Workplace Learning Record

VCE VET Engineering Studies

22632VIC Certificate II in Engineering Studies

**Student name:**

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East Melbourne VIC 3002

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Structured Workplace Learning Recognition

[VCE Structured Workplace Learning Recognition for VET](https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/SWLRforVET/Pages/Index.aspx) provides students with the opportunity to gain credit towards their VCE (including the VCE VM) or VPC by undertaking a Structured Workplace Learning (SWL) placement that is aligned to their VE1 VCE VET program or VE2 School-based Apprenticeship or Traineeship (SBAT).

To receive credit, students are required to demonstrate satisfactory achievement of the outcomes for the relevant unit of the *VCE Structured Workplace Learning Recognition for VET* study design.

Students must maintain a Workplace Learning Record (WLR) for each placement. In the WLR students must reflect on a minimum of six units of competency (UoCs) from their program, including a workplace health and safety (WHS) UoC.

About this workplace learning record

Students undertaking this study must maintain a Workplace Learning Record (WLR) related to the SWL placement for recording, authentication and assessment purposes.

Student reflections on their SWL placement are to be recorded in the three sections of this WLR to document the skills and knowledge learned, employability skills developed, and industry experience gained relating to the VET qualification being undertaken.

Students must undertake a work placement in a different workplace setting or context for each VCE unit and maintain a separate WLR per placement.

The WLR is divided into three sections.

**Section 1**: Learner profile

**Section 2**: Learning about VET units of competency (UoCs) 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 SWL placement.

|  |  |
| --- | --- |
| **Student Name** |  |
| **School** |  |
| **Phone number** |  |
| **Email** |  |
| **Explain why you decided to undertake this VET certificate?** | |
|  | |
| **List the other studies that you are undertaking.** | |
|  | |
| **Explain why you have chosen this overall program.** | |
|  | |
| **Outline what interests you about the industry.** | |
|  | |
| **What is your planned career path or future career aspiration?** | |
|  | |
| **Describe any workplace skills you have developed through previous work experience, SWL or part time employment.** | |
|  | |
| **How have you developed these skills?** | |
|  | |

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

This section of the WLR will contain three key questions per unit of competency (UoC) designed to draw out related experiences you may be exposed to in a 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 UoCs you have 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. Do not use the names or details of any clients/stakeholders external to the organisation/other. This record does not require identifying actual people or events, as this may breach confidentiality.

Program outline

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The compulsory UoCs and a selection of electives are listed in the table below. You may list any additional UoC(s) relating to your experiences in the workplace in the table. Indicate the year in which you are undertaking each UoC. You must reflect on a minimum of six UoCs from your program, including a workplace health and safety (WHS) UoC.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| UoC code | UoC title | Nominal hours | Year | Page |
| **Work, Health and Safety** | | | | |
| VU23481 | Apply occupational health and safety principles in an engineering environment | 20 |  | 10 |
| **Compulsory** | | | | |
| MEMPE006 | Undertake a basic engineering project | 80 |  | 11 |
| VU23475 | Safely use hand tools and hand held power tools for general engineering applications | 40 |  | 12 |
| VU23476 | Report on the sectors and employment in the manufacturing, engineering and related industries | 20 |  | 13 |
| VU23477 | Interpret and prepare basic two and three dimensional engineering drawings | 30 |  | 14 |
| VU23478 | Perform basic machining processes | 40 |  | 15 |
| VU23479 | Apply basic fabrication techniques | 40 |  | 16 |
| VU23480 | Perform intermediate engineering computations | 40 |  | 17 |
| **Elective** | | | | |
| MEM30011 | Set up basic pneumatic circuits | 40 |  | 18 |
| MSMENV272 | Participate in environmentally sustainable work practices | 30 |  | 19 |
| VU23482 | Produce basic engineering components and products using fabrication and machining operations | 60 |  | 20 |
| VU23483 | Perform metal machining operations | 60 |  | 21 |
| VU23484 | Perform metal fabrication operations | 60 |  | 22 |
| VU23485 | Perform basic welding and thermal cutting processes | 60 |  | 23 |
| VU23486 | Configure and program a basic robotic system | 60 |  | 24 |
| VU23487 | Create engineering drawings using computer aided drafting system | 60 |  | 25 |
| VU23488 | Use 3D printing to create products | 40 |  | 26 |
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Reflect on the UoCs you have experienced in the workplace on the following pages.

