The optional HSC examination is based on all components of this examinable unit of competency as detailed in Section 11.3 of Part A.

Training Package	Construction, Plumbing and Services Integrated Framework (CPC08)	**HSC Requirements and Advice**
Unit title	**Use construction tools and equipment**	

Unit code	**Competency field**	**Unit sector**	**HSC Indicative Hours**
CPCCCM2005A	Common	Construction	**20**

Unit descriptor	This unit of competency specifies the outcomes required to safely select and use construction tools and equipment. It includes hand tools, power tools, pneumatic tools, and plant and equipment.
Prerequisite units	CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry
Co-requisite units	Nil
Application of the unit	This unit of competency supports achievement of use of basic hand and power tools 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	**Critical aspects for assessment and evidence required to demonstrate competency in this unit**	**Context of and specific resources for assessment**	**Method of assessment**
This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.	A person who demonstrates competency in this unit must be able to provide evidence of the ability to: • locate, interpret and apply relevant information, standards and specifications • comply with site safety plan and OHS legislation, regulations and codes of practice applicable to workplace operations • comply with organisational policies and procedures, including quality requirements • safely and effectively use tools, plant and equipment	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.	Assessment methods must: • satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Integrated Framework Training Package • include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application • reinforce the integration of employability skills with workplace tasks and job roles

	Critical aspects for assessment and evidence required to demonstrate competency in this unit cont/d	**Context of and specific resources for assessment cont/d**	**Method of assessment cont/d**
	• communicate and work effectively and safely with others • *identify and select hand tools for given tasks* • *safely use and maintain a minimum of rule, tape, square, hammer, hand saw, hand plane, chisel, shovel, wheelbarrow, sledge hammer, pick, mattock, crow bar and pinch bar for given tasks* • *identify power and pneumatic tools, including electrical and compressed air safety, for a given task* • *safely use and maintain a minimum of a:* - *power saw* - *electric plane* - *impact power drill* - *nail gun* - *impact hammer* - *generator* - *compressor.*	Resource implications for assessment include: • an induction procedure and requirement • realistic tasks or simulated tasks covering the mandatory task requirements • relevant specifications and work instructions • tools and equipment appropriate to activity • support materials appropriate to applying safe work practices • workplace instructions relating to safe work practices and addressing hazards and emergencies • material safety data sheets • research resources, including industry related systems information. Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.	• confirm that competency is verified and able to be transferred to other circumstances and environments. Validity and sufficiency of evidence requires that: • competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace • where the assessment is part of a structured learning experience the evidence collected must related to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge • all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence. Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed. Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

The optional HSC examination is based on all components of this examinable unit of competency as detailed in Section 11.3 of Part A.

Required Skills and Knowledge

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

Required skills

Required skills for this unit are:

- communication skills to:
  - determine requirements
  - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
  - follow instructions
  - read and interpret:
    - documentation from a variety of sources
    - drawings and specifications
  - report faults
  - 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
- 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

Required knowledge for this unit is:

- construction terminology
- construction tool use techniques
- job safety analysis (JSA) and safe work method statements
- plans, specifications and drawings
- quality requirements
- relevant Acts, regulations and codes of practice
- safety manuals and instructions of tools and equipment
- types, characteristics, uses and limitations of plant, tools and equipment
- workplace and equipment safety requirements.

HSC Requirements and Advice

Key Terms and Concepts

- cleaning, maintenance and storage of tools, plant and equipment
- environmental requirements
- hand tools
- plant and equipment
- pneumatic tools
- power tools
- recording and reporting
- regulatory authorities
- safe work practices
- safety/instruction manuals
- selection and use of tools, plant and equipment
- statutory authorities
- tool, plant and equipment safety requirements.

The optional HSC examination is based on all components of this examinable unit of competency as detailed in Section 11.3 of Part A.

Element	Performance Criteria	Range Statement	HSC Requirements and Advice
1 Plan and prepare.	1.1 Work instructions and operational details are obtained, confirmed and applied from relevant ***information*** for ***planning and preparation***.	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. ***Information*** includes: • diagrams or sketches • instructions issued by authorised organisational or external personnel • manufacturer specifications and instructions where specified • material safety data sheets (MSDS) • memos • organisation work specifications and requirements • plans and specifications • regulatory and legislative requirements pertaining to using construction tools and equipment • relevant Australian standards • safe work procedures related to using construction tools and equipment • signage • verbal or written and graphical instructions • work bulletins • work schedules. ***Planning and preparation*** include: • work site inspection • equipment defect identification • assessment of conditions and hazards • determination of work requirements.	**Learning experiences for the HSC must address:** A range of sources for work instructions and procedures including: • work schedule • plans/specifications • diagrams/sketches • job card/job sheet • job safety analysis (JSA)/safe work method statement • standard operating procedures (SOPs) • material safety data sheets (MSDS) • regulations/legislation/codes of practice • Australian Standards • workplace/site policies and procedures • workplace bulletins/memos • manufacturer specifications and instructions • client requirements. An awareness of various modes of communication to receive work instructions including: • verbal - face-to-face (supervisor to employee) - telephone/mobile phone/pager - two-way radio - on-site meeting - voice signals • written communication - work plan/job card - memo/message - job description/statement - workplace form - roster - facsimile - email - intranet • non-verbal - gestures - signals - signage - diagrams.

