



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **TLIE3002A Estimate/calculate mass, area and quantify dimensions**

**Release: 1**

## **TLIE3002A Estimate/calculate mass, area and quantify dimensions**

### **Modification History**

Not Applicable

### **Unit Descriptor**

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This unit involves the skills and knowledge required to estimate and calculate mass and area and quantify dimensions of loads as part of work functions in the transport, stevedoring, warehousing, and/or storage sectors. This includes estimating loads to be transported or placed in storage, identifying mass, area and volume limitations of available transport/storage systems and carrying out calculations required to organise load(s) to match identified transport/storage limitations. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

### **Application of the Unit**

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Work must be carried out in compliance with workplace requirements and any relevant regulations related to the estimation and/or calculation of mass and area and the quantification of dimensions as part of workplace tasks.

Work is performed under some supervision generally within a team environment. It involves the application of basic mathematical principles and operations to the estimation and/or calculation of mass and area and the quantification of dimensions as part of workplace activities in the transport, stevedoring, warehousing, distributi

### **Licensing/Regulatory Information**

Refer to Unit Descriptor

### **Pre-Requisites**

Not Applicable

## **Employability Skills Information**

**Employability Skills**            This unit contains employability skills.

## **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Estimate loads for transport or storage</b>	1.1 Order forms/work orders are read and requirements are noted 1.2 Shape, balance characteristics, dimensions and mass of the load(s) are identified 1.3 Area/volume required for storage is estimated 1.4 Weights and volumes are totalled to calculate load requirements of transport or storage system
<b>2 Estimate load limits of transport and/or storage</b>	2.1 Allowable load limits for storage and/or transport systems are identified in accordance with workplace procedures 2.2 Capacity of transport and storage systems in terms of mass, area and volume are calculated
<b>3 Organise load</b>	3.1 Load(s) is restricted to allowable range(s) 3.2 Load(s) is spread to ensure safe weighting on pallets, trucks, platforms or other storage or transport systems 3.3 Appropriate workplace documentation is completed

## Required Skills and Knowledge

### REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

#### Required knowledge:

- Australian and international codes and regulations relevant to workplace activities
- Relevant OH&S and environmental protection procedures and guidelines
- Workplace procedures and policies for the estimation and/or calculation of mass, area and volumes of loads and transport and storage facilities including the quantification of dimensions
- Basic mathematical operations required when estimating and/or calculating mass, area and volumes of loads and transport/storage facilities including addition, subtraction, multiplication and division
- Focus of operation of work systems, equipment, management and site operating systems for the transport and/or storage of goods and stock
- Problems that may occur when estimating and/or calculating mass, area and volumes of loads and transport/storage facilities and appropriate action that can be taken to resolve the problems
- Documentation requirements for the workplace activities concerned

#### Required skills:

**Required skills:**

- Communicate effectively with others when estimating and/or calculating mass, area and volumes of loads and transport and storage facilities
- Read and interpret instructions, procedures, information and labels relevant to the estimation and/or calculation of mass, area and volumes of loads and transport and storage facilities
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to work activities
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when estimating and/or calculating mass, area and volumes of loads and transport/storage facilities
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may arise when estimating and/or calculating mass, area and volumes of loads and transport and storage facilities in accordance with workplace procedures
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Identify, select and use relevant calculators, computing and office equipment when estimating and/or calculating mass, area and volumes of loads and transport/storage facilities
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
  - the underpinning knowledge and skills

## EVIDENCE GUIDE

- Context of and specific resources for assessment**
- relevant legislation and workplace procedures
  - other relevant aspects of the range statement
  - Performance is demonstrated consistently over a period of time and in a suitable range of contexts
  - Resources for assessment include:
    - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
    - access to an appropriate range of relevant operational situations in the workplace
  - In both real and simulated environments, access is required to:
    - relevant and appropriate materials and equipment, and
    - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- Method of assessment**
- Assessment of this unit must be undertaken by a registered training organisation
  - As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
  - Practical assessment must occur:
    - through activities in an appropriately simulated environment at the registered training organisation, and/or
    - in an appropriate range of situations in the workplace

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- Work may be conducted:
- in a range of work environments
  - by day or night
- Customers may be:
- internal or external
- Workplaces may comprise:
- large, medium or small worksites

## RANGE STATEMENT

Work may be conducted in:

- limited or restricted spaces
- exposed conditions
- controlled or open environments

Estimating/calculation tasks may include:

- estimating loads to be transported or placed in storage
- identifying mass, area and volume limitations of available transport/storage systems
- carrying out calculations required to organise load(s) to match identified transport/storage limitations
- calculations and estimations of weights and dimensions of cargo and containers to be shifted, stored or lifted

Calculations may include mathematical operations of addition, subtraction, multiplication and division and may be carried out:

- manually
- with the aid of a calculator
- with the aid of a computer
- using appropriate tables and/or charts

Consultative processes may involve:

- other employees and supervisors
- suppliers, customers and clients
- relevant authorities and institutions
- management and union representatives
- industrial relations and OH&S specialists
- other maintenance, professional or technical staff

Communication in the work area may include:

- phone
- electronic data interchange (EDI)
- fax
- email
- internet
- radio
- RF systems
- oral, aural or signed communications

Hazards in the work area may include exposure to:

- chemicals
- dangerous or hazardous substances
- movements of equipment, goods and materials

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

- company procedures
- enterprise procedures
- organisational procedures
- established procedures

Information/documents may include:

- workplace procedures and policies
- operations manuals, job specifications and induction documentation
- goods identification numbers and codes

## RANGE STATEMENT

- Applicable regulations and legislation may include:
- manifests, picking slips, merchandise transfers, stock requisitions and bar codes, goods and container identification/serial number
  - Australian and international codes of practice and regulations relevant to workplace activities including mass and loading regulations
  - Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances
  - manufacturers specifications for equipment
  - supplier and/or client instructions
  - dangerous goods declarations and material safety data sheets (where applicable)
  - award, enterprise bargaining agreement, other industrial arrangements
  - relevant Australian standards and certification requirements
  - quality assurance procedures
  - emergency procedures
  - relevant codes and regulations relevant to workplace activities
  - Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances
  - licence, patent or copyright arrangements
  - water and road use and licence arrangements
  - export/import/quarantine/bond requirements
  - marine orders
  - relevant state/territory OH&S and environmental protection legislation
  - workplace relations regulations
  - workers compensation regulations

## Unit Sector(s)

Not Applicable



## **Competency Field**

**Competency Field**

E - Communication and Calculation