

Title	Demonstrate and apply knowledge of costing for an activity in a civil engineering laboratory		
Level	5	Credits	6

Purpose	<p>People credited with this unit standard are able to, for an activity in a civil engineering laboratory:</p> <ul style="list-style-type: none"> – demonstrate knowledge of costs; – determine and allocate costs; and – recommend and justify options based on cost information.
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Classification	Infrastructure Civil Engineering > Infrastructure Laboratory
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Available grade	Achieved
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Guidance Information

- 1 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable organisational and legislative requirements.
- 2 Applicable legislation, regulations, rules, standards and codes include but are not limited to the:
 - Health and Safety at Work Act 2015, Hazardous Substances and New Organisms Act 1996. and their associated regulations and subsequent amendments; and
 - ISO/IEC 17025:2018 *General requirements for the competence of testing and calibration laboratories*, available from <https://www.iso.org/store.html>.
- 3 Definitions
Activity may include but is not limited to – manufacturing, retail, event, service provision.
Organisational requirements refer to instructions to staff on policy and procedures which are formally documented or generally accepted at the worksite. This may include legislation; industry standards and methods; national and international standards and methods; standard operating procedures; specifications; manuals; and manufacturer's information.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of costs for an activity in a civil engineering laboratory.

Performance criteria

- 1.1 Costs are classified in relation to the activity.
- Range costs, as relevant to the activity – direct, indirect, fixed, variable, product, period, overhead;
evidence is required for four costs.
- 1.2 Costing terms are explained in terms of the activity.
- Range break-even point, variable, fixed, direct, indirect.
- 1.3 Cost sources are described in terms of their effect on the activity.
- Range cost sources, as relevant to the activity – labour, materials, overheads, capital, depreciation;
evidence is required for four cost sources.
- 1.4 Costing methods are described in terms of whether or not they are suitable for the activity.
- Range historical, unit, standard, zero-based, job, process;
evidence is required for at least three methods, including the cost method used for the activity.

Outcome 2

Determine and allocate costs for an activity in a civil engineering laboratory.

Performance criteria

- 2.1 Direct and indirect resource costs are determined and allocated for the activity.
- Range resources – plant, materials, human.
- 2.2 Indirect operational costs are determined and allocated for the activity.
- Range operational costs may include but are not limited to – consumables, machinery, maintenance, capital;
evidence is required for two operational costs.
- 2.3 Overhead costs are determined and allocated for the activity.
- Range costs – management, sales and marketing, administration, compliance;
allocation options may include but are not limited to – materials, labour, overheads, work in progress, completed jobs.

Outcome 3

Recommend and justify options for an activity in a civil engineering laboratory, based on cost information.

Range the activity and/or the cost information may be those from outcome 2; recommendations will address at least two of – planning, quotations, estimates, pricing, capital investment, production, make and/or buy, cost-control.

Performance criteria

3.1 Recommendations are made and justified in terms of the activity's purpose.

3.2 Recommendations are made and justified in terms of the cost information.

Planned review date	31 December 2026
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	28 October 2021	N/A

Consent and Moderation Requirements (CMR) reference	0101
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Connexis - Infrastructure Industry Training Organisation qualifications@connexis.org.nz if you wish to suggest changes to the content of this unit standard.