Stage 6 Syllabus

CONSTRUCTION
Curriculum Framework

Part B

Units of Competency and HSC Requirements

for implementation from 2010

Construction (120 indicative hours)
Construction (240 indicative hours)

2009
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The Construction Curriculum Framework

The Construction Curriculum Framework has been developed to provide students with the opportunity to gain credit towards the NSW Higher School Certificate and credit towards national vocational qualifications in the Construction industry under the Australian Qualifications Framework. The Framework is based on the national Construction, Plumbing and Services Integrated Framework Training Package (CPC08).

This industry curriculum framework incorporates all Higher School Certificate Construction VET courses including:
- courses delivered by schools
- courses delivered by TAFE colleges
- courses delivered by other Registered Training Organisations on behalf of schools or TAFE colleges.

This document, Part B of the Construction Curriculum Framework Stage 6 Syllabus, contains the text of the units of competency from the Construction, Plumbing and Services Integrated Framework Training Package (CPC08). Each examinable unit of competency is accompanied by HSC requirements and advice. The HSC requirements and advice column indicates the depth of study required for the purposes of the HSC. The terms, concepts and content contained in that column must be included in programming and delivery for the HSC.

Construction Curriculum Framework Stage 6 Syllabus Documentation

| Syllabus Part A Course Structures and Requirements | Assessment and Reporting in Construction Curriculum Framework Stage 6 | Syllabus Part B Units of Competency and HSC Requirements | Support Materials | Past HSC Examination Papers | HSC Notes from the Marking Centre | Performance Band Descriptions |
**Construction Curriculum Framework – units of competency contained in Part B**

This document contains the following units of competency together with HSC requirements and advice for each examinable unit. The HSC requirements and advice column indicates the depth of study required for the purposes of the HSC. The terms, concepts and content contained in that column must be included in programming and delivery for the HSC.

<table>
<thead>
<tr>
<th>Unit code</th>
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<td>9–27</td>
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<td>CPCCCM1003A</td>
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<tr>
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<td>Carry out measurements and calculations</td>
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<tr>
<td>CPCCOHS1001A</td>
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<tr>
<td>CPCCOHS2001A</td>
<td>Apply OHS requirements, policies and procedures in the construction industry</td>
<td>15</td>
<td>89–107</td>
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All other units of competency from the Construction Curriculum Framework are available from the Construction, Plumbing and Services Integrated Framework Training Package (CPC08) at www.ntis.gov.au.
The HSC examination in Construction is based on a set of examinable units of competency from the Construction (240 indicative hours) course or the Construction School-based apprenticeship (240 indicative hours) course and the associated employability skills for Certificate II in Construction (refer to Section 15).

The HSC examination is based on the following components of each examinable unit of competency:

- elements of competency
- performance criteria
- range statement*
- required skills and knowledge
- evidence guide, including:
  - overview of assessment
  - critical aspects for assessment and evidence required to demonstrate competency in this unit
  - context of and specific resources for assessment
  - method of assessment
- minimum prescribed learning contained in HSC requirements and advice, described as:
  - key terms and concepts, and
  - learning experiences that must be addressed for the HSC.

* The range statement frequently uses the term ‘may include’. This has been clarified in the HSC Requirements and Advice column to specify the learning experiences that must be included for the examinable units of competency. Only the learning that is compulsory according to the Training Package and/or HSC Requirements and Advice can be examined.

The following **Key to Units** explains the purpose of each part of the layout of the units.
<table>
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<tr>
<th>Training Package</th>
<th>Construction, Plumbing and Services Integrated Framework (CPC08)</th>
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<td>Read and interpret plans and specifications</td>
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</table>

**Unit descriptor**: This unit of competency specifies the outcomes required to read and interpret plans and specifications relevant to construction operations. It includes the identification of types of plans and drawings and their functions, the recognition of commonly used symbols and abbreviations, the identification of key features and specifications on a site plan, the comprehension of written job specifications and the recognition of document status and amendment detail.

**Prerequisite units**: Nil

**Co-requisite units**: Nil

**Application of the unit**: This unit of competency supports achievement of basic reading and interpretation of plans and specifications commonly used in the construction industry.

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

**Evidence Guide**: The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**: This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints. Assessment of essential underpinning knowledge will usually be conducted in an off-site context. Assessment is to comply with relevant regulatory or Australian standards' requirements.

