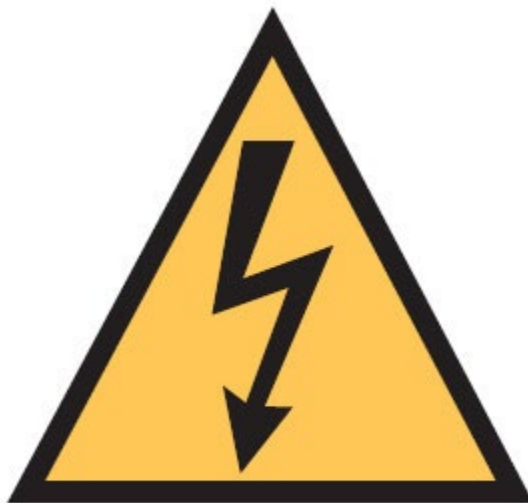


# Resource Book

UEECO0023

# Participate in electrical work and competency development activities



UEE Training Package Support Material

Based on:  
National Electrotechnology Industry Standards

North Metropolitan TAFE  
V2 - Dec 2022

UEECO0023 - Participate in electrical work and competency development activities

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### **Acknowledgements**

This Unit Guide has been prepared by Kris Murray on behalf of NMTAFE.

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## CONTENTS

Competency Standard Unit Elements and Performance Criteria UEECO0023

Laboratory Safety Instructions

Resource book

Revision questions

### References

- Electrical (Licensing) Regulations 1991.
- Work Health and Safety Act 2020.
- Work Health and Safety (General) Regulations 2022.
- WAER
- NMTAFE Student Handbook 2022 (Available on NMTAFEs website)
- AS3000-2018 with Amendment 2
- AS3008-2017
- Berry/Cahill/Chadwick, Electrical Trade Practices, 3<sup>rd</sup> Edition
- Phillips, Electrical Principles, 4<sup>th</sup> Edition



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(ISBN 9780170458412)

## Application of CO0023

### Application.

This unit involves the skills and knowledge required to participate in electrical work and related activities that contribute to the ongoing development of competency.

It includes complying with electrical industry and organisational policies and procedures, undertaking work and related activities by a competency development plan, documenting and periodically reporting work activities, and participating in periodic reviews to monitor one's competency development.

Competency development activities in this unit are subject to regulations directly related to licensing. Where a licence or permit to practice is not held, a relevant contract of training, such as an Australian Apprenticeship, may be required.

Additional and/or other conditions may apply in some jurisdictions subject to regulations related to electrical work. Practice in the workplace and during training is also subject to work health and safety (WHS)/occupational health and safety (OHS) regulations.

Those holding an "Unrestricted Electrician's Licence" or equivalent issued in an Australian state or territory meet the requirements of this unit.

**Pre-requisite Unit**

Not applicable

**Elements and Performance Criteria****ELEMENTS**

Elements describe the essential outcomes.

**PERFORMANCE CRITERIA**

Performance criteria describe the performance needed to demonstrate the achievement of the element.

<b>1 Engage in a competency development plan</b>	<p><b>1.1</b> Context and conditions under which the competency development plan is to be undertaken are identified and confirmed</p> <p><b>1.2</b> Roles and obligations of all parties/stakeholders concerning the competency development plan are identified and confirmed</p> <p><b>1.3</b> The competency development plan is agreed upon, finalised and executed by all relevant parties/stakeholders</p>
<b>2 Participate in electrical competency development work activities</b>	<p><b>2.1</b> Industry/organisational policies and procedures for work and competency development activities are identified, obtained and reviewed</p> <p><b>2.2</b> Electrical work is undertaken by the competency development plan and applicable industry/organisational policies and procedures</p> <p><b>2.3</b> Opportunities to practise skills and apply knowledge relevant to the development of competency are utilised</p>
<b>3 Monitor and report on competency development</b>	<p><b>3.1</b> Records of competency development work activities are maintained and updated regularly</p> <p><b>3.2</b> Obligations are met for periodic and timely reporting of competency development activities</p> <p><b>3.3</b> Periodic competency development report is verified and validated by appropriate person/s within accepted industry timelines</p> <p><b>3.4</b> Progress in the competency development plan is self-monitored and assistance is sought from the appropriate person/s to overcome difficulties or deficiencies</p> <p><b>3.5</b> Modifications to the competency development plan are made in consultation with appropriate person/s</p>

## Performance Evidence

**Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include:**

- participating in the development of a competency development plan for a specified electrotechnology work function, including:
  - identifying competencies to be undertaken
  - identifying responsibilities of all relevant parties/stakeholders
- undertaking electrical work relevant to the scope of competencies specified in the competency development plan, including:
  - experience in relevant work areas
  - exposure to a relevant range of equipment
- periodically documenting and reporting electrical work activities to the relevant parties/stakeholders, including:
  - the workplace activities that have been undertaken
  - the range of equipment used for the work
  - the level of supervision under which the work was undertaken
  - submitting work activities records for verification by authorised personnel
- participating in regular periodic reviews to evaluate progress in competency development, including:
  - consultation with relevant parties/stakeholders overseeing the administration of the competency development plan
  - review of participation in the undertaking, documenting and reporting of electrical work activities
  - review of progress against agreed benchmarks
  - Develop and implement strategies in consultation with appropriate personnel to address any difficulties or deficiencies.

