Workplace Learning Record

VCE VET Electrical Industry



22261VIC Certificate II in Electrotechnology (Pre-vocational)

**Student name**:

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SWL Recognition

Structured workplace learning (SWL) recognition provides you with the opportunity to gain credit into your VCE or VCAL for undertaking SWL that matches your VCE VET program.

To receive recognition and credit, you will be required to reflect on your experience in the workplace and how this relates to your VET course. Your reflections are to be recorded in the three sections of this workplace learning record (WLR).

About this workplace learning record

This workplace learning record helps you gather evidence for assessment and is part of the requirement for obtaining SWL Recognition.

To be eligible for one Unit towards your VCE or VCAL, you must:

* be enrolled in a minimum of 180 hours of units of competency (UoC) from the 22261VIC Certificate II in Electrotechnology Studies (Pre-vocational)
* undertake a minimum of 80 hours (equivalent to 10 days of work) in an electrical industry placement
* reflect on a minimum of six units of competency (UoC) from your program including the OHS UoC (CPCCOHS1001A — see page 8).

VCE VET Electrical Industry

22261VIC Certificate II in Electrotechnology Studies (Pre-vocational)

The VCE VET Electrical Industry program provides pre-employment training and pathways in the electrical industry. The Certificate II in Electrotechnology Studies (pre-vocational) is a state-accredited qualification that offers students the opportunity to develop their skills and knowledge across a range of electrical sectors, including electrical, electronics, refrigeration and mechanical engineering.

Specifically a graduate of this course can:

* undertake an apprenticeship, traineeship or cadetship leading to a range of related careers in any electrotechnology discipline
* enrol in Certificate III qualifications in the electrical industry
* gain entry-level employment in electrical or related industries
* undertake higher level VET certificates in the electrical sector or a degree in electrical technology or related industries
* learn to fix and secure electrical equipment, use routine equipment in an electrical setting, OH&S, provide.

The course:

* provides students with competencies in basic electrical theory, hands-on electrical practices, wiring and basic installation skills, the use of hand and power tools and an overview of the electrotechnology industry
* fosters the development of social and personal skills relevant to further training and employment
* provides experience in and knowledge of a range of occupations in electrotechnology disciplines
* enables students to gain a recognised credential and credits for further training.

Workplace Learning Record

The workplace learning record is divided into three sections.

**Section 1**: Learner profile

**Section 2**: Learning about VET units of competency in the workplace

**Section 3**: Post-placement reflections

Please complete the details of your workplace.

|  |  |
| --- | --- |
| Employer/Company/Business |  |
| Supervisor name |  |
| Contact phone number |  |

|  |  |
| --- | --- |
| Employer/Company/Business |  |
| Supervisor name |  |
| Contact phone number |  |

|  |  |
| --- | --- |
| Employer/Company/Business |  |
| Supervisor name |  |
| Contact phone number |  |

Section 1: Learner profile

Complete the Learner profile and discuss this with your host employer on or before your first day of placement.

|  |  |
| --- | --- |
| **Name** |  |
| **School** |  |
| **Contact information** |  |

Within your VCE/VCAL why did you undertake this VET course?

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What VCE/VCAL subjects are you also undertaking?

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Why have you chosen this overall VCE/VCAL program?

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Program outline

22261VIC Certificate II in Electrotechnology Studies (Pre-vocational)

**Units of competency** (UoC) included in this program are listed below. There are compulsory UoC, along with a selection of electives. You can make a note of any UoC that relates to your experiences in the workplace. Also indicate the year you’re undertaking each UoC.