VCE VET units of competency

VU23481 - Apply occupational health and safety principles in an engineering environment

This unit describes the performance outcomes, skills and knowledge required to apply occupational health and safety (OHS) principles in an engineering or similar work environment

It requires the ability to follow safety procedures, read and interpret safety signs and symbols, identify hazards and apply risk control measures, use safe manual handling procedures and correctly select and fit personal protective equipment (PPE).

|  |  |
| --- | --- |
| Respond to the following | Comments/observations |
| How did you identify and follow relevant workplace WHS/OHS safety regulations and procedures in your engineering work area? |  |
| Describe the process you followed to check the functionality and safety of tools and equipment required for your work. |  |
| Provide an example of a manual handling task you performed and describe the safe procedures you followed. |  |

MEMPE006 - Undertake a basic engineering project

This unit of competency defines the skills and knowledge to plan and undertake a basic engineering project which can be completed in an institutional environment. Included in this unit is the opportunity to use a basic computer-aided drafting (CAD) system to produce engineering type drawings.

|  |  |
| --- | --- |
| Respond to the following | Comments/observations |
| What sorts of methods did you observed being used to join metal? |  |
| What process did the workplace follow to produce products and what machines, tools and equipment were used? |  |
| Describe a project that you contributed to in the workplace.  What was your role?  Outline the assembly process. |  |

VU23475 - Safely use hand tools and hand held power tools for general engineering applications

This unit describes the performance outcomes, skills and knowledge required to safely use a range of hand tools and hand held power tools for general engineering applications.

It requires the ability to select the correct hand tool/s and/or hand held power tool/s for specific engineering applications, identify unsafe or faulty tools, safely use the selected tool/s and undertake routine tool maintenance.

|  |  |
| --- | --- |
| Respond to the following | Comments/observations |
| How were the workplace ensure occupational health and safety (OHS) requirements followed when using hand tools and hand held power tools? |  |
| What were your primary responsibilities in using hand tools and/or hand held power tools to achieve required work outcomes? |  |
| Describe how to carry out basic maintenance on a tool and the steps you followed. |  |

VU23476 - Report on the sectors and employment in the manufacturing, engineering and related industries

This unit of competency sets out the knowledge and skills required to locate information and report on the breath of coverage and degree of diversity found in the manufacturing, engineering and related industries.

|  |  |
| --- | --- |
| Respond to the following | Comments/observations |
| How did you identify sources of information on the major sectors of the manufacturing, engineering, and related industries? |  |
| Describe the process you followed to determine the products and production processes utilised by each major sector in your workplace. |  |
| How did you identify the required training and qualifications for various occupational roles in your workplace? |  |

VU23477 - Interpret and prepare basic two and three dimensional engineering drawings

This unit describes the performance outcomes, skills and knowledge required to interpret and prepare basic two dimensional (2D) and three dimensional (3D) engineering drawings.

It requires the ability to read and interpret information from a basic engineering drawing as well as using conventional drafting materials and equipment to prepare basic 2D and 3D engineering drawings in accordance with the requirements of Australian Standard for Technical Drawing (AS1100).

|  |  |
| --- | --- |
| Respond to the following | Comments/observations |
| Describe the process you followed to determine the scale, configuration, and dimensions of a component from a technical drawing. |  |
| What methods did you use to interpret drawing symbols, notations, abbreviations, and material requirements in your workplace tasks? |  |
| Provide an example of when you added dimensions, tolerances, and symbols to a drawing and how you ensured accuracy. |  |

VU23478 - Perform basic machining processes

This unit of competency describes the knowledge and skills required to perform basic machining operations.

|  |  |
| --- | --- |
| Respond to the following | Comments/observations |
| How did you determine and clarify machining tasks with your trainer or supervisor in the workplace? |  |
| What techniques did you use to select and use cutting lubricants during machining processes? |  |
| How would you handle an unexpected situation during a machining task and how you reported it to your trainer or supervisor. |  |

VU23479 - Apply basic fabrication techniques

This unit of competency describes the knowledge and skills required to perform basic fabrication tasks.

|  |  |
| --- | --- |
| Respond to the following | Comments/observations |
| How did you determine and clarify fabrication tasks with your trainer or supervisor in the workplace? |  |
| What steps did you take to interpret technical drawings and prepare a work plan for fabrication tasks? |  |
| What techniques did you use to set up and operate different types of metal fabrication equipment? |  |

VU23480 - Perform intermediate engineering computations

This unit of competency describes the skills and knowledge required to prepare and apply intermediate level engineering computations.

|  |  |
| --- | --- |
| Respond to the following | Comments/observations |
| How did you identify and establish the required calculations from job instructions or technical drawings in your workplace? |  |
| What methods did you use to perform and check calculations for accuracy during your tasks? |  |
| Provide an example of how you estimated expected results and confirmed them with actual calculations in a workplace task. |  |

MEM30011 - Set up basic pneumatic circuits

This unit of competency defines the skills and knowledge required to set up and select components associated with single linear pneumatic systems.