## Knowledge Evidence

**Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:**

### Knowledge of:

- competency development plans, including:
  - formal training agreements, including:
    - state/territory regulations
    - employer, learner and training organisation roles and responsibilities
  - training plans or individual learning plans, including:
    - parties involved
    - scope of competencies specified
    - nominal training periods
- roles of electrotechnology industry bodies applicable to the context and conditions under which the competency development plan will be undertaken, including:
  - unions
  - employer associations
  - work health and safety (WHS)/occupational health and safety (OHS) regulatory bodies
  - electrical regulatory bodies
- training organisation policies and procedures applicable to the context and conditions under which the competency development plan will be undertaken
- electrotechnology workplace policies and procedures applicable to the context and conditions under which the competency development plan will be undertaken, including:
  - health and safety
  - anti-discrimination
  - effective work outcomes
  - customer relations
  - conflict resolution
  - supervision and competency development
- documenting and reporting evidence of work activities, including:
  - methods of documenting evidence of workplace activities
  - aspects of work activities evidence, including:
    - work task/area
    - degree of participation
    - range of equipment
    - levels of supervision
  - learner responsibilities concerning periodic reporting of work activities and consequences of failing to meet obligations
  - employer responsibilities concerning verifying work activities evidence
  - training organisation responsibilities concerning monitoring work activities evidence
  - procedures for periodic review of work activities evidence
  - procedures for addressing difficulties or deficiencies in various aspects of work activities evidence.



## Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- A range of relevant exercises, case studies and/or other simulations
- Relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in the industry
- Applicable documentation, including workplace procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

## Training Guide

Activity	Topic	Primary Reference	Page
1		Resource Book	
2		Resource Book	
3		Resource Book	
4		Resource Book	
5		Resource Book	
6		Resource Book	
7			

## **Assessment Strategy**

### **Conditions of Assessment:**

Normally learning and assessment will take place in an integrated classroom/ laboratory environment.

It is essential to work through the Revision Questions and practical activities in this workbook and follow the guidance of your lecturer. The worksheets and practical activities will provide the essential performance skills and knowledge outlined in this Unit and assist you in achieving competency.

### **Assessment Methods:**

Written Knowledge Assessment – based on the Knowledge Evidence, you are required to achieve a Satisfactory Result of 75% in the Knowledge Assessment to be deemed competent.

Observed Skills Assessment – based on the Elements and Performance Evidence of this Unit of Competency UEECO0023. To be competent you are required to achieve a Satisfactory Result in the Skills Assessment.

## LABORATORY INSTRUCTIONS

Students working in laboratories at North Metropolitan TAFE Campus do so on the condition that they agree to abide by the following instructions. Failure to observe the safety instructions may result in disciplinary action, including cancellation of your training contract with NMTAFE.

1. No circuit is to be plugged in or switched on without the specific permission of the lecturer in charge of the class. A circuit must be switched off, isolated and tested for ZERO VOLTS before any supply leads are removed. The DANGER TAG PROCEDURE must be used at all times.
2. Do not leave any circuit switched on any longer than necessary for testing. Do not leave any circuit switched on unattended.
3. Check each item of equipment before using it. Report any broken, damaged or unserviceable equipment to your Lecturer.
4. All wiring must be disconnected at the end of each practical class or as each project is completed.
5. Make all connections safely with an appropriate connecting device. Unshielded 4mm banana plugs are not to be used for wiring.
6. Switch off, remove the plug from the socket and attach your DANGER TAG to the plug top before working on any project. It is not sufficient to simply turn the switch off.
7. When disconnecting your wiring from a connection made under a screw, undo the screw to remove the wiring, do not cut the wire off.
8. Observe the correct colour code for all wiring projects.
9. Test your circuit for short circuits with your multimeter before asking your Lecturer to switch the circuit on. Test the Tester before and after EACH test.
10. Where an activity sheet is issued for a project, complete each step in the Procedure before moving to the next step. Advise your Lecturer when you have completed the activity.
11. Draw ALL DIAGRAMS in PENCIL so that they can be easily changed or corrected. Mark off each connection on your diagram as it is made.
12. Check the range before taking a reading with a multimeter.
13. Make sure that it is YOUR plug before inserting the plug into an outlet.
14. Always switch the multimeter to OFF, or to the highest possible AC VOLTS range when you have finished using it.
15. Report any unexpected situations or events to your Lecturer.

## Personal Protective Equipment (PPE) Requirements – Electrical Workshops

One of the aims of studying at North Metro TAFE (NMT) is to prepare students for work. Therefore it is expected that whilst participating in NMT activities, students will dress in a manner that is neat, clean and safe as would be expected in the workplace.

Many of the work/training activities in trades-based environments throughout NM TAFE employees and students engage in are hazardous/high risk and may place them or others at risk of injury or harm.

NMTAFE has a Personal Protective Equipment (PPE) policy (Document# PCY143) to communicate to all employees, students and contractors the PPE requirements.

Staff are authorised to deny students access to any workshop or classroom-based high-risk activity if the PPE standards are not observed.

This includes:

- Wearing suitable clothing by Work Health & Safety requirements. (Lecturers will inform students of specific Work Health and Safety dress standards that apply to their industry area)
- Adhering to all mandatory signage in areas where PPE requirements are displayed.

### Workshop Dress Standards

Students are expected to observe the mandatory PPE standards from the first day of attendance at NMT.

Examples of mandatory signage for the Electrical workshops may include the following depending on the risk and tasks performed;



Students not complying with the PPE signage requirements or instructions from their lecturer relating to the wearing of these items will **NOT** be permitted to enter workshops by their lecturer or may be removed from the workshop or task for failing to comply.