|  |  |  |  |
| --- | --- | --- | --- |
| Unit code | Unit of Competency | Year | Page |
| **VCE VET Units 1–4** |
| **Compulsory** |
| CPCCOHS1001A | Work safely in the construction industry |  | 8 |
| HLTAID002 | Provide basic emergency life support |  | 9 |
| UEENEEE101A | Apply occupational health and safety regulations, codes and practices in the workplace |  | 10 |
| UEENEEE102A | Fabricate, assemble and dismantle utilities industry components |  | 11 |
| UEENEEE103A | Solve problems in ELV single path circuits |  | 12 |
| UEENEEE105A | Fix and secure electrotechnological equipment |  | 13 |
| UEENEEE130A | Provide solutions and report on routine electrotechnological problems |  | 14 |
| UEENEEE142A | Produce products for carrying out energy sector work activities |  | 15 |
| UEENEEE148A | Carry out routine work activities in an energy sector environment |  | 16 |
| UEENEEE179A | Identify and select components, accessories and materials for energy sector work activities |  | 17 |
| **Electives** |
| UEENEEE122A  | Carry out preparatory energy sector work activities  |  | 18 |
| UEENEEP024A  | Attach cords and plugs to electrical equipment for connection to a single phase 230 volt supply  |  | 19 |
| VU21533  | Perform energy sector installations of extra low voltage (ELV) single path circuits  |  | 20 |
| UEENEED102A  | Assemble, set-up and test computing devices  |  | 21 |
| UEENEEH104A  | Set up and test residential audio/video equipment  |  | 22 |
| UEENEEJ102A  | Prepare and connect refrigeration tubing and fittings  |  | 23 |
| UEENEEJ103A  | Establish the basic operating conditions of vapour compression systems  |  | 24 |
| UEENEEJ104A  | Establish the basic operating conditions of air conditioning systems  |  | 25 |
| VBP131  | Construct and configure a basic robotic system  |  | 26 |
| VBP132  | Program a basic robotic system  |  | 27 |

List any other units you are undertaking and include comments regarding additional units on page 26.

What interests you about the industry?

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|  |

What is your planned career path or future career aspiration?

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|  |

Describe any workplace skills you have developed through previous work experience, SWL or part time employment?

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Section 2: Learning about VET units of competency in the workplace

This workplace learning record contains three key questions per UoC designed to draw out related experiences you may be exposed to in an electrical industry workplace.

This does not cover all the elements or performance criteria within the units and is not designed as a UoC assessment tool.

You should comment on the units you’ve experienced in the workplace, and reflect on actual observations or activities that you have been exposed to. Your observations will:

* reinforce the training you have undertaken
* identify differences in practice or equipment
* identify areas requiring further training or practical experience.

You are encouraged to take photos and/or video where appropriate to showcase learning in the workplace. Evidence you collect can include:

* observations
* descriptions of activities and tasks
* conversations with employers and other staff
* participation in meetings
* workplace documents
* research in the workplace
* photos of equipment/processes/events
* video of workplace activities.

**Note**: please speak to your host employer before taking photos or video. This record does not require identifying actual people or events, as this may breach confidentiality.

VCE VET units of competency

CPCCOHS1001A
Work safely in the construction industry

This Unit of Competency specifies the outcomes required to undertake **Occupational Health and Safety** (OHS) induction training within this industry.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| How did you learn about the OHS policies and procedures? |  |
| Briefly outline what you observed about the role of designated OHS personnel within the workplace. |  |
| In your experience, in this workplace, what are the specific OHS issues when responding to incidents? |  |

HLTAID002
Provide basic emergency life support

This unit describes the skills and knowledge required to recognise and respond to life-threatening emergencies in line with the Australian Resuscitation Council (ARC) Guidelines.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| What was the procedure for responding to an emergency situation in the workplace? |  |
| What was the role of the designated First Aid officer within the workplace? |  |
| What was the process for reporting workplace incidents? |  |

UEENEEE101A
Apply occupational health and safety regulations, codes and practices in the workplace

This unit specifies the mandatory requirements of occupational health and safety and how they apply to the various electrotechnology work functions. It encompasses responsibilities for health and safety, risk management processes at all operative levels and adherence to safety practices as part of the normal way of doing work.

