



The trainee's handbook

Everything you need to know
about Industrial Measurement
and Control (IMC)



Te Pūkenga

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Contact us

Need help? Got a burning question?
We've got you covered.

Call us: 0800 327 648 (0800 EARN IT)
Mon–Thurs, 7am–6pm Fri 7am–5pm

Email: support@earnlearn-tepukenga.ac.nz

Website: www.earnlearn-tepukenga.ac.nz



Your Apprenticeship: How it works

The New Zealand Certificate in Industrial Measurement and Control (Practice) (Level 4) is a qualification for people who can apply Industrial Measurement and Control (IMC) knowledge and practical skills. It is intended for people that are working in an IMC workplace.

This qualification complements the New Zealand Certificate in Industrial Measurement and Control (Theory) (Level 4) [Ref: 2252], and recognises the practical application of the knowledge and skills required to safely and competently install, commission, service, and maintain industrial measurement and control equipment and systems.

If you haven't already, you can enroll in the theory qualification with Wintec, by emailing your interest to: imcadmin@wintec.ac.nz

This programme is made up of unit standards which are completed and assessed on-job (e.g., at your workplace). It will take about 14 months to complete.

Graduate profile

By the time you finish your programme and graduate you will be capable of operating as an instrumentation technician. You will be able to:

- install and commission industrial instrumentation
- service industrial measurement and control equipment and systems
- diagnose and correct faults in industrial measurement and control systems

Education Pathway

Once you finish this qualification you might wish to progress to the New Zealand Certificate in Process Control and Automation (Level 5) with strands in Process Control and Process Automation [Red. 2253].

Qualification award

Te Pūkenga will award the qualification to people who have met all requirements of the programme. This means that all the required On-job Assessments have been completed and verified by the Workplace Verifier, assessed as competent by the Assessor, and the unit standards have been awarded.





Let's get started

Te Pūkenga induction

If they haven't already, your Te Pūkenga Account Manager will be in touch with you or your employer to set up an induction meeting. They'll sit down with you, run you through the ins and outs of your training, and answer any questions you may have. In the meantime, you'll find most of the information you need to know in this guide.

On-job assessments

Now that you've signed up, you've been given a folder containing the on-job assessments you'll complete during your training.

You will have received one folder labelled:

- On-job Assessments - Compulsory unit standards

The assessments in this folder are your compulsory units. These are the assessments you'll complete during your training. Each assessment is specific to a unit standard, which explains the range of work covered. There should be 9 assessments.

You will also need to complete some elective units. You can find the on-job assessments for these on My Portal. Make sure you have your log-in setup.

Completing your assessments

You record the work you are doing in these booklets. The On-job Assessments form the basis of the assessment process. Your Supervisor/Verifier will complete their parts when they have observed you completing an appropriate task.

- Print your details on the front sheet.
- Answer all the questions.
- Ask your Supervisor/Verifier to complete the tables where appropriate when they think you are competent in the tasks.
- Make an appointment with your Verifier when the On-job Assessment is complete. They will go through your assessment with you, possibly asking additional questions.
- When your Verifier judges you competent, he or she signs off the unit.
- It is your responsibility to send the completed On-job Assessment and any other evidence to Te Pūkenga.

Make sure you keep a copy of your assessment for your own record!

Setting up your My Portal login

My Portal is our online portal where you and your employer can check your progress through your training.

When we registered your Training Agreement, we set up a My Portal login for you – you should have received an email from us. We need you to log on to the portal and reset your password.

Just follow the steps below:

1. Go to portal.earnlearn-tepukenga.ac.nz
2. Click on “Password Reset Portal”
3. Click on “I need a code”
4. Enter your details and reset your password

If you need help, just give us a call and we can give you a hand.

You can also talk to your training provider about how you are going and your progress.





On-job learning

Most of your learning will happen on the job. Your supervisor will show you how to do things and explain why they are done that way. Your supervisor will also make sure you follow safe working practices so you keep yourself and others safe while working.

During your normal daily work, we recommend you keep a record of the jobs that you do in a work diary or on-job sheets. We have provided you with on-job assessment booklets. These have instructions on how to complete assessments.

These assessments can be done in any order, depending on the range of work that you are doing.

Who's involved

There can be a few people involved in the process. Let's take a look at them.



Supervisor

Depending on the size of your company, this can be any registered and practicing electrician who can confirm your skills and competency. If you work in a small company, the supervisor may be the same person as the Te Pūkenga Verifier. It's worth asking to be sure.



Verifier

This is a person who is registered as a Te Pūkenga Verifier. They will have received training from Te Pūkenga in how to verify you. They are the only person who can sign off a completed assessment booklet. Your Verifier is usually your employer or supervisor. If you don't know who your verifier is - ASK!