Lecturers are responsible for ensuring that students are wearing appropriate PPE and being properly used must ensure student PPE complies with the appropriate Australian Standard and are in good condition.

<b>Hair</b>	Long hair must be restrained where it exceeds the length of the top of the shoulders or when using rotating tools or machinery where applicable.
<b>Footwear</b>	<p>Australian standard-compliant safety footwear (AS2210.3) (Steel cap safety boots) must be worn during all classes and workshops at all times where required. (Thongs are not acceptable footwear on NMT premises)</p> <p>If a student doesn't have a pair of safety boots then he/she will be asked to leave campus if so possible to obtain a pair. If not possible to leave campus then the student's employer or guardian will be contacted.</p>
<b>Eye Protection</b>	<p>Safety glasses must be worn when working in or entering areas where signage denotes the requirement or if instructed by a lecturer.</p> <p>Anyone using hand tools or connecting banana leads <b>in the classrooms</b> must wear clear protective safety glasses. <b>Tinted safety glasses are not acceptable for any indoor work activities.</b></p> <p>Any student who repeatedly offends will be denied to continue with any activity until the situation is rectified. Sunglasses are not an acceptable substitute for safety glasses. If a student does not have a pair of Safety glasses then he/she can purchase a pair from campus (ask the lecturer for details).</p>
<b>Hearing Protection</b>	Hearing protection must be worn when working in or entering areas where signage denotes the requirement or if instructed by a lecturer.
<b>Hand Protection</b>	<p>Hand protection must be worn when working in or entering areas where signage denotes the requirement or if instructed by a lecturer.</p> <p>Gloves with a minimum grade cut 2 resistance must be worn when working with tools in the classroom and workshops. Gloves are allowed to be removed to do dexterity work but must be resumed where possible. If a student does not have a pair of safety gloves then he/she can purchase a pair from campus (ask the lecturer for details).</p>

# DANGER TAG PROCEDURE for ELECTRICAL TRADE LABORATORIES

## THE FOLLOWING PROCEDURE IS COMPULSORY



1. The student is to attach a DANGER TAG to the plug top of the project lead before proceeding with the allocated project. A danger tag must be attached to the plug top at all times when the lead is NOT plugged into the supply outlet. Plug tops or leads are not to be connected to the supply outlet WHILE A DANGER TAG is attached.

2. The student is to assemble the project according to the project instruction procedure and lecturer's directions in its isolated and de-energised state and report to the lecturer as necessary and upon completion.

3. The lecturer is to:-
  - a. Check the project for safety and
  - b. Ensure that the student has performed a safety check, including a short circuit test using the recommended procedure.
4. When the lecturer is satisfied that the project is safe to connect and energise the lecturer is to instruct the student to REMOVE the DANGER TAG from the plug top.
5. The student is to plug in the project and switch it on in the presence of the lecturer.
6. The lecturer is to determine whether or not the project is operating satisfactorily.
7. If the project operates satisfactorily the student may take measurements using correct meters about the safety risks associated with using the particular item of test equipment including;
  - a. Selecting the correct meter function,
  - b. Holding meter probes correctly during measuring with fingers behind knurls (finger guards) at all times.

This is to be done under the general supervision of the lecturer. The student is NOT to modify, disassemble or carry out ANY unsafe act.
8. If the circuit is to be modified the student must:
  - a. Switch the circuit off,
  - b. Disconnect the project from the supply,
  - c. Attach the DANGER TAG to the plug top,
  - d. Report to the lecturer for instructions,
  - e. In the lecturer's presence the student is to:-
  - f. TEST and VERIFY for ZERO VOLTAGE.
  - g. Restart the DANGER TAG procedure from step 2 above.

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9. When the student is satisfied that the project has been completed the student is to:-
- Switch the project off,
  - Remove the plug,
  - Replace the DANGER TAG on the plug top,
  - Report to the lecturer for instructions,

In the lecturer's presence the student is to:-

- TEST and VERIFY for ZERO VOLTAGE.

The lecturer is then to instruct the student to:-

- Disassemble the project
- Remove the DANGER TAG and store the equipment in its designated place.

Failure to follow Danger Tag Procedures when working on practical activities and practical assessments will result in a '**Not yet Satisfactory**' comment recorded for this Unit of Competency – UEECO0023.

### **Student Responsibilities:**

It is your responsibility to come to NMTAFE prepared to carry out your studies from Day 1

You are responsible for providing the following:-

- Pens, pencil and notebook
- Scientific calculator (Non-programmable) e.g. CASIO FX – 82AU approx. \$40
- Current edition of AS3000-2018 (available at Electrical Stores for \$35.00)
- Current edition of AS3008-2017 (available at Electrical Stores for \$30.00)
- WAER Current edition (available at Electrical Stores for \$15.00).
- Berry/Cahill/Chadwick, Electrical Trade Practices, 3<sup>rd</sup> Edition (Requirement before you attend TAFE)
- Phillips, Electrical Principles, 5<sup>th</sup> Edition (Requirement before you attend TAFE).

**You have been advised to Purchase the Electrical Practices and Electrical Principles,**

**This is a requirement on your first day of TAFE to have these available.**

## Engage in a Competency Development Plan.

As an Electrical Apprentice at North Metropolitan TAFE, you are required to be employed by an Electrical Company that holds an Electrical Contractors' Licence.

This Electrical Contractor agrees to employ you for the 4-year term of your apprentice and allocate an AASN to assist with any questions you may have regarding your apprenticeship.

