Programme and Delivery Proposal

New Zealand Certificate in Drinking Water Treatment Operations Level 4					
Credits	115-120	NZQA#	5672-1	Duration	18-19 Months

Strands

At least one of the following strands is required:

- Pre-treatment
- Clarification
- Coagulation and Flocculation
- Non-Chlorine Disinfection
- Fluoridation
- Filtration

How is this programme proposed to be completed?

A combination of eLearning, a five-day block course, and an on-site assessment would be required to complete this programme.

eLearning	Online learning and a combination of theory and practical assessment that are completed using the Connexis eLearning system (LMS). Practical assessments focus on real work activities completed on-job with evidence uploaded to support the assessment. SIM plant scenarios will also be required. Skill standards that require SIM plant are noted on this document in the Learning & Assessment column.
Online Drop-in Sessions & Tutorials	Formal online tutorial sessions covering targeted topics (i.e. mathematical techniques) as well as informal online drop-in sessions to help provide any additional learner support and technical guidance during their programme.
Block Course	Learners attend a five-day block course (BC) with expanded delivery locations from Wellington e.g. Auckland, South Island. Included in the block course is local site visits for learners to gain exposure to other plants as well as networking opportunities.
On-site Assessment	The final assessment is an on-site assessment where an external assessor will visit the learner's treatment plant for half a day/one day. Learners will provide a portfolio of evidence to support the assessment, some of this evidence may have been gathered as part of previous skill standard assessments in the programme. All skill standard assessments, including the chosen strand, must be completed before the on-site assessment.
Learner Support Sessions	In addition to the learning and assessment methods above, learners are also supported by Connexis through our Learner Support sessions. These sessions may be 1:1 or in a group, they help to build learner confidence, strengthen understanding and provide the support learners need to succeed. Support is tailored to each learners needs but may include tutoring on specific topics or skill standards, coaching, guidance or encouragement to keep learners progressing. For more information, please visit the Connexis website here.

Proposed Programme Entry Requirements

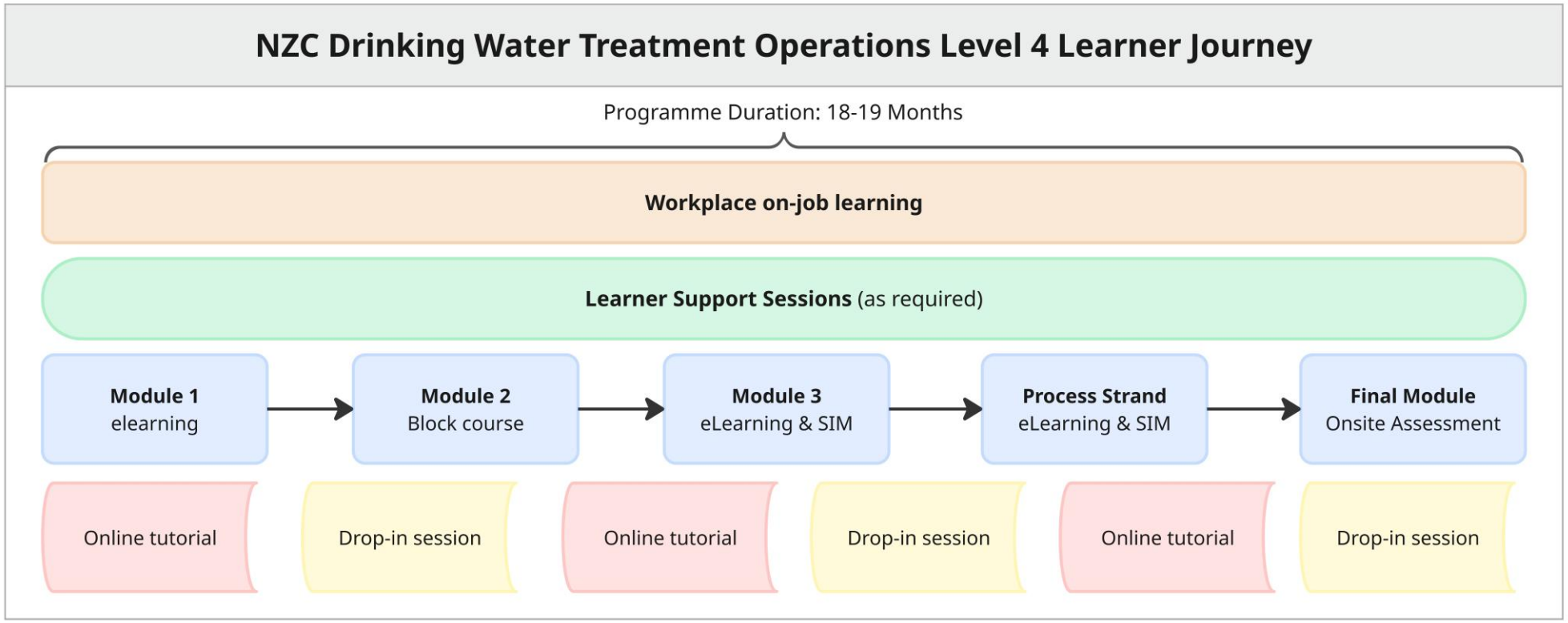
Learners **must** be employed in a drinking-water treatment plant as a treatment operator and have enough exposure to gain the relevant skills covered within this programme.

