

The Core of the Programme consists of Graduate Profile Outcomes 1, 2, 3 and 4, without the Strands.

Credit requirements:

- Total credits for this programme must be a minimum of 160 credits.
- Total credits for this programme must not exceed 175 credits. (Internal guideline)
- Total credits for each Graduate Profile outcome must be within the specified Total Programme credit range. (Internal guideline)
- Elective Unit Standard 19205 may be credited towards *either* Graduate Profile Outcome 1 *or* Graduate Profile Outcome 5 and may only be *selected once* in a Programme.

Outcome 1

Meet health, safety, environment and quality assurance requirements for pipeline construction and maintenance.

Qualification Credits 35

Total Programme credit range: 32 - 38

Minimum Level 4 credits: 21

*** Elective Unit Standard 19205 may be credited towards *either* Graduate Profile Outcome 1 *or* Graduate Profile Outcome 5 and may only be *selected once* in a Programme.**

Mandatory (12 credits):

22290 Demonstrate knowledge of and carry out infrastructure works quality assurance requirements (Level 4, 6 credits)

31470 Demonstrate knowledge of and implement environmental controls for an infrastructure worksite (Level 4, 6 credits)

Elective (Between 20 and 26 credits, with a minimum of 9 credits at Level 4, from):

6451 Carry out notifiable work and permit requirements on an infrastructure works site (Level 4, 5 credits)

20876 Conduct and document infrastructure works health and safety meetings (Level 4, 3 credits)

30269 Develop a healthy and safe working culture for a team within an organisation (Level 4, 4 credits)

20872 Take control of an emergency at an infrastructure works site (Level 4, 6 credits)

32769 Describe health and safety procedures and explain risk assessment for an infrastructure worksite (Level 3, 3 credits)

20869 Demonstrate knowledge of notifiable works and work permits typical of infrastructure works sites (Level 3, 3 credits)

31942 Demonstrate knowledge of the impact of erosion and sedimentation on an infrastructure worksite (Level 3, 5 credits)

19205* Demonstrate knowledge of pathogens, diseases, and their control in water services reticulation (Level 3, 5 credits)

<p>Combined Outcomes 2 & 3 Qualification Credits 50</p> <p>Total Programme credit range: 47 - 55</p> <p>Minimum Level 4 credits: 37</p> <p>Outcome 2 Plan and apply appropriate methodology when constructing and maintaining pipelines. Qualification Credits 30</p> <p>Outcome 3 Coordinate plant, equipment and materials to complete pipeline construction and maintenance operations. Qualification Credits 20</p>	<p>Mandatory (20 credits): 31518 Demonstrate knowledge of and select methods for pipeline construction and maintenance (Level 4, 10 credits) 31517 Demonstrate knowledge of and select pipes and fittings for pipeline construction and maintenance (Level 4, 5 credits) 31515 Carry out pipeline construction or maintenance preparation and service location (Level 4, 5 credits)</p> <p>Elective (Between 27 and 33 credits, with a minimum of 17 credits at Level 4, from): 26780 Describe, issue, and monitor resources for daily activities on an infrastructure worksite (Level 4, 10 credits) 28711 Interpret civil infrastructure plans (Level 4, 6 credits) 31516 Carry out excavation and post-excavation reinstatement work for pipeline construction or maintenance (Level 4, 10 credits) 6436 Inspect infrastructure works plant and equipment (Level 4, 4 credits) 26783 Organise the supply and storage of materials for an infrastructure works site (Level 4, 5 credits) 27329 Demonstrate knowledge of and apply quality assurance practices to own work area in an infrastructure works operation (Level 3, 5 credits) 28715 Load, secure, and transport infrastructure works materials, small plant, and equipment (Level 3, 2 credits) 27501 Demonstrate knowledge of protection and support systems for excavation on an infrastructure works site (Level 3, 2 credits) 6476 Use plans to locate features on an infrastructure worksite (Level 3, 5 credits) 31446 Demonstrate knowledge of materials used for infrastructure works (Level 3, 5 credits) 32767 Demonstrate knowledge of lifting and moving loads for infrastructure works (Level 3, 5 credits)</p>
<p>Outcome 4 Communicate effectively while constructing and maintaining pipelines. Qualification Credits 15</p> <p>Total Programme credit range: 13 - 17</p>	<p>Mandatory (5 credits): 31475 Interpret and communicate daily operational requirements on a civil infrastructure worksite (Level 4, 5 credits)</p> <p>Elective (Between 8 and 12 credits from): 30809 Support and mentor an infrastructure works team onsite (Level 4, 10 credits) 30423 Participate in assessment processes as a verifier (Level 4, 10 credits) 31519 Demonstrate knowledge of stakeholder engagement for pipeline construction and maintenance projects (Level 4, 8 credits) 32770 Carry out health and safety procedures on an infrastructure worksite (Level 4, 5 credits) 22992 Prepare and maintain records for civil construction works (Level 4, 6 credits) 26781 Identify and liaise with people affected by activities at an infrastructure works site (Level 4, 3 credits) 26784 Maintain daily records for an infrastructure worksite (Level 3, 5 credits)</p>