Element	Performance Criteria	Range Statement	HSC Requirements and Advice
			Strategies for obtaining, understanding and clarifying instructions/procedures including: • correct sourcing and selection of information • consulting appropriate personnel • active listening • open and closed questions. Planning and preparation for a range of tasks/ activities applicable to the construction industry. A basic overview of the role of employees in quality assurance.
	1.2 ***Safety (OHS)*** requirements are followed in accordance with safety plans and policies.	***Safety (OHS)*** is to be in accordance with legislation, regulations, codes of practice, organisational safety policies and procedures, and project safety plan and may include: • emergency procedures related to equipment operation, including emergency shutdown and stopping, extinguishing fires, organisational first aid requirements and evacuation • handling of materials • hazard control • hazardous materials and substances • safe operating procedures, including the conduct of operational risk assessment and treatments associated with: - earth leakage boxes - lighting - power cables, including overhead service trays, cables and conduits - restricted access barriers - surrounding structures - traffic control - trip hazards - work site visitors and the public - working at heights - working in confined spaces - working in proximity to others - working with dangerous materials • organisational first aid	**Learning experiences for the HSC must address:** Safe work practices and procedures for the construction industry. Project/site safety plan.

Element	Performance Criteria	Range Statement	HSC Requirements and Advice
		• personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices • use of firefighting equipment • use of tools and equipment • workplace environment and safety.	
	1.3 Signage and barricade requirements are identified and implemented.		**Learning experiences for the HSC must address:** Selection and use of standard signage and barricades common to the construction industry: • legislative requirements • meaning of colour and shape • appropriate placement and positioning.
	1.4 Plant, tools and equipment selected to carry out tasks are consistent with job requirements, checked for serviceability, and any faults are rectified or reported prior to commencement.		**Learning experiences for the HSC must address:** General features, purpose, maintenance and working knowledge of a range of plant, tools and equipment common across the various sectors of the construction industry. Procedures and documentation for identifying faulty plant, tools and equipment including those with: • malfunctions • worn, broken or missing components • broken or missing safety guards. An awareness of the signs of poor performance and inefficiency including: • noise • quality of end product • appearance • vibration • rough running • failure to start • presence of smoke and odours • consumption of fuel and other consumables • blockages • amount of maintenance required • time taken to complete the job.

Element	Performance Criteria	Range Statement	HSC Requirements and Advice
			The importance of acting within level of authority in terms of: • taking initiative • problem-solving • decision-making. Solutions to a range of potential faults. Personnel to whom problems should be reported: • supervisor/manager • supplier/manufacturer. Reporting of serious faults including: • verbal notification to appropriate personnel • recording on job card/maintenance log • safety/lockout tagging where appropriate. Reasons for safety/lockout tagging including: • ease of identification • evidence of serviceability • preventing use until repaired.
	1.5 ***Environmental requirements*** are identified in accordance with environmental plans and ***statutory and regulatory authority*** obligations and are applied.	***Environmental requirements*** include: • clean-up protection • noise and dust • vibration • waste management. ***Statutory and regulatory authorities*** include: • federal, state and local authorities administering applicable Acts, regulations and codes of practice.	**Learning experiences for the HSC must address:** Environmentally sustainable work practices.
2 Identify and select hand, power and pneumatic tools.	2.1 ***Hand tools*** and ***power and pneumatic tools***, their functions, operations and limitations are identified and selected.	***Hand tools*** include: • cutting, planing, boring, shaping, fixing, fastening and percussion tools • material shifting and holding tools • setting out, marking out and levelling tools.	**Learning experiences for the HSC must address:** An understanding of the difference between hand, power and pneumatic tools. A basic knowledge of a range of hand, power and pneumatic tools and equipment common across the

Element	Performance Criteria	Range Statement	HSC Requirements and Advice

		Power and pneumatic tools include:
		• portable, electrical, pneumatic and gas driven tools, including their leads and hoses.
			various sectors of the construction industry including:
			• name
			• characteristics
			• use
			• limitations
			• hazard controls
			• maintenance.
			