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| --- | --- |
| **Respond to the following** | **Comments/observations** |
| Describe the process in the workplace for checking safety and functionality of tools and equipment. |  |
| In the workplace, what were three typical hazards? What procedure was used to control the risks of these hazards? |  |
| In your observation and experience, what was the workplace procedure for dealing with accidents/fires/ emergencies? |  |

UEENEEE102A
Fabricate, assemble and dismantle utilities industry components

This unit covers basic fitting and fabrication techniques as they apply in the various utilities industry work functions. It encompasses the safe use of hand, fixed and portable power tools; cutting, shaping joining and fixing using metallic and non-metallic materials; dismantling and assembling equipment; basic mechanical measurement and marking-out and reading drawings/diagrams.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| How did the workplace prepare for dismantling, assembling and fabrication work? |  |
| What were the routine quality checks that were undertaken in your workplace? |  |
| In your observation and experience in the workplace, what utilities industry components were fabricated? |  |

UEENEEE103A
Solve problems in extra-low voltage (ELV)
single path circuits

This unit covers providing known solutions to predictable problems in single path circuits operated at extra-low voltage (ELV) as they apply to various energy sector work functions. It encompasses working safely and problem-solving procedures, including the use of basic voltage, current and resistance measuring devices, providing known solutions to predictable circuit problems.

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| --- | --- |
| **Respond to the following** | **Comments/observations** |
| How did the workplace prepare to work on extra-low voltage single path electrical circuits? |  |
| What problems did you observe in the workplace when working with extra-low voltage single path electrical circuits? |  |
| In your observation and experience in the workplace, how was work completion documented? |  |

UEENEEE105A
Fix and secure electrotechnological equipment

This unit covers fixing, securing and mounting techniques as they apply in the various electrotechnological work functions.

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| --- | --- |
| **Respond to the following** | **Comments/observations** |
| Describe the tools, equipment and testing devices that you used in the workplace. |  |
| How did the workplace arrange electrical isolation when preparing for work? |  |
| Outline any fixing and support devices that you observed being installed. |  |

UEENEEE130A
Provide solutions and report on routine electrotechnological problems

This unit covers the application of fundamental numerical calculations required to solve routine electrotechnological problems and reporting the outcomes to requirements.

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| --- | --- |
| **Respond to the following** | **Comments/observations** |
| Describe the methods for resolving non-routine problems that you observed being used in the workplace. |  |
| How did the workplace use fundamental numerical calculations in solving problems? |  |
| Outline any reporting that was required in the workplace for calculated solutions. |  |

UEENEEE142A
Produce products for carrying out energy sector work activities

This unit covers how products required to do work in the energy sector environment are produced in accordance with the schedule of work ensuring work is completed in an agreed time, to a quality standard and with a minimum waste.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| Describe the tools, equipment and personnel protective equipment used in the workplace. |  |
| What checks of work quality were undertaken in the workplace? |  |
| Outline all of the routine products that you observed being produced in the workplace. |  |

UEENEEE148A
Carry out routine work activities in an energy sector environment

This unit covers undertake scheduled routine work activities in the energy sector in an agreed time, to a quality standard and with a minimum of waste. It encompasses working safely and applying knowledge of carrying out routine work activities in electrotechnology environments.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| Describe OHS policies and procedures that were communicated and applied to the work being carrying out. |  |
| What electrotechnology practices and electrical principles were undertaken in the workplace? |  |
| Outline the processes used in the workplace for cleaning, checking and storage of tools, equipment and any surplus resources and materials. |  |

UEENEEE179A
Identify and select components, accessories and materials for energy sector work activities

This unit covers undertaking a schedule of work for selecting appropriately identified components, accessories or materials in an agreed time, to a quality standard and with a minimum of waste, using appropriate technology mediums where required.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| How were instructions for preparing components, accessories or materials identification communicated and confirmed in the workplace?  |  |
| What was the process used by the workplace for the selection of components, accessories or materials? |  |
| What role did you undertake for ensuring that the work area was cleaned up and made safe and that sustainable energy practices were followed? |  |

UEENEEE122A
Carry out preparatory energy sector work activities

This unit covers the carrying out of preparatory work related to any energy sector work discipline. It encompasses working safely and following basic instructions under direct supervision.

