

SKILLSTECH AUSTRALIA – NWP07 TRAINING UPDATE



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ABSTRACT

The future direction of Water Industry Training within Queensland and indeed Australia is now firmly on track with the National Qualifications Framework (AQF) but a question lingers:

“I can see light at the end of the tunnel but why is that whistle blowing?”

Recent skills audits of amalgamated or restructured Water infrastructure has revealed that most senior operators hold qualifications previous to the initial 1998 Water Industry Training Package UTW98, and employers are requesting Operators up-skill or seek Recognition of Prior Learning (RPL) in the Water Industry’s new Training Package NWP07.

This presentation intends to show how the Water–Team at SkillsTech Australia (previously OLI – Open Learning Institute) have been working diligently to maintain our 30 yrs status as significant provider for Water Industry Training, by levelling the playing field with flexible training that best suits the individual and industry needs.

1.0 INTRODUCTION

The Water Industry Training Package describes the skills and knowledge needed to perform effectively in the workplace by encouraging learning and assessment in a work-related environment. Historically a blend of both distance education and face-to-face delivery has proven the best means of providing Water Industry Training to the small number of students dispersed throughout Queensland.

Feedback from students has shown they prefer the flexibility of self-paced study at home or work prior to attending our intensive two week Practicum, currently held in the Environmental Laboratory of Griffith University (Nathan Campus). Alternatively, some organizations have drawn upon the experience of SkillsTech Teachers in providing on-site training and assessment tailored to individual treatment processes.

Future delivery of Water Industry Training through SkillsTech is to remain Learner Focused by recognising that:

- learners have individual needs
- workplaces and treatment processes are seldom the same
- access to varied, new and emerging technologies is rare
- opportunities to network with Industry peers is limited

The following discussion will look at Skills Recognition, Recommended Enrolment Patterns and how you can help the SkillsTech Water Team by providing valuable industry input to our Training Programs.

2.0 SKILLS RECOGNITION

2.1 Credit Transfer

Credit Transfer for Operators currently employed in the Water Industry can be verified by providing an Academic Transcript of previous Competencies gained from a Registered Training Organisation (RTO) in Water Industry Operations.

For students who have completed units in our (OLI or SkillsTech) NWP01 and wish to transfer into the SkillsTech NWP07 Training Program, the below table lists units/courses that are equivalent in the old and new qualification that allow credit transfer.

Unit Code/s	NWP01 Require successful completion of:	Unit Code/s	NWP07 Transfer credit in:
NWP301A	Apply, implement, monitor and coordinate environmental procedures	NWP301B	Implement, monitor and coordinate environmental procedures
NWP363A	Monitor performance and control maintenance of treatment plant assets	NWP363B	Monitor performance and control maintenance of treatment plant assets
NWP268A	Monitor, operate and report disinfection systems	NWP268B	Monitor, operate and report chlorine disinfection systems
NWP210A	Perform basic water tests	NWP210B NWP208B	Perform basic water quality tests Perform basic wastewater tests
NWP345A	Monitor, operate and control water treatment processes	NWP345B	Monitor, operate and control water treatment processes
NWP317A	Monitor, identify and respond to water quality problems	NWP317B	Control water quality in distribution systems
NWP347A & NWP345A	Monitor, operate and control coagulation and flocculation processes	NWP347B	Monitor, operate and control coagulation and flocculation processes
NWP348A & NWP345A	Monitor, operate and control sedimentation and clarification processes	NWP348B	Monitor operate and control sedimentation and clarification processes
NWP354A & NWP345A	Monitor, operate and control granular media filtration processes	NWP354B	Monitor, operate and control granular media filtration processes
NWP346A	Monitor, operate and control wastewater treatment processes	NWP346B	Monitor, operate and control waste water treatment processes
NWP351A & NWP346A	Monitor, operate and control suspended media aerobic bioreactor processes	NWP351B	Monitor operate and control activated sludge processes
NWP353A & NWP346A	Monitor, operate and control mixed, fixed and suspended media anaerobic bioreactor processes	NWP353B	Monitor operate and control anaerobic bioreactor processes
NWP360A & NWP346A	Monitor, operate and control dewatering processes	NWP360B	Monitor operate and control dewatering processes

Previous OLI or SkillsTech students with **CNC28** Water Treatment Plant Operation and **CNO446** Sewage Treatment Plant Operation or **UTW201098** Certificates may use these qualifications as evidence for Recognition of Prior Learning (RPL) into the current SkillsTech NWP30107 Certificate III in Water Industry Operations.