These could be MEGT, WA ([Melbourne Eastern Group Training](#)), Apprenticeship Community, and Apprenticeship Support Australia.

Your employer will have undergone a "Capacity to Train" agreement with NMTAFE, ensuring they are capable of carrying out the training you require for the qualification you are to be enrolled on.

Once you are signed up by your employer a Training Contract will be created and AMT (Apprentice Management Team) will send this through to your Employer for them and you to sign.

Within this contract, there will be your start date, completion date, Employer details and the Units of Competency within your qualification.

This is the time you need to advise NMTAFE of any previous study that you may have undertaken at a previous RTO so we can allocate credits to your qualification if applicable.

Once this is signed and returned to AMT, they will sign it on behalf of NMTAFE you will have an account created in Ready Skills and you will also be enrolled in your qualification and credited any previous 'Units of Competency' you have previously undertaken if applicable.

Any questions regarding this process can be directed to your assigned AASN or you can make contact with the Apprentice Management Team at the following email address: - [apprentices@NMTAFE.wa.edu.au](mailto:apprentices@NMTAFE.wa.edu.au).



In summary the roles and obligations of the following parties or stakeholders are as follows;

### **Apprentice.**

As an apprentice you will be required to attend work, do your job and follow your employees' instructions as long as you feel safe to do so. they are.

Work towards achieving the qualification you are enrolled in the best of your ability by the time your proposed completion date with in your Training Plan.

Attend Tafe, carry out the training and assessment as identified in your training Plan and as per footprint given to you by your lecturer. (See examples on pages 21 and 22).

### **Employer.**

As an Employer they are required Employ and Train you in the Training you have been signed up into employer must explain your obligations under this contract.

Make sure that you (the apprentice) receive the necessary training and assessments in accordance with the Training Plan.

### **Apprentice Management Team (AMT).**

AMT are responsible for all apprentice commences, Training Plans (not only Electrical), they are also responsible for any apprenticeship travel requirements, training extensions or variations, terminations and completions.

### **Regulatory Bodies**

Building and Energy are the Regulatory body that governs the Electrical industry and licencing in Western Australia.

### **NECA or Master Builders Association**

These two entities provide Employer association giving advice on Electrical installations, real on the job situations. Wiring Rules updates etc.

### **Trade Unions**

The Electrical Trades Union is there to look after its members in the Electrical industry.

Periodically they will be invited into the college to do presentations to first year students and Pre-Apprentices to give guidance on what your rights are within the industry.

## Participate in Electrical Competency development work activities

Based on your identified Training Plan (Competency Development Plan) your employer is required to give you opportunities to develop and practice these skills throughout your apprenticeship in all the competencies on your Training Plan (Competency Development Plan).

These Electrical Skills and Knowledge tasks are required to be carried out under industry /and organisational policies and procedures and according to Workplace Safety and Health Procedures (WHS).

### ***What is WHS?***

**WHS Meaning:** *Workplace Health and Safety (WHS) refers to health and safety practices that are established and carried out to ultimately prevent or mitigate any injury, illness, or any kind of mishap in the workplace.*

To be effective, WHS relies on 3 core objectives.

They are:

- **Hazard Identification** - identifying or spotting anything or process that can cause harm in the workplace.
- **Risk Assessment** - analysing the likelihood of hazards causing harm to workers as well as to what degree.
- **Control of hazards** and risk - measures put forward to prevent, eliminate, or reduce hazards and its risk at the workplace.

## Monitor and Report on Competency development

You will be given a 'footprint' for the qualification you are undertaking, examples of these are shown on pages 20 and 21.

These Footprints show the units of Competency in your qualification which will match your Training Plan (Competency Development Plan) and the sequence in which they are to be delivered. Along with expected assessment times through your qualification.

NMTAFE will monitor your progress throughout your apprenticeship using our Student Management System (SMS or CI Anywhere).

You can request a progress report from AMT at any time during your apprenticeship.

Your progress through your apprenticeship can be self-monitored by yourself even though NMTAFE will make every effort to progress you through your apprenticeship within industry timelines.

Any changes to your training plan must be identified and confirmed by AMT and your Training Plane is adjusted and re-signed by all parties, namely yourself, your employer and AMT on behalf of NMTAFE.

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Block Release Footprint

UEE30820 Certificate III in Electrotechnology Footprint Semester 1 2023 7 hour Days

Semester 1	Stage 1 - S1, T1 2023		Stage 2 - S2, T1 2023		Stage 3 - S1, T1 2024		Stage 4 - S2, T1 2024		Stage 5 - S1, T1 2025		Stage 6 - S2, T1 2025		Stage 7 - S1, T1 2026	
Block 1 of 2	8.00 - 12.00	12.45 - 15.45	8.00 - 12.00	12.45 - 15.45	8.00 - 12.00	12.45 - 15.45	8.00 - 12.00	12.45 - 15.45	8.00 - 12.00	12.45 - 15.45	8.00 - 12.00	12.45 - 15.45	8.00 - 12.00	12.45 - 15.45
Day 1	CO0023	HLTAID009					UETDRR04							
Day 2			CD0051								DV0005		EL0012	
Day 3	UEECD007						CD0016			EL0005				
Day 4														
Day 5	CD0019				EL0020									
Day 6														
Day 7			EL0023				EL0003							
Day 8														
Day 9	UEECD0020													
Day 10														
	S1, T2		S2, T2		S1, T2		S2, T2		S1, T2		S2, T2		S1, T2 2026	Capston Stage 8
Block 2 of 2	8.00 - 12.00	12.45 - 15.45	8.00 - 12.00	12.45 - 15.45	8.00 - 12.00	12.45 - 15.45	8.00 - 12.00	12.45 - 15.45	8.00 - 12.00	12.45 - 15.45	8.00 - 12.00	12.45 - 15.45	8.00 - 12.00	12.45 - 15.45
Day 1							EL0008							
Day 2			EL0021		EL0025						DV0008		EL0039	
Day 3	CD0046													
Day 4							EL0009							
Day 5			EL0019						UEEL014					
Day 6							EL0010							
Day 7	CD0044				EL0024									
Day 8			RE0001				EL0047						EL0018	
Day 9														
Day 10														

