may apply to the MSC Registration / Recertification Committee to have their hours of training reduced. After due consideration of the application, MSC will decide on whether a reduction of hours is appropriate. The maximum time that, training may be reduced by is 12 months.
  - The stated clinical training hours must be completed before being eligible to sit the Registration Examination.
  - The Supervisor of Training is responsible for ensuring documentation is provided that verifies completed hours 'on-the-job'. The calculation of clinical hours will be inclusive of all entitlements relating to sick leave and annual leave as stated in the Trainees' employment contract agreement. If a Trainee takes sick leave or annual leave in excess of their employment contract agreement they may be required to complete additional hours of clinical training.
  - Trainees who interrupt their training may do so for a period of up to 12 months without loss of recognition of clinical hours already completed, NZATS and MSC must be notified in writing by the Trainee of an interruption in the clinical training hours prior to the interruption occurring. Late notification may result in the loss of recognition of hours. Documented support for the interruption in training must be provided by the SoT.
  - Trainees can undertake the programme on a part-time basis but they must put their proposed schedule, prior to commencement of the part time training, to NZATS Executive and MSC to gain approval to undertake part time training. Late notification may result in a loss of recognition of hours.
  - Training time should normally be completed within 5 years. Trainees must successfully complete the following within the 5 year time frame:

### **Diploma students**

- Diploma of Applied Science (Anaesthetic Technology)
- NZ Anaesthetic Technicians Registration Examination

### **Graduate certificate students**

- Graduate certificate in Applied Science (Anaesthetic Technology)
- NZ Anaesthetic Technicians Registration Examination

If the stated requirements are not met within 5 years of commencing actual employment as a Trainee, that Trainee will be removed from NZATS membership. The Trainee, training hospital and MSC will be advised accordingly. In exceptional circumstances an application for an extension to training may be made by the SoT in writing to MSC Registration / Recertification Committee for consideration.

### **6.3 Theoretical syllabus**

The Diploma and Graduate Certificate programmes are currently delivered by the MSC approved provider, Auckland University of Technology (AUT).

- In compliance with AUT quality assurance initiatives, all academic papers will be reviewed 5 yearly. The MSC / NZATS in consultation with AUT determines the detailed syllabus for the anaesthesia papers. The NZATS / MSC shall approve any alterations to the paper prescriptors.
- The anaesthesia papers are only available to Trainees who holds a position as a Trainee Anaesthetic Technician in an MSC accredited training hospital and are members of NZATS.
- Trainees are required to travel to attend nationally organised block courses and assessments at locations arranged by AUT in consultation with NZATS.

## **7.0 New Zealand Anaesthetic Technicians' - Registration Examination**

The Registration Examination will be held twice a year.

The Registration Examination is independent of the AUT theoretical learning programme and is the final assessment required by MSC. NZATS is contracted to deliver the Registration Examination. The candidate will be expected to have a wide knowledge of operating room practice and patient care. A list of likely topics for the examination is listed on the NZATS website. Suggested reference reading is included in the AUT syllabus.

### **7.1 Examination Requirements**

The prospective candidate must have completed the Diploma in Applied Science (Anaesthetic Technology) or Graduate Certificate programme.

- Students presenting for the Registration Examination must produce a current (not more than 6 months old) CPR certificate (CORE Immediate)
- The prospective candidate must prove on application that they have attained 95% of the required clinical training hours when they apply to sit the Registration Examination as detailed below:
  - a) A Registered Nurse with a degree qualification with the relevant clinical practice who has undertaken training and enrolled in the Graduate Certificate in Anaesthetic Technology, must complete a minimum of 2760 hours.
  - b) A Registered Nurse with a Diploma qualification with the relevant clinical practice who has undertaken and enrolled in the Diploma of Applied Science (Anaesthetic Technology), must complete a minimum of 3680 hours of clinical practice during the programme, except where granted a reduction of hours by MSC.



- c) An Enrolled Nurse with relevant clinical experience or other health professional with relevant clinical experience who has completed a suitable anatomy and physiology paper must complete a minimum of 3680 hours except where granted a reduction of hours by MSC.
- d) Trainees without previous health professional training who are employed as a trainee must complete 5520 hours of clinical practice, except where granted a reduction of hours by MSC.
- e) Where a Trainee has been granted a reduction of hours by the MSC, the required number of hours shall be 95% of the training hours, as recommended by MSC.