2.2 Recognition of Prior Learning

Recognition of Prior Learning (RPL) candidates should provide current, quality evidence of their competence against the relevant unit of competency. This process is directed by the candidate through compilation of a **Portfolio** to be verified by an assessor. In addition observation of workplace performance and skills, and oral or written assessment may be required.

Follow the below dot points to assist timely assessment of your **Portfolio**:

- Up-to-date CV (Curriculum Vitae)
- Testimonial from Supervisors, with equal or higher qualifications
- Certified copies of results from relevant courses/programs
- Section your **Portfolio** into relevant NWP07 competencies
- Highlight & label evidence specific to elements within each competency.

The onus is on candidates to provide sufficient evidence to satisfy assessors they currently hold the relevant competencies, evidence must be:

- authentic (the candidate's own work)
- valid (directly related to the current unit of competency)
- reliable (shows that the candidate consistently meets the unit of competency)
- current (reflects the candidate's current capacity to perform the aspect of the work covered by the competency)
- sufficient (covers the full range of elements in the competency and addresses the four dimensions of competency, namely task skills, task management skills, contingency management skills and job/role environment skills).

To assist identifying courses the SkillsTech Water Team suggest you follow our recommended enrolment pattern and/or download the NWP07 Water Industry Training Package from the National Training Information Service (NTIS).

The following table is one example of a coversheet you may obtain from SkillsTech to assist sectioning your **Portfolio** for Skills Recognition.

NWP301B Implement, monitor and coordinate environmental procedures		
This unit of competency describes the outcomes required to identify and minimise the environmental impact of water industry work activities, identify general environmental risks and to implement, monitor and coordinate environmental procedures.		
Element Performance criteria	How I do this	Evidence I can provide to prove I do this
Assess the environmental requirements of a specific project or site. Implement environmental procedures. Report & review the application of environmental procedures.		

The following tables will assist SkillsTech students currently employed within the Water Industry map qualifications prior to NWP01.

Unit Code/s	CNO446 Require successful completion of:	Unit Code/s	NWP07 RPL mapping for:
WW012	Chlorination and industrial wastes	NWP268B	Monitor, operate and report chlorine disinfection systems
WW015	Laboratory practice applicable to sewage and wastewater	NWP208B	Perform basic wastewater tests
WW015	Laboratory practice applicable to sewage and wastewater	NWP218B	Perform sampling
WW005	Screening and grit removal	NWP264B	Monitor, operate and report wastewater pre-treatment processes
WW006	Sedimentation processes	NWP348B	Monitor operate and control sedimentation and clarification processes
WW002 WW003 WW017	Technology of treatment. Fundamental principles of sewage treatment plant design. Topics in wastewater treatment.	NWP346B	Monitor, operate and control waste water treatment processes
WW010	Activated sludge	NWP351B	Monitor operate and control activated sludge processes
WW007 & WW008	Sludge digestion and associated processes Part A & Part B	NWP353B	Monitor operate and control anaerobic bioreactor processes
WW009	Sludge disposal and biological filtration	NWP350B	Monitor, operate and control aerobic processes (trickling filters)
WW009	Sludge disposal and biological filtration	NWP360B	Monitor, operate and control dewatering processes

Unit Code/s	CNC28 Require successful completion of:	Unit Code/s	NWP07 RPL mapping for:
TWO112	Water Treatment Plant Operation (Level 2)	NWP363B	Monitor performance and control maintenance of treatment assets
TWO111	Water Treatment Plant Operation (Level 1)	NWP268B	Monitor, operate and report chlorine disinfection systems
TWO113	Water Treatment Plant Operation (Practical)	NWP210B	Perform basic water quality tests
TWO113	Water Treatment Plant Operation (Practical)	NWP218B	Perform sampling
TWO111	Water Treatment Plant Operation (Level 1)	NWP345B	Monitor, operate and control water treatment processes
TWO112	Water Treatment Plant Operation (Level 2)	NWP317B	Control water quality in distribution systems
TWO111	Water Treatment Plant Operation (Level 1)	NWP347B	Monitor, operate and control coagulation and flocculation processes
TWO111	Water Treatment Plant Operation (Level 1)	NWP348B	Monitor operate and control sedimentation and clarification processes
TWO111	Water Treatment Plant Operation (Level 1)	NWP354B	Monitor, operate and control granular media filtration processes
TWO112	Water Treatment Plant Operation (Level 2)	NWP356B	Monitor, operate and control ion exchange processes