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| **Respond to the following** | **Comments/observations** |
| How were safety hazards reported in the workplace? |  |
| What mechanical equipment did you observe being installed and what were the acceptable tolerances in the workplace? |  |
| What basic hand and power tools were you able to use in the workplace? |  |

UEENEEP024A
Attach cords and plugs to electrical equipment for connection to a single phase 230 volt AC supply

This unit covers attaching flexible cords and plugs to electrical equipment for connection to supplies up to 230V AC. This may be incidental to or a primary and regular function of work related to a principle function in the workplace.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| How did the workplace select flexible cords and plugs for various jobs and what standards and requirements were considered? |  |
| What process did you observe being conducted for attaching flexible cords and plugs in the workplace? |  |
| What was the workplace’s established procedure for identifying faults in attached flexible cords and plugs? |  |

VU21533
Perform energy sector installations of extra-low voltage (ELV) single path circuits

This unit provides the skills and knowledge required to wire extra-low voltage (ELV) single path circuits and terminate associated accessories in a simulated workplace environment.

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| **Respond to the following** | **Comments/observations** |
| How did the workplace determine requirements for specific extra low voltage (ELV) jobs? |  |
| Describe any occasion where you observed the wiring of ELV circuits and connection of accessories in the workplace. |  |
| What did the workplace use as testing devices to confirm compliance with regulatory and licensing requirements, as well as safe operation of the circuit? |  |

UEENEED102A
Assemble, set-up and test computing devices

This unit covers assembly, setting up and testing personal computers as directed in computer service manuals.

|  |  |
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| **Respond to the following** | **Comments/observations** |
| How did the workplace assemble computing devices? |  |
| Describe any occasion where you observed installation of an operating system and application software in the workplace. |  |
| How did the workplace test computer operation once installation was completed? How was this documented? |  |

UEENEEH104A
Set-up and test residential video/audio equipment

This unit covers setting-up of non-fixed audio and video equipment as directed in user manuals in a residential or business environment.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| How did the workplace prepare for the set up of audio/video equipment? |  |
| Describe any occasion where you observed installation or set up of audio/video equipment in the workplace. |  |
| How did the workplace test the equipment and hand over system/component documentation to the customer? |  |

UEENEEJ102J
Prepare and connect refrigerant tubing and fittings

This unit covers the basic connection of refrigeration and air conditioning piping/ tubing and fittings. It encompasses the safe use of hand, fixed and portable power tools for cutting, flaring, bending, swaging, silver brazing copper tube to copper tube, bundy tube and brass and steel fittings, measurement and reading drawings and diagrams.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| How did the workplace prepare to fabricate tubing and attach fittings for refrigeration and/or air conditioning systems? |  |
| Describe any occasion where you observed the fabrication of tubing and attachment of fittings for refrigeration and/or air conditioning systems in the workplace. |  |
| What routine quality checks were undertaken by the workplace for completed work? |  |

UEENEEJ103A
Establish the basic operating conditions of vapour compression systems

This unit covers the determination of the operating conditions of vapour compression systems. It encompasses working safely, determining refrigerant pressures and temperatures and relevant air and water temperatures using measurement and basic calculation methods.

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| --- | --- |
| **Respond to the following** | **Comments/observations** |
| What tools, equipment and testing devices were used by the workplace to determine the basic operating conditions of vapour compression systems? |  |
| Describe any occasion where you observed systems being checked and isolated. Why was it necessary in the workplace? |  |
| How was operation conditions documented, including identification of any parameter that was not within the specified range for the system, by the workplace? |  |

UEENEEJ104A
Establish the basic operating conditions of air conditioning systems

This unit covers the determination of basic operating conditions of air conditioning systems. It encompasses working safely, determining air temperature, air flow rates and relative humidity using measurement, and basic calculation methods.