The following documentation must be presented by the New Zealand trained candidate:

- Evidence of Trainee membership with NZATS.
- Completed application form including passport sized photograph.
- Evidence of successful completion of the Diploma or Graduate Certificate.  
If a candidate has been unsuccessful in any of the academic papers the Trainee is not eligible to sit the Registration Examination. In some circumstances, AUT may grant an extension and a specific time frame for the completion of the Anaesthetic Technology II paper. Written confirmation will be required from AUT to confirm this before the Trainee may be registered to sit the Registration Examination.
- A summary of training time in hours as per the NZATS official document available on the website.
- Evidence of other relevant qualification e.g. nursing
- Evidence of time dispensation as approved by MSC Registration / Recertification Committee.
- Full payment of the examination fee (no cash).
- Criminal conviction history. This requirement is requested by MSC and must be included in your examination application. The criminal history conviction certificate will need to be produced when applying for your registration with MSC after successful completion of the Registration Examination. The MSC states that this must be no more than 3 months old. The application form can be found on the Ministry of Justice website, <http://www.justice.govt.nz/services/criminal-records/forms/requests-by-individual.pdf> and can take up to 20 working days to process.

## **7.2 Registration Examination Format**

This will be held in March and October, and take place in Auckland, Palmerston North, Wellington or Christchurch.

The examination will consist of up to 17, 7 minute Objective Structured Clinical Examinations (OSCE's.)

The Medical Sciences Council of NZ state that "The use of a Reader / Writer support person is not permitted in the Anaesthetic Technicians' Registration Examination"

The fee to sit the Registration Examination will be \$1100 excluding GST.

### **Examination Process**

The OSCE's will consist of up to 17 stations.

During this examination the candidate will move in a controlled sequence from station to station.

- 5 OSCE stations will focus on testing checking or describing the function of a particular part of the anaesthetic machine. A pass in all 5 of these OSCE stations is required.
- 1 station will focus on infection control. A pass in this station is required.
- The remaining stations may include short scenarios, written answers or the candidate may be asked viva questions. The candidates may also be asked to demonstrate a specific skill at a station.
- The candidates will rotate through the stations at 7-9 minute intervals.
- An overall pass rate of 14 out of the 17 OSCEs must be achieved.
- Examples of OSCEs will be posted on the website.
- Candidates will be given a candidate number by which they shall be known for the duration of the examination. Neither the identity of the candidate nor the candidate's hospital will be revealed to the examiners. Photographs of candidates will assist in identifying candidates at the post-examination meeting.
- There may or may not be an examiner present at each OSCE station. Alternatively the candidate may have to demonstrate a specific skill to an examiner at a 'station'. For the viva sections of the OSCEs, at least 2 examiners will be present.
- On some occasions the examiner may be known to the candidate, however there will always be both an Exam coordinator and a NZATS executive member Moderator (see below\*) present at the examinations who will offset any perceived issue relating to the professional or personal relationship with examiners.
- It is an MSC requirement that the examiners will participate in regular workshops and validation processes.
- The Exam coordinator will be a supernumerary examiner and may examine, may observe or may alternate between these two tasks. \* One member of the NZATS Executive board will take the role of moderator and will not examine. The Exam coordinator and the moderator will take the responsibility for the professional delivery of the examination following the NZATS Training Guidelines.
- The Exam coordinator will chair the pre and post examination meetings and will ensure the process, question review, format of questions, machine check faults and other details relating to the delivery of the examination.
- Should there be any final result relating to an individual candidate that the court of examiners cannot agree on, the NZATS Executive representative member will have the casting vote.
- The Exam coordinator will be responsible for writing the Examination Report for publication.
- Only the Exam coordinator and the moderator may enter the examination room or move around the stations whilst the examination is in progress. Both persons must be readily identifiable and be introduced to the candidates prior to the examination process commencing.
- At any examination an observer, an examiner in training or a senior technician who has a role in education, may be present. Candidates must be advised of the presence of the observers prior to the examination commencing. The observers must remain silent and still throughout the examination. Only one observer will be permitted to be present at any OSCE station at any time. The examiner in training may attend examination meetings and contribute to the discussions at the court of examiners. However, as with the moderator and secretary, the examiner in training will have no voting rights on decisions made by the court of examiners.
- The observer who is not an examiner in training will not attend examination meetings nor contribute in any way to the outcome of any candidates results.
- All examiners, members of the examining team and observers will agree to, and sign a confidentiality agreement before the commencement of the examination.

### **7.3 Pass / Fail criteria**

Candidates will need to pass 14 out of the 17 OSCEs to pass the examination. Candidates must however pass all 5 machine OSCEs and the infection control station as the court of examiners must be satisfied that the candidate is safe to practice as a Registered Anaesthetic Technician.