Unit Code/s	UTW201098 Require successful completion of:	Unit Code/s	NWP07 RPL mapping for:
UTWNWS 620A	Monitor and operate wastewater treatment processes	NWP268B	Monitor, operate and report chlorine disinfection systems
UTWNWS 620A	Monitor and operate wastewater treatment processes	NWP208B	Perform basic wastewater tests
UTWNWS 620A	Monitor and operate wastewater treatment processes	NWP218B	Perform sampling
UTWNWS 620A	Monitor and operate wastewater treatment processes	NWP264B	Monitor, operate and report wastewater pre-treatment processes
UTWNWS 620A	Monitor and operate wastewater treatment processes	NWP348B	Monitor operate and control sedimentation and clarification processes
UTWNWS 620A	Monitor and operate wastewater treatment processes	NWP346B	Monitor, operate and control waste water treatment processes
UTWNWS 620A	Monitor and operate wastewater treatment processes	NWP350B	Monitor, operate and control aerobic processes (trickling filters)
UTWNWS 620A	Monitor and operate wastewater treatment processes	NWP351B	Monitor operate and control activated sludge processes
UTWNWS 620A	Monitor and operate wastewater treatment processes	NWP353B	Monitor operate and control anaerobic bioreactor processes
UTWNWS 620A	Monitor and operate wastewater treatment processes	NWP360B	Monitor, operate and control dewatering processes

Unit Code/s	UTW20198 Require successful completion of:	Unit Code/s	NWP07 RPL mapping for:
UTWNWS 600A	Monitor and operate water treatment processes	NWP268B	Monitor, operate and report chlorine disinfection systems
UTWNWS 600A	Monitor and operate water treatment processes	NWP210B	Perform basic water quality tests
UTWNWS 600A	Monitor and operate water treatment processes	NWP218B	Perform sampling
UTWNWS 600A	Monitor and operate water treatment processes	NWP345B	Monitor, operate and control water treatment processes
UTWNWS 600A	Monitor and operate water treatment processes	NWP317B	Control water quality in distribution systems
UTWNWS 600A	Monitor and operate water treatment processes	NWP347B	Monitor, operate and control coagulation and flocculation processes
UTWNWS 600A	Monitor and operate water treatment processes	NWP348B	Monitor operate and control sedimentation and clarification processes
UTWNWS 600A	Monitor and operate water treatment processes	NWP354B	Monitor, operate and control granular media filtration processes

Where gaps in candidate competence are found or additional competencies are required, the assessor will identify an appropriate pathway for gap training.

3.0 RECOMMENDED ENROLMENT PATTERN FOR THE CURRENT CERT III

To complete NWP30107 Certificate III in Water Industry Operations eleven courses, 3 core and 8 electives must be completed. You should first complete the six distance delivery courses listed below, including the workplace assessments before enrolling in the laboratory practical, seminar, tutorial and workshop sessions held at Griffith

University (Brisbane, Nathan Campus).

Course Code	Core Courses (Mandatory)	Course Hours	Pre or co requisites	Specific Requirements
NWP301B	Implement, monitor and coordinate environmental procedures	40		Employment in the industry
BSBWOR301A	Organise personal work priorities and development	30		
BSBOHS303B	Contribute to OHS hazard identification and risk assessment	30	Water industry OH&S	

Course Code	Common Technical electives (Treatment processes)	Course Hours	Pre or co requisites	Specific Requirements
NWP268B	Monitor operate and report chlorine disinfection systems	30	Water industry chemistry	
NWP363B	Monitor performance and control maintenance of treatment plant assets	40	Water industry calculations	

To complete the Certificate III in Water Industry Operations, you must complete either the Water or Wastewater technical courses listed on the following pages, or you may choose to complete both strands.

Technical electives in WATER treatment (delivered in contact - face to face mode)

Course Code	Course Name	Course Hours	Pre or co requisites	Specific Requirements
NWP345B	Monitor operate and control water treatment processes	70	NWP268B and NWP363B	Attendance for two week contact session
NWP210B	Perform basic water quality tests	20		
NWP218B	Perform Sampling	20		
From the list below select 3 units of processes you use at your workplace				
NWP339B	Perform leak detection	40		
NWP348B	Monitor operate and control sedimentation and clarification processes	40		
NWP354B	Monitor operate and control granular media filtration processes	50		
NWP317B	Control water quality in distribution systems	30		
NWP355B	Monitor operate and control membrane filtration processes	30		
NWP366A	Monitor operate and	40		

	control chloramination processes			
NWP347B	Monitor operate and control Coagulation and flocculation processes	50		
NWP357B	Monitor operate and control reverse osmosis and nano filtration	30		
NWP360B	Monitor operate and control dewatering processes	30		