Delivery Sequence Assessments for prior unit/s

Knowledge Resits please see Campus Timetable  
Practical Resits Week 20

UEECO0023	Participate in electrical work and competency development activities	UEECD0016	Document and apply measures to control WHS risks associated with electrotechnology
HLTAID001	Provide cardiopulmonary resuscitation	UETDRR06	Perform rescue from live LV panel
UEECD0007	Apply WHS regulations, codes and practices in the workplace.	UEEEL0003	Arrange circuits, controls and protection for electrical installations
UEECD0019	Fabricate assemble and dismantle utilities industry components	UEEEL0047	Identify, shut down and restart systems with alternate supplies
UEECD0020	Fix and secure electrotechnology equipment	UEEEL0008	Evaluate and modify low voltage heating equipment and controls
UEECD0046	Solve problems in single path circuits	UEEEL0009	Evaluate and modify low voltage lighting circuits, equipment and controls
UEECD0044	Solve problems in multiple path circuits	UEEEL0010	Evaluate and modify low voltage socket outlet circuits
UEECD0051	Use drawings, diagrams, schedules, standards, codes and specifications	UEEEL0005	Develop and connect electrical control circuits
UEEEL0023	Terminate cables, cords and accessories for low voltage circuits	UEEEL0014	Isolate, test and troubleshoot low voltage electrical circuits.
UEEEL0021	Solve problems in magnetic and electromagnetic devices	UEEEL0018	Select wiring systems and select cables for low voltage electrical installations
UEEEL0019	Solve problems in direct current (d.c.) machines	UEEIC0002	Assemble, enter and verify operating instructions in microprocessor equipped devices
UEERE0001	Apply environmentally and sustainable procedures in the energy sector	UEEIC0047	Use instrumentation drawings, specifications, standards and equipment manuals
UEEEL0020	Solve problems in low voltage ac circuits	UEEIC0013	Develop, enter and verify discrete control programs for programmable controllers
UEEEL0025	Test and connect transformers	UEEEL0012	Install low voltage wiring, appliances, switchgear and associated accessories
UEEEL0024	Test and connect alternating current (a.c.) rotating machines	UEEEL0039	Design, install and verify compliance and functionality of general installations
		UEEDV0005	Install and maintain cabling for multiple access to telecommunication services
		UEEDV0008	Install, modify and verify coaxial and structured communication copper cabling

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		S1 2023		S2 2023		S1 2024		S2 2024		S1 2025		S2 2025		S2 2026	
		Stage 1		Stage 2		Stage 3		Stage 4		Stage 5		Stage 6		Capstone	Stage 7
Semester 1	Term 1/Block 1	CO20B HLTAI001		CD0051		EL0020		CD0016		EL0005		*UEEAS0009		2 weeks EL0039	
	Day 1	CD0007		CD0019		EL0023		UETDRR06		EL0003		*UEEEL0004			
	Day 2	CD0020										*UEEEL0017			
	Day 3														
	Day 4														
	Day 5														
	Day 6														
	Day 7														
	Day 8														
	Day 9														
	Day 10														
	Term 2/Block 2	CD0046		EL0021		EL0025		EL0008		UEEEL014					
	Day 1	CD0044		EL0019		EL0024		EL0009				UEEIC0013			
	Day 2	RE0001						EL0010							
	Day 3							EL0047							
	Day 4														
	Day 5														
	Day 6														
	Day 7														
	Day 8														
	Day 9														
	Day 10														
		Unit finalisation /Ready Skills / Resits		Unit finalisation /Ready Skills / Resits		Unit finalisation /Ready Skills / Resits		Unit finalisation /Ready Skills / Resits		Unit finalisation /Ready Skills / Resits		Unit finalisation /Ready Skills / Resits			
		Delivery Sequence		Assessments for prior unit/s		Ready Skills									

UEECO0023	Participate in electrical work and competency development activities	UEECD0016	Document and apply measures to control WHS risks associated with electrotechnology work
HLTAID001	Provide cardiopulmonary resuscitation	UETDRR06	Perform rescue from live LV panel
UEECD0007	Apply WHS regulations, codes and practices in the workplace.	UEEEL0003	Arrange circuits, controls and protection for electrical installations
UEECD0019	Fabricate assemble and dismantle utilities industry components	UEEEL0047	Identify, shut down and restart systems with alternate supplies
UEECD0020	Fix and secure electrotechnology equipment	UEEEL0008	Evaluate and modify low voltage heating equipment and controls
UEECD0046	Solve problems in single path circuits	UEEEL0009	Evaluate and modify low voltage lighting circuits, equipment and controls
UEECD0044	Solve problems in multiple path circuits	UEEEL0010	Evaluate and modify low voltage socket outlet circuits
UEECD0051	Use drawings, diagrams, schedules, standards, codes and specifications	UEEEL0005	Develop and connect electrical control circuits
UEEEL0023	Terminate cables, cords and accessories for low voltage circuits	UEEAS0009	Mount and wire control panel equipment
UEEEL0021	Solve problems in magnetic and electromagnetic devices	UEEEL0004	Carry out basic repairs to electrical components and equipment
UEEEL0019	Solve problems in direct current (d.c.) machines	UEEEL0017	Repair and maintain mechanical components of electrical machines
UEERE0001	Apply environmentally and sustainable procedures in the energy sector	UEEIC0013	Develop, enter and verify discrete control programs for programmable controllers
UEEEL0020	Solve problems in low voltage ac circuits		
UEEEL0025	Test and connect transformers		
UEEEL0024	Test and connect alternating current (a.c.) rotating machines		