<p>Drinking-water Strand (Programme ID: 124535) Outcome 5 Maintain drinking-water reticulation assets, including planned and reactive works. Qualification Credits 60</p> <p>Total Programme credit range: 57 – 65 Minimum Level 4 Credits: 40</p> <p>* Elective Unit Standard 19205 may be credited towards either Graduate Profile Outcome 1 or Graduate Profile Outcome 5 and may only be selected once in a Programme.</p>	<p>Mandatory (12 credits): 31521 Demonstrate knowledge of and maintain water quality in drinking-water supply networks (Level 4, 6 credits) 22104 Demonstrate knowledge of pipe jointing systems for water reticulation (Level 4, 6 credits)</p> <p>Elective (Between 45 and 51 credits , with a minimum of 28 credits at Level 4, from): 32816 Demonstrate knowledge of complex water reticulation assets, their components and fittings, and procedures used for them (Level 4, 8 credits) 32810 Install, commission and decommission bypasses for pipeline construction or maintenance (Level 4, 4 credits) 27328 Install structures for infrastructure pipelaying structures (Level 4, 10 credits) 31523 Install pipes for infrastructure pipelaying (Level 4, 11 credits) 28722 Confirm alignment and reinstate pipes and structures to correct line and level (Level 4, 4 credits) 32809 Demonstrate knowledge of bypasses for pipeline construction and maintenance (Level 4, 2 credits) 31452 Carry out maintenance operations on complex water reticulation assets (Level 4, 12 credits) 31532 Demonstrate knowledge of fusion jointing of polyethylene pipes for water networks (Level 4, 5 credits) 31525 Carry out electrofusion jointing on polyethylene pipes for water networks (Level 4, 10 credits) 31524 Carry out butt fusion jointing on polyethylene pipes for water networks (Level 4, 10 credits) 32823 Explain single point ground water control, pump systems and disposal methods for an infrastructure works excavation (Level 4, 5 credits) 31520 Demonstrate knowledge of public health considerations, hydraulics, backflow, and corrosion in drinking-water networks (Level 4, 5 credits) 31522 Service or commission, and disinfect, reticulation mains for drinking-water supply networks (Level 4, 6 credits) 30003 Prepare, install fittings, and recommission water mains, for water reticulation (Level 4, 6 credits) 28722 Confirm alignment and reinstate pipes and structures to correct line and level (Level 4, 4 credits) 25445 Demonstrate knowledge of bypass pumping and employ bypasses for pipeline construction or maintenance (Level 4, 4 credits) 17599 Plan a confined space entry (Level 4, 5 credits) 31526 Analyse water loss for a drinking-water reticulation network (Level 4, 4 credits) 32821 Demonstrate knowledge of water quality and water sampling in drinking-water supply networks (Level 4, 3 credits) 31449 Carry out maintenance operations on drinking-water networks (Level 3, 12 credits) 30596 Demonstrate knowledge of asbestos and safety measures for asbestos-related work (Level 3, 2 credits) 31245 Plan for and lift, move, and place loads using mobile plant (Level 3, 10 credits) 19205* Demonstrate knowledge of pathogens, diseases, and their control in water services reticulation (Level 3, 5 credits)</p>
---	---