Te Pūkenga Verifier

Te Pūkenga will award the qualification to people who have met all requirements of the programme. This means that all the required On-job Assessments have been completed and verified by the Verifier, assessed as competent by Te Pūkenga, and the unit standards have been awarded.



How to get assessed

When you feel confident doing the tasks outlined in the On-job Assessments, these are the steps you need to take:

- Ask your Verifier to verify your work.
- Once a whole assessment is ready to be signed off you will be assessed by your Verifier.
- If your Verifier is happy with your assessment and evidence supplied, they will sign you off as competent.
- You will then send your completed assessment and supporting evidence to Te Pūkenga for processing.
- If everything is in order you will be granted the unit standard associated with that assessment.

Competence

You are competent when you can show, without help, the skills and knowledge required to complete the assessment tasks in your training. You should be able to complete a task just as well as the person verifying you. The decision, however, is up to your assessor. They will be looking to see that you can safely perform the requirements of each unit:

Repeatedly



You will typically need to practice a skill several times before you are ready to take the assessment. Throughout this period, you should keep work diaries, records etc. which you will later be able to use as supporting evidence to show competence.

When you and your Supervisor/Verifier are confident that you can carry out a job consistently to the appropriate level, you are ready to ask to be observed and have your skills verified.

Without assistance



First, ask yourself if you think your skills meet the requirements of the assessment.

Read through the on-job assessment you want to be assessed on and see if you think you are ready.

Next, ask the people who will be assessing you what they think. It's okay if they say they don't think you're ready. They will give you good feedback on where you need to improve and you can ask for tips to get you up to speed.

According to the assessment book



You should now start completing the assessment. If you are unsure of some of the content, ask for clarification before you go to get signed off.

In accordance with industry best practice

Your work should meet the expected standards for reputable organisations operating within your industry.

Within acceptable industry timeframes



As a trainee, you will not be expected to complete jobs to the same speed as someone with several years' work experience. However, your Supervisor/Verifier will need to see that you are able to complete your work in economically viable timeframes.

Evidence of competency

Workplace learning and assessment is an ongoing process and you may not be competent in the more complex unit standards until near the end of your training.

When you are ready to be assessed, you should complete your parts of the On-job Assessment and discuss with your Supervisor/Verifier when they want to observe you and complete their parts of the On-job assessment. Evidence is obtained using a mix of the following methods.

Direct observation

Your Supervisor/Verifier watches you carry out the work and completes the Assessment results page of the On-job Assessment.

Third party evidence

A tradesperson, other than your Verifier, watches your work or inspects the result and your Verifier uses their assurance that you have demonstrated competence.

Verifiers can use the testimony of another tradesperson or supervisor as evidence or to confirm that your records are correct and that you can be assessed as competent.

Inspection of work

Your Supervisor/Verifier inspects your finished work and completes their part in the On-job Assessment.

Questioning and discussion

You may be asked additional questions which allow you to demonstrate your understanding of requirements of the unit standard.

Daily written record

You can either have separate sheets which you would keep in a folder, or use a diary, in which you should record the work carried out that day.

The information you need to record daily is:

- date;
- work site (where you were working);
- the actual work you carried out;
- materials/components used;
- who your supervisor was.

What follows is a typical example of what is required:

| Work record sheet/diary | |
|--|-----------------------|
| Name: J Stewart | Date: 15/12/15 |
| Worksite: East Bay | Servicing |
| Work done: | Unit standard |
| Servicing pressure measurement device | 2631 JKL |
| Types of materials/components used: | |
| | |



Submitting trainee assessments

First: Please make and keep a copy of every page of your assessment booklet and any other evidence (like photos and site plans).

You can do this on a scanner, photocopier, or smartphone, for example. If your on-job assessment gets lost for whatever reason, you will have to redo it again and no one enjoys that. There are a couple of ways you can send in your on-job assessments:

Email



Scan and email the assessment and any other evidence as **one attachment** to: assessments@earnlearn-tepukenga.ac.nz

Please note: The processing time is around 5 working days if all the information is signed off and received correctly. The results can take around one month to appear on your NZQA record.

Hand it in to your Account Manager



If you are due to see your Te Pūkenga Account Manager, you can simply take a copy of your assessment and give it to them.

Please don't forget to make a copy of your assessment booklet and evidence before submitting it!

Important:

- Send assessments into Te Pūkenga regularly. Do not save them up until the end of your training.
- File your copies carefully - they will help you trace a missing assessment as well as give you a record.



Other useful information

Assessment appeal

- What do you do when your Verifier has decided you don't yet meet the achieved requirements in an On-job Assessment, but you believe you have met requirements?
- You can lodge an appeal. Te Pūkenga has a process
- Look up <https://earnlearn-tepukenga.ac.nz/assessment/workplace-assessment/> for further information on this process.

Monitoring of assessment

- Te Pūkenga monitors the assessment process and reviews the assessment results. This is the process of checking that the assessment meets the criteria set out in the Competence section on page 9 of this book.
- A trainee found not conforming to the criteria will have their training agreement reviewed immediately.