# Profiling - Ready Skills

## Profiling Requirements of the UEE20 Qualification taken from the UEE20 Electrotechnology Companion Implementation Guide Volume 3.2

### ATTACHMENT E: IMPLEMENTATION GUIDANCE

#### ELECTRICAL ASSESSMENT CONDITIONS

A small number of Electrical (UEEEL...) Units that cover critical EPCs used for issuing an Electrical Licence include the following additional requirements in the

#### Assessment Conditions:

***Assessment must occur in suitable workplace operational situations where it is appropriate to do so, where this is not appropriate, assessment must occur in suitable simulated workplace operational situations that replicate workplace conditions. In addition, evidence of Performance Evidence requirements of this unit must be gathered in authentic workplace operational conditions (not simulated) before a final determination of competence in this unit can be made.***

The purpose of these additional requirements is to ensure that evidence is gathered in authentic workplace settings and not limited to activities completed in institutional environments.

Where the above requirements are included, the evidence must be gathered in authentic operational settings. During training plan development, consideration must be given to the candidate's ability, within the scope of their employment, to demonstrate Performance Evidence requirements on the job.

This may require additional work placement/s outside of the apprentice's place of employment, where the employer's normal activities do not provide the scope of work required.

The use of workplace logbooks, journals and/or a profiling system will support the implementation of these requirements.

The additional requirements appear in the following units:

- UEEEL0003 Arrange circuits, control and protection for electrical installations
- UEEEL0005 Develop and connect electrical control circuits
- UEEEL0008 Evaluate and modify low-voltage heating equipment and controls
- UEEEL0009 Evaluate and modify low voltage lighting circuits, equipment and controls
- UEEEL0010 Evaluate and modify low voltage socket outlets circuits
- UEEEL0012 Install low voltage wiring, appliances, switchgear and associated accessories
- UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits
- UEEEL0018 Select wiring systems and select cables for low-voltage electrical installations
- UEEEL0023 Terminate cables, cords and accessories for low-voltage circuits
- UEEEL0024 Test and connect alternating current (a.c.) rotating machines

Only the above-listed units are required to be profiled using NMTAFE's preferred 'Evidence gathering Tool', "Ready Skills", based on the Performance Criteria highlighted by a # in each unit of competency within your qualification.

This is termed 'On the Job training' "Evidence Gathering"

**Note: - these units are only applicable to the following Qualifications**

**1. UEE30820 Electrotechnology (10 units Only)**

**2. UEE33020 Electrical Fitting. (9 Units Only)**

Evidence gathering for all other units within each qualification is gathered at the discretion of each individual Registered Training Organisation (RTO).

North Metro TAFE collects all evidence from all other units from your TAFE studies through Knowledge, Skills and Portfolio Assessments.

This is termed 'Off Job Training' "Evidence Gathering"

Ready Skills is an electronic profiling tool to enable RTOs to monitor an electrical apprentices' "on the job" training for specific units highlighted.

This is to ensure that the apprentice is receiving the required on-the-job training from the employer.

**Within UEE 30820 Electro-technology there are only 10 units that need to be profiled**

<b>UEE30820 Electro-technology 10 Units of Competency</b>	<b>Required Profiling Hours</b>
UEEEL0018	216
UEEEL0012	144
UEEEL0024	180
UEEEL0003	144
UEEEL0008	72
UEEEL0009	72
UEEEL0010	72
UEEEL0005	288
UEEEL0014	216
UEEEL0023	144
<b>TOTAL</b>	<b>1548</b>

**Within UEE33020 Electrical Fitting there are only 8 units that need to be profiled.**

<b>UEE33020 Electro-technology 8 Units of Competency</b>	<b>Required Profiling Hours</b>
UEEEL0020	288
UEEEL0024	180
UEEEL0003	144
UEEEL0008	72
UEEEL0009	72
UEEEL0010	72
UEEEL0005	288
UEEEL0014	216
<b>TOTAL</b>	<b>1440</b>

There are specific tasks highlighted within the Performance Evidence of each unit that required on job profiling.

These particular tasks have been embedded into the Ready Skills programme and the student has to reach a minimum of 100% overall NMTAFE requires the currency be maintained throughout the apprenticeship.

Each student will be given access to the Ready Skills along with login details and instructions on how to use the system.

There is an app that can be downloaded for use with Apple or Android devices or the system can be accessed from an internet browser.

Your allocated supervisor will also be sent login details as they will be required to approve your entries.

As a guide students are expected to reach the following target levels during their 4 years of study.