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| --- | --- |
| **Respond to the following** | **Comments/observations** |
| How did the workplace determine the basic operating conditions of air conditioning systems? |  |
| What procedures were used by the workplace to determine the actual and specified range of operating conditions from measured and calculated values as they apply to particular air conditioning systems being installed? |  |
| How did the workplace ensure that the work site and equipment was cleaned and made safe at the conclusion of installation? |  |

VBP131
Construct and configure a basic robotic system

This unit of competency sets out the knowledge and skills required to construct and configure a basic robotic system. Typical tasks for basic robotics system operation include pick and place, motion, navigation.

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| **Respond to the following** | **Comments/observations** |
| What documentation did the workplace use to plan the construction and configuration of a basic robotics system? |  |
| Describe the construction and configuration of any robotics system you observed in the workplace. |  |
| What were the equipment and tools used in the workplace to construct and configure robotics systems? |  |

VBP132
Program a basic robot system

This unit of competency sets out the knowledge and skills required to program small robotic systems. This includes standard development steps taken when creating code in integrated programming environments and consequently applying the programming code to controlling robotic systems.

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| --- | --- |
| **Respond to the following** | **Comments/observations** |
| What documentation did the workplace use to plan the programming of a robotics system? |  |
| Describe how robotics systems were programmed in the workplace. |  |
| How did the workplace document the programming of a robotics system? |  |

Comment/observation on any other unit of competency/s not listed

|  |  |
| --- | --- |
| **Unit(s)** | **Comments/observations** |
|  |  |

Section 3: Student post-placement reflection

Employability skills are a set of eight skills we use every day in the workplace.

1. Communication
2. Team work
3. Problem solving
4. Self-management
5. Planning and organising
6. Technology
7. Learning
8. Initiative & enterprise

When you’re on work placement, you’ll be using employability skills in many different ways.

This record will assist you when applying for jobs and in interviews. The skills you’re developing may be transferred to a range of occupations. Assessment of SWL recognition is based on a discussion of each of the sections from this booklet with a school representative.

In Section 3, identify the employability skills you’ve used and how you’ve demonstrated them in the workplace. Identify how the skills you acquired and used during your 80 hours of SWL might assist you in the future.

List of employability skills

How did you demonstrate **communication skills**? For example, by listening and understanding, speaking clearly and directly or reading and writing skills.

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How did you demonstrate **team work**? For example, by working as part of a team or sharing ideas and resources with co-workers.

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How did you demonstrate **problem solving**? For example, by identifying problems or developing solutions to workplace activities.

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How did you demonstrate **self-management**? For example, by taking responsibility, managing time and tasks effectively, monitoring your own performance or having the ability to work unsupervised.

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How did you demonstrate **planning and organising**? For example, by time management, setting priorities, making decisions, setting goals, collecting or analysing and organising information.

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How did you demonstrate the use of **technology**? For example, by being prepared to use a range of technology systems, IT skills (typing or data entry) or being able to learn new skills from the technology used in this industry.

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How did you demonstrate **learning**? For example, by being willing to learn new things, being open to new ideas or adapting to change.

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How did you demonstrate **initiative and enterprise**? For example,, being creative, adapting to new situations, turning ideas into actions, coming up with a variety of options.

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Summary of industry learning

At the conclusion of your SWL for this VET Qualification, think about the experiences you’ve had in the workplace, your reflection of learning against the UoCs and the employability skills you have developed.

How will these learnings assist you in your pathway to employment or further training in this industry?

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Student declaration

I confirm that I have undertaken work placement with:

|  |  |
| --- | --- |
| **Employer/Company/Business name** | **Total hours of placement** |
|  |  |
|  |  |
|  |  |
| **TOTAL** |  |

I have completed the reflections and evidence submitted in this workplace learning record and they are from my own experiences.

**Signed** (Student)

**Name** (Block letters)

**Date**