If a candidate fails the examination, the candidate will be required to re-sit. Full current examination fees will be incurred.

A maximum of 2 resits are allowed. If the candidate fails the third attempt, they will need to contact MSC to request any further resits. The MSC may decide the candidate, may be ineligible to sit any further attempts at the NZ Technicians' Registration Examination.

### **Results**

Candidates' results will be posted in the mail. Please ensure your postal address details are correct. The successful candidates will also have their candidate number published on the NZATS website, under exams as soon as possible after the examination marking is complete on Sunday afternoon. Candidates will be notified of their results by post. No candidate will be advised by telephone, email or direct conversation.

### **7.4 Further Conditions**

#### Fees

Fees for the examination to be verified as appropriate by the NZATS accountant. Fees may be subject to change as required.

#### Refund

Candidates will be eligible for a refund if they notify the secretary of their withdrawal 10 days prior to the exam. These candidates would be charged a 10% processing fee.

#### Illness or other circumstances

If a candidate withdraws on the day of the examination due to illness or bereavement the examination fee will be credited to the next scheduled examination. Candidates in these circumstances will not be charged the 10% processing fee. However should there have been an increase in the fee structure; any difference between the fees of the two examinations must be paid by the candidate. A medical certificate will be required (candidate to be encouraged to see a local doctor).

#### Feedback

Candidates will have the opportunity to provide feedback on the process, venue, format and documentation.

#### Complaints process

There is a complaints process available to candidates. The complaint must be sent in writing and post marked within 7 days of the date of the exam, to the Exam Facilitator at:

Examinations' Secretary  
NZATS  
PO Box 10691  
Wellington 6143

The NZATS Executive in consultation with the moderator and examiners, may change the format of the Registration Examination.

The NZATS Executive, in consultation with the moderator and examiners, may review the examination fee to meet the expenses of conducting the examination.

*Training Regulations reviewed December 2010*

*Training Regulations reviewed March 2011*

*Training Regulations reviewed April 2012*

*Training Regulations reviewed May 2015*

*Training Guidelines reviewed July 2016*

## **Appendix A**

### **MSC Recommended Clinical Supervision Structure**

#### **Level 1 - Direct Supervision**

- Trainees must be directly supervised by a Registered Anaesthetic Technician at all times.

#### **Level 2 – Indirect Supervision**

- A Registered Anaesthetic Technician must be available to give immediate practical assistance / advice at any time to Trainees who are in an anaesthetising location.
- The Registered Anaesthetic Technician must be conversant with the trainee's caseload and experience.
- The ratio of Trainee to Registered Anaesthetic Technician must not exceed 2:1 on each duty.

#### **Level 3 Supervision**

- The Registered Anaesthetic Technician is available in the healthcare facility but is not exclusively available for a specific trainee.

#### **Guideline Copied from MSC presentation at NZATS conference 2015**

#### **Transition from level 1 to level 2 supervision for Trainee Anaesthetic Technicians enrolled in the Diploma of Applied Science (Anaesthetic Technology) Mandatory minimum requirements:**

For trainees who have completed the AUT paper Anaesthesia 1:

- A pass in Anaesthesia 1 paper
- A minimum clinical training time of 460 hours
- An "in house" assessment of competency which must include a self- assessment and competent demonstration of the NZATS level 2 and level 3 anaesthetic machine check
- Verbal and written feedback is provided to the Trainee

For trainees who have **NOT** completed the AUT paper Anaesthesia 1:

- A minimum training time of 920 hours
- An "in house" assessment of competency which must include a self- assessment and competent demonstration of the NZATS level 2 And level 3 anaesthetic machine check
- Verbal and written feedback is provided to the Trainee

NB There must be evidence that the trainee has received formal lectures on:

Infection Control

Health and Safety in the workplace

## Principles of Anaesthesia (basic drug and equipment information)

For Registered Nurses enrolled in the Graduate Certificate in Anaesthetic Technology who have relevant previous experience (a minimum of 1 years recent experience in ICU, PACU, operating rooms or surgical nursing):

- Determining the transition through all levels of supervision is the responsibility of the accredited training hospital. There is no minimum time period at which the R/N (“Trainee AT”) may progress to a higher supervision level.
- An “in house” assessment of competency which must include a self- assessment and competent demonstration of the NZATS level 2 And level 3 anaesthetic machine check
- Verbal and written feedback is provided to the Trainee