Stages 1 and 2	– 25% complete and <b>current</b>
Stages 3 and 4	– 50% complete and <b>current</b>
Stages 5 and 6	– 75% complete and <b>current</b>
Stage 7	– 95% complete and <b>current</b>
Stage 8	– 100% complete and <b>current</b>

**“Current” means within 4 weeks of the current date.**

The use of Ready Skills must be used until you reach Stage 8 (Capstone)

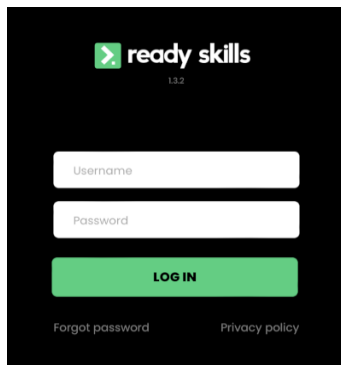
If you have any questions, please contact your lecturer John Dickie (M) 0400 044 423 or [John.Dickie@nmtafe.wa.edu.au](mailto:John.Dickie@nmtafe.wa.edu.au).

**The Ready Skills process is described on the next page. If you haven't already, the app is free to download from your phone's app store.**





# ready skills

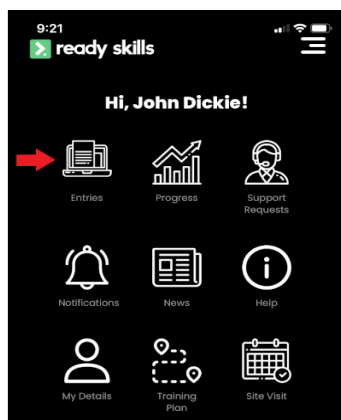


## Logging in:

Log into the ready skills app with the provided username and password.

If you have forgotten your password, select the **Forgot password** link below the login button and follow the prompts.

For any unknown login/account issues contact your lecturer or the library for further assistance.



## Home menu:

Once you have successfully logged in you will be taken to the home screen. To begin recording your workplace activity select the **Entries** option.

Recording your entries day-by-day helps create an important picture of developing skills and potential gaps in your skill development.



## Selecting dates:

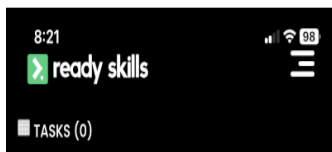
You will see the days available to log tasks are highlighted green. Select a day from the highlighted options.

Weeks are structured beginning on Monday and ending on Sunday, meaning that you can only record entries one week at a time.

If a week has been finalised, you can't go back and edit entries for that week.

It is important to note if you begin your entries for the week on your mobile phone app, you cannot switch to the browser version during the week. This is because the mobile app is designed to work offline.

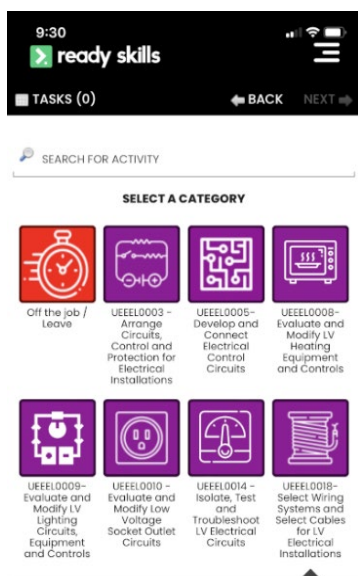
UEECO0023 - Participate in electrical work and competency development activities



**Entering a New Task:**

Once you have selected the week you are wishing to log, you will see the prompt **Enter New Task**, select this to begin.

*Important:* The app is not designed to allow for one entry to cover an entire week. You must enter in new entries/tasks daily to ensure an accurate record is kept of the work you are completing.



**Categories (units of competency):**

Have a look at the list of categories (units of competency) and select the one relevant to the task you are wanting to log.

If you are having trouble finding an intended category or activity, there is a search bar you can use to narrow down available options.



**Subcategories and activities:**

Once you have selected a category, you will see a selection of subcategories. If one of the subcategories is marked red, that means it is compulsory you select that option.

After you have selected a subcategory, it will open a series of activities. From the activities you can select more than one option depending on the tasks you completed throughout the day. You can see you have successfully selected an option when a green tick appears on the bottom right of the icon box.

UEECO0023 - Participate in electrical work and competency development activities



**Activity evidence:**

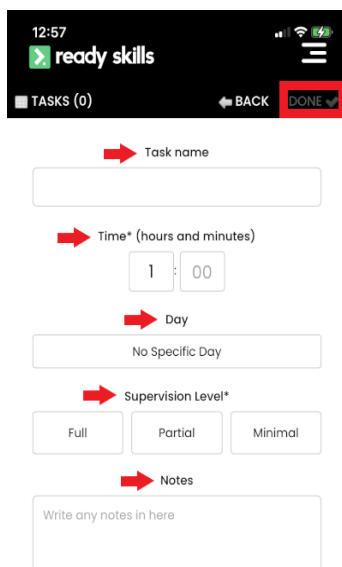
There are two further options available to you within selected activities. Press and hold down on an icon until it darkens and loads up a pop-up menu. You may need to scroll up towards the top of the screen to see the pop-up menu.

1. You may wish to upload a photo or video as evidence to the completed activity. There is the option to take a new photo/video, or you can select one from your phone's library.
2. If you have completed a task more than once throughout the day, there is an option to note how many times you carried out that task.



**Finishing selecting activities:**

Once you have selected the activities you have completed and uploaded any relevant photographs, select the **Next** option towards the top right of the screen.