|  |  |
| --- | --- |
| Respond to the following | Comments/observations |
| How did the workplace determine system requirements? |  |
| What components for simple pneumatic circuits were used in the workplace? |  |
| Describe how the workplace tested the operation of pneumatic circuits. |  |

MSMENV272 - Participate in environmentally sustainable work practices

This unit describes the skills and knowledge required to comply with environmental regulations, identify environment issues and minimise the risks of negative impact on work and carry out improvements in own work area.

|  |  |
| --- | --- |
| Respond to the following | Comments/observations |
| What environmental policies were followed by workers in the workplace? |  |
| Briefly outline the environmental hazards/ risks that were considered by the workplace. |  |
| How did the business aim to improve environmental performance and to promote more efficient production and consumption of resources? |  |

VU23482 - Produce basic engineering components and products using fabrication and machining operations

This unit of competency describes the knowledge and skills required to produce a range of basic engineering components and products using basic fabrication and machining techniques.

|  |  |
| --- | --- |
| Respond to the following | Comments/observations |
| What sort/s of fabrication techniques did you practice in the workplace? |  |
| What sort/s of fabrication equipment did you use in the production of a component? |  |
| Who did you report to when you finished a work task?  What did they do once you reported to them? |  |

VU23483 - Perform metal machining operations

This unit of competency describes the knowledge and skills required to produce basic engineering components and products by metal machining operations such as cutting, grinding, turning and drilling.

|  |  |
| --- | --- |
| Respond to the following | Comments/observations |
| What sorts of documentation and/or instructions did you read to prepare for a work task involving cutting, grinding, turning and drilling? |  |
| How did you find out about WHS policies and procedures relating to cutting, grinding, turning and drilling operations in this workplace? |  |
| Describe any cutting, grinding, turning or drilling operations that you undertook in the workplace.  Include the machine used and the work piece. |  |

VU23484 - Perform metal fabrication operations

This unit of competency describes the knowledge and skills required to perform various fabrication operations such as cutting, forming, bending and shaping to produce components and products.

|  |  |
| --- | --- |
| Respond to the following | Comments/observations |
| Briefly describe a job you performed to cut and form a component. |  |
| Describe a situation where you had to report a problem with setting up or using machinery or with a product quality problem. |  |
| What is most important for ensuring a job is done properly? |  |

VU23485 - Perform basic welding and thermal cutting processes

The unit includes identifying the welding and thermal cutting equipment and consumables, preparing materials and equipment, welding and thermal cutting process and safe welding and thermal cutting practices.

|  |  |
| --- | --- |
| Respond to the following | Comments/observations |
| Where would you go in the workplace to find out about risk control measures?  What were the major risk control measures you observed? |  |
| What sorts of components did you weld and cut? |  |
| Describe briefly how welding is conducted safely. |  |

VU23486 - Configure and program a basic robotic system

This unit of competency describes the knowledge and skills required to configure and program a basic robotic system.

|  |  |
| --- | --- |
| Respond to the following | Comments/observations |
| How did you find out about safety hazards relating to robotic systems in the workplace where you undertook structured work placement? |  |
| What sort of equipment/machine/plant was used in the workplace to configure and program a robotic system? |  |
| How were the robotic system overall function and requirements verified in the workplace? |  |

VU23487 - Create engineering drawings using computer aided drafting system

This unit of competency describes the knowledge and skills required to produce engineering drawings using a computer aided drafting (CAD) system.

|  |  |
| --- | --- |
| Respond to the following | Comments/observations |
| Briefly describe the CAD environment used in the workplace. |  |
| Describe a situation where you would be required to develop simple 2D and 3D drawings in the workplace. |  |
| Describe a situation where you would be required to develop Simple 2D and 3D drawings in the workplace. |  |

VU23488 - Use 3D printing to create products

This unit describes the skills and knowledge to utilise a three dimensional (3D) printer to produce basic products.

|  |  |
| --- | --- |
| Respond to the following | Comments/observations |
| What was the purpose for 3D printing in the workplace? |  |
| What was the job role of the person who created 3D printing products? |  |
| How did the workplace evaluate 3D printed products? |  |

Comments/observations on any other UoCs not listed

|  |  |
| --- | --- |
| UoCs | 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. Teamwork
3. Problem solving
4. Self-management
5. Planning and organising
6. Technology
7. Learning
8. Initiative and enterprise

When you are on work placement, you will be using employability skills in many ways.

This record will assist you when applying for jobs and in interviews. The skills you are developing may be transferred to a range of occupations.

In Section 3, identify the employability skills you have used and how you have demonstrated them in the workplace. Identify how the skills you have 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.

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|  |

How did you demonstrate **teamwork**? 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 issues.

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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 have 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?

|  |
| --- |
|  |

Student declaration

I confirm that I have undertaken work placement with:

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

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

**Signed** (Student)

**Name**

**Date**