Reporting of credits to NZQA

- Te Pūkenga records the units completed on your Te Pūkenga record and then sends the unit standard credits for registration with NZQA on your record of learning.
- You can access a Te Pūkenga progress report from My Portal. This report shows your progress against the qualification and confirms unit standards registered with NZQA.

The Privacy Act

- Trainees and employers must keep assessment records secure and confidential. The reporting of results to candidates, employers and Te Pūkenga must comply with the requirements of the Privacy Act 1993.
- If you are unclear on what happens to your assessments at your workplace, talk to your employer.

Advice and support

- If you need some advice or support as you progress through the training, contact your Te Pūkenga Account Manager, or the Customer Service team on **0800 EARN IT (0800 327 648)**.

Remember:

- Assessments should be part of your everyday work. It should not be saved up until the end of your training.
- Assessment can begin as soon as you feel able to do a unit competently.
- Ask for regular verification of assessments.
- Send your completed assessments to Te Pūkenga regularly.
- You are responsible for completing your qualification.

If you don't know who your verifier is - ASK!

The training and assessment process

Read the Trainee Handbook and get familiar with the On-job Assessments.

Collect evidence of the work you do.

Your On-job Assessments will outline the evidence requirements, and how to collect it

(eg. answer questions in each On-job Assessment, attach workplace documentation, and ask your Supervisor/Verifier to verify and sign-off your work).

Your Supervisor/Verifier will need to complete their part of the On-job Assessment. This confirms that your work meets industry and organisational requirements.

Your Verifier will check your On-job Assessments and may also want to ask you further questions to complete a full assessment.

Your Verifier will decide if you have met requirements to achieve the unit standard.

Achieved

Your verifier will sign off your On-job Assessment.

Send your completed On-job Assessments to Te Pūkenga along with any evidence you have collected.

Not Achieved

Do some further training and ask for a date for further assessment.

Keeping track of your progress

Use the following checklist to keep track of your progress through your apprenticeship. It's a good idea to only mark these off once you know they are on your progress report with NZQA.

Compulsory workplace unit standards

You must complete **ALL** of the compulsory unit standards.

| MUST COMPLETE ALL OF THE UNITS BELOW (72 Credits) | | | | | |
|---|-------|--------|---|-----------|----------------|
| Unit | Level | Credit | Title | Completed | Date Submitted |
| 9180v6 | 4 | 10 | Install or replace, test, and commission industrial instrumentation | | |
| 2631v6 | 4 | 10 | Maintain pressure measurement devices | | |
| 2633v6 | 3 | 10 | Maintain level measurement devices used in industry | | |
| 2635v6 | 4 | 10 | Maintain temperature measurement devices used in industry | | |
| 2637v6 | 3 | 10 | Maintain flow measurement devices used in industry | | |
| 2640v6 | 3 | 5 | Maintain control valve actuators and positioners | | |
| 2667v6 | 3 | 5 | Install and service pneumatic or electro-pneumatic equipment | | |
| 4357v6 | 4 | 2 | Tune or adjust a plant control loop | | |
| 19234v3 | 5 | 10 | Diagnose and correct faults in industrial measurement and control systems | | |

Elective on-job assessments

You will need to complete **at least 8 credits** from the Elective section. You only need to select enough units to achieve the 8 credits. You can find the assessments for these elective units on My Portal.

When you are ready to complete these units, print off the assessment books from My Portal. Your choice may depend on the work you are doing with your employer.

MINIMUM OF 8 CREDITS REQUIRED

| Unit | Level | Credit | Title | Completed | Date Submitted |
|---------|-------|--------|--|-----------|----------------|
| 2639v6 | 4 | 10 | Maintain and service control valves in accordance with industry requirements | | |
| 2642v6 | 4 | 4 | Maintain pH measurement system for chemical analysis | | |
| 2643v6 | 4 | 4 | Maintain a conductivity measuring system | | |
| 2644v6 | 4 | 4 | Maintain a dissolved oxygen measuring system | | |
| 2645v6 | 4 | 4 | Maintain a consistency or a viscosity measuring system | | |
| 2646v6 | 4 | 4 | Maintain analytical monitoring equipment | | |
| 2647v6 | 4 | 4 | Maintain humidity or dewpoint monitoring equipment | | |
| 2648v6 | 4 | 4 | Maintain and calibrate density monitoring equipment | | |
| 2657v6 | 4 | 5 | Maintain pneumatic controllers | | |
| 2664v6 | 3 | 3 | Maintain hydraulic or electro-hydraulic equipment | | |
| 4356v6 | 4 | 4 | Maintain chromatographers | | |
| 24884v2 | 4 | 8 | Maintain conditioning modules and electronic or microprocessor based controllers | | |



Te Pūkenga

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