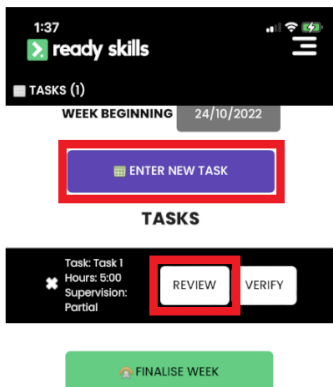


**Activity details:**

On this screen you will see a series of options. Read through the following carefully.

**Task name:** Unless you have been instructed otherwise, you can leave this box as it is. **Time:** The time taken to complete the tasks. You can select more than one day if it has taken multiple days. **Please note** that if you have selected 5 hours over two days; that equates to you having undertaken 5 hours to do the task, not 5 hours each on both days. **Supervision Level:** Whether you received full, partial, or minimal supervision. **Notes:** Anything important you may wish to add or have been instructed to add by your supervisor.

Once you have filled out all the relevant information, select **Done** towards the top right of the screen.

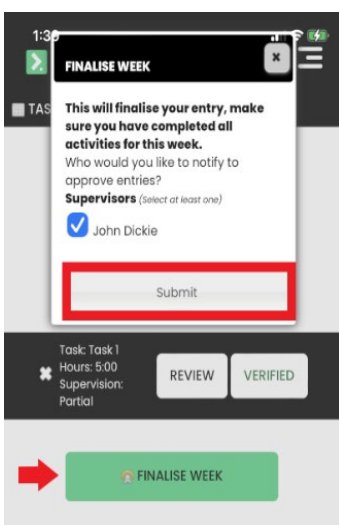


### Review entries:

Once you have selected **Done**, you are taken through to this screen. If you are concerned that you have made an error or forgotten to add something in; select **Review** to go back and make any necessary changes.

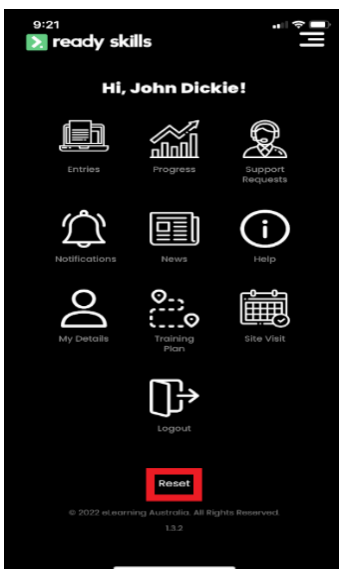
If you are working with someone other than your usual supervisor, you will need them to **Verify** what you have logged is correct. Please note that after an entry has been verified by a supervisor it cannot be edited.

With the completion of your first entry, you repeat the process



### Finalising week:

At the end of the week with all your entries logged you can select the **Finalise Week** option. A pop up will appear reminding you to not submit until you have completed all activities for the week. If you are certain you have logged all your tasks, make sure you select the correct supervisor/s before hitting **Submit**.



### Troubleshooting:

Once you have selected **Finalise Week**, you will be taken back to the home screen ready for the next week.

If you are experiencing problems with the app, the **Reset** option towards the bottom of the home screen fixes the problem more often than not.

*Important:* hitting **Reset** will delete any entries which have not been finalised.

If you are still having issues with the app, contact your lecturer, the library or, John Dickie (Mobile: 0400044423, Email: [John.Dickie@nmTAFE.wa.edu.au](mailto:John.Dickie@nmTAFE.wa.edu.au)).

**PLEASE NOTE THERE ARE HELP VIDEOS AVAILABLE FROM THE HELP MENU IN THE APP**

## CO0023 Worksheet Questions

1. Name two stationary items are you required to bring to Tafe?
2. Which 2 resource publications are required to get you through your Electrical Apprenticeship?
3. What are the colours of a Danger Tag?
4. Which 3 parties need to sign your Training Plan (Competency Development Plan)?
5. What is the name of the 'On "the Job' profiling tool used by NMTafe?
6. How many units need to be profiled by Ready Skills in the 30820 Qualification?
7. How many units need to be profiled by Ready Skills in the 33020 Qualification?
8. Where can you find the Ready Skills help videos?
9. What percentage do I need to have achieved as a guide in Stage 2.
10. Can you add Photographs to my Ready Skills Entries as support information?
11. What are the roles and responsibilities of the following parties in the competency development of the apprentice?  
Apprentice  
Employer  
RTO
12. Name an industry body that has responsibility in each of the following roles in the Electrotechnology Industry in WA
13. Why is it important that Work health and Safety policies and procedures are followed? Select one of the answers
14. Select one or more of the following answers, which is/are an unlawful discrimination category under the Equal Employment Opportunity legislation in W.A.?  
Gender  
Age  
Race  
Religion
15. What are three Training contract obligations for apprentices
16. What are 3 responsibilities Training contract obligations for apprentice employers?
17. Using the NMTAFE Student Handbook, state NMTAFE website address to register a complaint using a 'Feedback' form.
18. What 3 items of support services does the NMTAFE Apprenticeship Management Team (AMT) provide for apprentices and their employers.
19. Gathering workplace evidence is an important component of the units of competency in the Electrotechnology Training Package. What must all NMTAFE apprentices complete during their apprenticeship?
20. Which 'on-the-job' profiling tool is used by NMTAFE to gather work place evidence.
21. According to the WA Electricity (Licensing) Regulations, what level of supervision must a 1<sup>st</sup> Year apprentice be working under when working on an existing electrical installation?
22. Which party to the Apprentice's Training Plan needs to be consulted, to change the selected 'Elective units'.

End of Questions