It is **recommended** that learners hold the New Zealand Certificate in Water Services Level 3 or demonstrate equivalent skills and knowledge.

SKILL STANDARD		CREDIT	LEVEL	LEARNING & ASSESSMENT
*These skill standards are included in more than one module due to split learning and assessment				
Module 1 (eLearning)				
41235	Implement treatment process requirements to protect people, communities, and the environment	6	4	Online learning & assessment
41234	Outline the protective measures that guide water extraction and discharge practices	6	3	Online learning & assessment
*41226	Manage operational risk and safety controls in a water services treatment environment	8	4	Online learning only
41237	Apply mathematical techniques to operate and control water services treatment operations	5	4	Online learning & assessment
41239	Carry out sampling, testing, and reporting of drinking water	5	3	Online learning & assessment
Module 2 (Block Course)				
*41226	Manage operational risk and safety controls in a water services treatment environment	8	4	Block course learning & assessment
*41236	Apply science principles to operate and control water services treatment operations	10	4	Block course learning only
*41243	Operate and control chlorination processes for drinking water	15	4	Block course learning only
Module 3 (eLearning)				
*41236	Apply science principles to operate and control water services treatment operations	10	4	Online learning & assessment
41241	Control source water abstraction for drinking water	12	4	Online learning & assessment
*41243	Operate and control chlorination processes for drinking water	15	4	Online learning, assessment & SIM plant
41250	Analyse drinking water treatment processes	18	4	Online learning & assessment

SKILL STANDARD		CREDIT	LEVEL	LEARNING & ASSESSMENT
One of the following strands must be selected: Additional strands can be selected and completed after learners complete this programme				
Pre-treatment Strand (eLearning)				
41242	Operate and control pre-treatment processes for drinking water	10	4	Online learning & assessment
Clarification Strand (eLearning)				
41244	Operate and control clarification processes for drinking water	10	4	Online learning & assessment
Coagulation and Flocculation Strand (eLearning)				
41245	Operate and control coagulation and flocculation processes for drinking water	15	4	Online learning, assessment & SIM plant
Non-Chlorine Disinfection Strand (eLearning)				
41248	Operate and control non-chlorine disinfection processes for drinking water	15	4	Online learning & assessment
Fluoridation Strand (eLearning)				
41246	Operate and control fluoridation processes for drinking water	10	4	Online learning & assessment
Filtration Strand (eLearning)				
41249	Operate and control filtration processes for drinking water	15	4	Online learning, assessment & SIM plant
Final Module (Onsite Assessment)				
41251	Operate and control drinking water treatment plant operations	20	4	Onsite assessment with external assessor and portfolio of evidence

SKILL STANDARD	ELEARNING	BLOCK COURSE	SIM PLANT	ONSITE ASSESSMENT
41235 Implement treatment process requirements to protect people, communities, and the environment (Level 4, 6 Credits)	✓			
41234 Outline the protective measures that guide water extraction and discharge practices (Level 3, 6 Credits)	✓			
41226 Manage operational risk and safety controls in a water services treatment environment (Level 4, Credits 8)	✓	✓		
41237 Apply mathematical techniques to operate and control water services treatment operations (Level 4, Credits 5)	✓			
41239 Carry out sampling, testing, and reporting for drinking water (Level 3, Credits 5)	✓			
41236 Apply science principles to operate and control water services treatment operations (Level 4, 10 Credits)	✓	✓		
41243 Operate and control chlorination processes for drinking water (Level 4, 15 Credits)	✓	✓	✓	
41241 Control source water abstraction for drinking water (Level 4, 12 Credits)	✓			
41250 Analyse drinking water treatment processes (Level 4, 18 Credits)	✓			
41242 Operate and control pre-treatment processes for drinking water (Level 4, 10 Credits)	✓			
41244 Operate and control clarification processes for drinking water (Level 4, 10 Credits)	✓			
41245 Operate and control coagulation and flocculation processes for drinking water (Level 4, 15 Credits)	✓		✓	
41248 Operate and control non-chlorine disinfection processes for drinking water (Level 4, 15 Credits)	✓			
41246 Operate and control fluoridation processes for drinking water (Level 4, 10 Credits)	✓			
41249 Operate and control filtration processes for drinking water (Level 4, 15 Credits)	✓		✓	
41251 Operate and control drinking water treatment plant operations (Level 4, 20 Credits)				✓


NZC Drinking Water Treatment Operations Level 4 Learner Journey
Programme Duration: 18-19 Months
Workplace on-job learning
Learner Support Sessions (as required)
Module 1
elearning
Module 2
Block course
Module 3
eLearning & SIM
Process Strand
eLearning & SIM
Final Module
Onsite Assessment
Online tutorial
Drop-in session
Online tutorial
Drop-in session
Online tutorial
Drop-in session