			Hand tools including:
			• rule
			• tape
			• square
			• chisel
			• hand saw
			• hand plane
			• shovel
			• wheel barrow
			• hammer
			• sledge hammer
			• pick
			• mattock
			• crow bar
			• pinch bar.
			
			Power and pneumatic tools including:
			• power saw
			• electric plane
			• impact power drill
			• nail gun
			• impact hammer.
			
			Considerations for the selection of hand, power and pneumatic tools including:
			• skills/training
			• licensing requirements
			• time
			• cost
			• occupational health and safety (OHS) requirements
			  - JSA/safe work method statement
			  - risk assessment
			• appropriateness for purpose.

Element	Performance Criteria	Range Statement	HSC Requirements and Advice
	2.2 OHS requirements for using hand, power and pneumatic tools are recognised and adhered to.		**Learning experiences for the HSC must address:** Hazards associated with the use of: • electricity • compressed air. Importance of safe work practices for the operation of hand, power and pneumatic tools. Safe work practices including: • use of power supply - cut-out switches and/or earth leakage core balance device (ELCB) - tagging of leads - temporary power boards - correct use and placement of power leads - selection of personal protective equipment (PPE) • use of compressed air - safety inspections - checking pressure tanks - lines and connections - overload pressure valves to compressor - purge procedures. A range of PPE for the use of hand, power and pneumatic tools including: • footwear • head protection • hearing protection • gloves • masks/respirators • eye protection • clothing • sunscreen. Acknowledgement of the importance of securing work pieces when working with power/pneumatic tools.
	2.3 Pre-operational checks, including lubricants, hydraulic fluid and water, are completed according to manufacturer recommendations.		**Learning experiences for the HSC must address:** Pre-operational checks including: • safety

Element	Performance Criteria	Range Statement	HSC Requirements and Advice
			• consumables • adjustment/alignment for job task.
3 Use tools.	3.1 Hand tools used are appropriate to the task and materials, and are in accordance with OHS requirements.		
	3.2 Power and pneumatic tools are safely and effectively used in accordance with manufacturer recommendations and state or territory OHS requirements.		
	3.3 Tools are sharpened and maintained.		
4 Identify, select and use plant and equipment.	4.1 ***Plant and equipment*** are selected and used consistent with OHS requirements and the needs of the job.	***Plant and equipment*** include: • 240v power supplied • compressors • generators • hand held or small single person operated equipment • pneumatic driven.	**Learning experiences for the HSC must address:** A basic knowledge of a range of plant and equipment including: • name • characteristics • use • limitations • hazard controls • maintenance. Plant and equipment including: • generator • compressor. Considerations for the selection of plant and equipment including: • skills/training • licensing requirements • time • cost • OHS requirements - JSA/safe work method statement - risk assessment - emergency procedures

Element	Performance Criteria	Range Statement	HSC Requirements and Advice
			• environmental factors - confined space - noise restrictions - pollution.
	4.2 Pre-operational checks, including lubricants, hydraulic fluid and water, are completed according to manufacturer recommendations.		
	4.3 Plant and equipment are maintained in accordance with manufacturer recommendations and standard work practices.		
5 Clean up.	5.1 Work area is cleared and materials disposed of, reused or recycled in accordance with legislation, regulations, codes of practice and job specification.		**Learning experiences for the HSC must address:** An awareness of procedures for minimisation of impact on the environment including: • replacing disturbed or removed soil • removal and disposal of non-reusable materials in a responsible manner - work materials - plant debris and other organic matter - chemicals • safe storage of reusable materials in accordance with workplace/company policy • containment of loose materials on site (such as mud, dust, litter and waste material) • control of run-off. Environmental requirements for dealing with waste including: • recycling - paper-based products - plastic - worn components - metal components - construction materials - building components • approved disposal of - hazardous material - non-hazardous material.

Element	Performance Criteria	Range Statement	HSC Requirements and Advice
	5.2 Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and standard work practices.		**Learning experiences for the HSC must address:** Clean-up procedures with proper consideration of the environment and OHS. A range of cleaning techniques including: • wiping • washing • brushing • sweeping • scraping • use of cleaning agents (chemicals, solvents and detergents). A range of cleaning equipment including: • high pressure water cleaner • wet/dry vacuum • brooms and brushes • scrapers. Plant, tools and equipment cleaning/maintenance requirements as necessary including: • removal of dirt, dust, grease and oil • sharpening • anti-rust treatments • repair and/or replacement of missing/damaged parts • scheduled servicing • refuel and top-up consumables. An awareness of issues relating to storage of tools and equipment including: • climatic effects • OHS considerations • stability • security • ease of access. Knowledge of methods by which tools and equipment are stored and accessed.

Element	Performance Criteria	Range Statement	HSC Requirements and Advice
			Security of workplace plant and equipment including: • guards • storage racks • protective covers • lock-up procedures.