<p>Stormwater and Wastewater Strand (Programme ID: 124536)</p> <p>Outcome 6 Maintain wastewater and stormwater reticulation assets, including planned and reactive works.</p> <p>Qualification Credits 60</p> <p>Programme credits: Total Programme credit range: 57 - 65 Minimum Level 4 Credits: 40</p>	<p>Mandatory (11 credits): 31527 Demonstrate knowledge of public health considerations, hydraulics, and corrosion in wastewater and stormwater networks (Level 4, 5 credits) 22104 Demonstrate knowledge of pipe jointing systems for water reticulation (Level 4, 6 credits)</p> <p>Elective (Between 46 and 54 credits, with a minimum of 29 credits at Level 4, from): 32816 Demonstrate knowledge of complex water reticulation assets, their components and fittings, and procedures used for them (Level 4, 8 credits) 32822 Demonstrate knowledge of risks and risk management in wastewater and stormwater networks (Level 4, 5 credits) 31529 Construct a pressure rising main (Level 4, 5 credits) 32810 Install, commission and decommission bypasses for pipeline construction or maintenance (Level 4, 4 credits) 31523 Install pipes for infrastructure pipelaying (Level 4, 11 credits) 28722 Confirm alignment and reinstate pipes and structures to correct line and level (Level 4, 4 credits) 31532 Demonstrate knowledge of fusion jointing of polyethylene pipes for water networks (Level 4, 5 credits) 31525 Carry out electrofusion jointing on polyethylene pipes for water networks (Level 4, 10 credits) 31524 Carry out butt fusion jointing on polyethylene pipes for water networks (Level 4, 10 credits) 31452 Carry out maintenance operations on complex water reticulation assets (Level 4, 12 credits) 32809 Demonstrate knowledge of bypasses for pipeline construction and maintenance (Level 4, 2 credits) 31528 Perform work on live wastewater and stormwater networks (Level 4, 10 credits) 32823 Explain single point groundwater control, pump systems and disposal methods for an infrastructure works excavation (Level 4, 5 credits) 32825 Clean and maintain a pump station (Level 4, 5 credits) 30095 Carry out CCTV inspection of non-pressure water services assets (Level 4, 6 credits) 30096 Report on pipe condition for a CCTV inspection of non-pressure water services assets (Level 4, 4 credits) 27328 Install structures for infrastructure pipelaying and carry out follow-up procedures (Level 4, 10 credits) 31531 Carry out rubber ring jointing on pipes for infrastructure works (Level 4, 6 credits) 25445 Demonstrate knowledge of bypass pumping and employ bypasses for pipeline construction or maintenance (Level 4, 4 credits) 30596 Demonstrate knowledge of asbestos and safety measures for asbestos-related work (Level 3, 2 credits) 31530 Operate a vacuum loading vehicle for wastewater or stormwater maintenance (Level 3, 5 credits) 31245 Plan for and lift, move, and place loads using mobile plant (Level 3, 10 credits) 28726 Operate a water-jet unit on infrastructure work sites (Level 3, 10 credits) 32815 Carry out maintenance operations on wastewater or stormwater networks (Level 3, 12 credits) 17599 Plan a confined space entry (Level 4, 5 credits)</p>
---	--

<p>Trenchless Technologies Strand (Programme ID: 124537)</p> <p>Outcome 7 Install or rehabilitate infrastructure assets using appropriate trenchless installation methodology and technology.</p> <p>Qualification Credits 60</p> <p>Total Programme credit range: 57 - 65</p>	<p>Mandatory (30 credits): 25396 Demonstrate knowledge of damage avoidance, consequences of damage, and damage response for trenchless installations (Level 4, 4 credits) 31571 Manage pipe handling, preparation, and assembly for trenchless installation (Level 4, 10 credits) 31572 Demonstrate knowledge of the effects of soil types and ground conditions on trenchless operations (Level 4, 6 credits) 31573 Set up site and equipment for trenchless pipe installation or rehabilitation and disestablish the site afterwards (Level 4, 10 credits)</p> <p>Elective (Between 27 and 35 credits from): 32819 Use trenchless technology to install or rehabilitate pipes (Level 4, 12 credits) 32823 Explain single point groundwater control, pump systems and disposal methods for an infrastructure works excavation (Level 4, 5 credits) 31570 Plan trenchless pipe installation or rehabilitation operations (Level 4, 10 credits) 20485 Provide tracking for horizontal directional drilling (Level 4, 20 credits) 32811 Demonstrate knowledge of drinking-water networks, their materials and fittings, and techniques used for them (Level 3, 8 credits) 32814 Demonstrate knowledge of wastewater and stormwater networks, their materials and fittings, and techniques used for them (Level 3, 8 credits)</p>
--	--