**Method of assessment**: Assessment methods must:

- Demonstrate competency in the following:
  - Location, interpretation and application of relevant information, standards and specifications
  - Safety plan and regulations applicable to work operations
  - Quality requirements, including organisational policies
- This competency is to be assessed using direct observation of tasks completed within simulated or project-based assessment techniques, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application.

**Employability Skills**: Employability Skills are essential features of each of the qualifications available in the Framework and therefore consideration must be given to the ways in which they can be addressed when designing learning activities and assessment instruments.

**Any unit(s) of competency that underpins others are listed as prerequisites. They must be achieved prior to undertaking the unit.**

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**Indicates the Training Package to which the unit of competency belongs.**

**Hours recognised for HSC credit.**

**HSC Requirements and Advice**

**The unit descriptor broadly communicates the content of the unit of competency and the skill area it addresses.**

**The application of the unit of competency describes its scope, purpose and operation in different contexts.**

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**HSC Indicative Hours**

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**Evidence Guide**

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

**Context of and specific resources for assessment**

**Method of assessment**

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**Assessment**

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**Assessment methods must:**

- Demonstrate competency in the following:
  - Location, interpretation and application of relevant information, standards and specifications
  - Safety plan and regulations applicable to work operations
  - Quality requirements, including organisational policies
- This competency is to be assessed using direct observation of tasks completed within simulated or project-based assessment techniques, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application.

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**Employability Skills**

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**Groupings of units of competency to assist in the organisation of the units and help users select relevant units.**
### Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

#### Required Skills

- **Communication skills to:**
  - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
  - read and interpret:
    - documentation from a variety of sources
    - drawings and specifications
    - drawings and specifications
- **Use language and concepts appropriate to cultural differences**
- **Use and interpret non-verbal communication, such as hand signals**
- **Identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials**
- **Numeracy skills to apply measurements and make calculations, including heights, areas, volumes and grades**
- **Organisational skills, including the ability to plan and set out work**
- **Teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities**
- **Technological skills to:**
  - use a range of mobile technology, such as two-way radio and mobile phones
  - voice and hand signals to access and understand site-specific instructions.

#### Required Knowledge

- **Basic calculations of heights, areas, volumes and grades**
- **Commonly used construction symbols and abbreviations**
- **Construction terminology**
- **Drawing conventions**
- **Features of plans and elevations, including direction, scale, key, contours, symbols and abbreviations**
- **Technological skills to:**
  - use a range of mobile technology, such as two-way radio and mobile phones
  - voice and hand signals to access and understand site-specific instructions
- **Drawing conventions**
- **Features of plans and elevations, including direction, scale, key, contours, symbols and abbreviations**
- **Job safety analysis (JSA) and safe work method statements**
- **Key features of formal job specifications**
- **Processes for application of scales in plan preparation and interpretation**
- **Project quality requirements**
- **Site and equipment safety (OHS) requirements**
- **Techniques for orienting/confirming the orientation of a plan.**

#### Key Terms and Concepts

- Amendments
- Dimensions
- Drawing conventions
- Environmental requirements
- Orientation
- Symbols and abbreviations
- Tolerances

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**Indicates the industry curriculum framework to which the unit of competency belongs.**

**Date of release for the HSC.**
1 Identify types of drawings and their functions.

1.1 Main types of plans and drawings used in the construction sector of the industry are identified.

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Plans and drawings include:
- construction plans
- cross-sectional plans
- dimensions and notes
- illustrations
- longitudinal plans
- project specifications
- site plans
- structural detail and specification providing illustrations and dimensions.

Learning experiences for the HSC must address:
- An awareness of the use of a range of technical drawings/plans.
- An understanding of the purpose of project documentation.

1.2 Key features and functions of each type of drawing are identified.

Key features of plans and specifications include:
- characteristics
- compatibility
- construction
- location
- pattern dimension
- quantities
- sizes
- type of product or service.

Learning experiences for the HSC must address:
The function and key features of a range of drawings including:
- indicates the depth of study required for purposes of the HSC for the corresponding performance criteria.
  - orientation
  - position of structures and ancillary works
  - boundary dimensions
  - setback from boundaries
  - contour lines
  - construction plans
  - overall dimensions
  - position of doors and windows