Or

Electives in WASTEWATER treatment (delivered in contact - face to face mode)

Course Code	Course Name	Course Hours	Pre or co requisites	Specific Requirements
NWP346B	Monitor operate and control wastewater treatment processes	70	Completion of NWP268B and NWP363B	Attendance for two week contact session
NWP208A	Perform basic wastewater tests	20		
NWP218B	Perform Sampling	20		
From the list below select 3 units of processes you use at your workplace				
NWP348B	Monitor operate and control sedimentation and clarification processes	40		
NWP347B	Monitor operate and control Coagulation and flocculation processes	50		
NWP353B	Monitor operate and control anaerobic bioreactor systems	30		
NWP360B	Monitor operate and control dewatering processes	30		
NWP355B	Monitor operate and control membrane filtration systems	30		
NWP351B	Monitor operate and control activated sludge processes	50		
NWP359B	Monitor operate and control nutrient removal systems	40		
NWP350B	Monitor operate and control aerobic processes	30		

Additional course offerings will be added as resources become available.

4.0 INDUSTRY INPUT TO TRAINING PROGRAMS

Water & Wastewater Operators have a unique Frontline view of the Water Industry and input into Training Programs is critical for transferring real world skills and knowledge back into the industry. SkillsTech is grateful to our Onsite Observers, Students, Markers and Industry partners that assist in this process.

SkillsTech input and assistance to the Water Industry Operators Association (WIOA), and Government Skills Australia (GSA), has contributed to the development of National course materials which will become pivotal to our Training Programs. With your input we endeavour to sustain and improve these resources and leave a legacy to those that follow.

5.0 CONCLUSION & QUOTES

Within this paper I have endeavoured to show a learning pathway for Operators to up-skill or be recognised for skills and knowledge gained in the Water Industry. The challenge has also been placed on you to become one of the Water-Team at SkillsTech Australia by providing input for our Training Programs.

I will leave you with the following quotes:

“Experience is the name we give to our past mistakes”
(Oscar Wilde)

“One thing I have learned in a long life: that all our science, measured against reality, is primitive and childlike – and yet it is the most precious thing we have”
(Albert Einstein)

“The difference between school and life? In school, you’re taught a lesson and given a test. In life, you’re given a test that teaches you a lesson.”
(Tom Bodett)

“I truly believe that individuals can make a difference in society, since periods of change such as the present one comes so rarely in human history, it is up to each of us to make the best use of our time to help create a happier world.”
(Dalai Lama)

“The odds are six to five that the light in the end of the tunnel is the headlight of an oncoming train”
(Paul Dickson)

6.0 INFORMATION AND CONTACT DETAILS

If you would like to provide writing, artwork, photographs, pier review, etc, for course material please contact the SkillsTech Water-Team on **1800 654 447**.

NWP07 Water Industry Training Package can be downloaded at the National Training

Information Service (NTIS) web site: www.ntis.gov.au

For SkillsTech enrolment forms and course information, conduct a course search for 'water' at: www.openlearning.tafe.qld.gov.au

Skills Recognition Centre - SkillsTech can be contacted on **1800 654 447** for further advice or when ready to enrol in RPL/CT.

7.0 ACCRONYMS

AQF, Australian Qualification Framework
CNC28, Certificate in Water Treatment Plant Operation
CNO446, Certificate in Wastewater Treatment Operation
CT, Credit transfer
CV, Curriculum Vitae
GSA, Government Skills Australia
NTIS, National Training Information Service
NWP01, Water Industry Training Package - 2001
NWP30101, Certificate III in Water Industry Operations - 2001
NWP07, Water Industry Training Package - 2007
NWP30107, Certificate III in Water Industry Operations - 2007
OH&S, Occupational Health and Safety
OLI, Open Learning Institute
RPL, Recognition of Prior Learning
RTO, Registered Training Organisation
SkillsTech Australia, TAFE QLD
TAFE, Technical and Further Education
UTW98, National Utilities Training package for the Water Industry - 1998
UTW20198, Certificate II in Water Industry Operations - 1998
WIOA, Water Industry Operators Association of Australia
WITA, Water Industry Training Association
WIETAA, Water Industry Education and Training Association of Australia

6.0 BIBLIOGRAPHY:

Government Skills Australia - Water Industry Training Package NWP07.