Workplace Learning Record

VCE VET Engineering



22209VIC Certificate II in Engineering Studies

**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 22209VIC Certificate II in Engineering Studies
* undertake a minimum of 80 hours (equivalent to 10 days of work) in an engineering industry placement
* reflect on a minimum of six units of competency (UoC) from your program including the OHS UoC (MEM13014A — see page 8).

VCE VET Engineering

22209VIC Certificate II in Engineering Studies

The VCE VET Engineering program provides pre-employment training and pathways in the engineering, manufacturing or related industries and accommodates entry into the wider engineering industry.

Specifically a graduate of this course may:

* undertake an apprenticeship, traineeship or cadetship leading into a range of related careers as a trades person
* enrol in Certificate III qualifications in the engineering sector
* gain entry level employment in engineering or related industries
* undertake higher level VET certificates in the engineering sector or a degree in engineering or related industries.

The course:

* provides students with competencies in engineering skills including basic machining, cutting, grinding and turning operations, creating engineering drawings using computer-aided systems, and materials handling
* fosters the development of social and personal skills relevant to further training and employment
* provides experience in and knowledge of a range of occupations at engineering trade level
* 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?

|  |
| --- |
|  |

Why have you chosen this overall VCE/VCAL program?

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Program outline

22209VIC Certificate II in Engineering Studies

**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 1–2** |
| **Compulsory** |
| MEM13014A  | Apply principles of Occupational Health and Safety in work environment  |  | 8 |
| MEM16006A  | Organise and communicate information  |  | 9 |
| MEM16008A  | Interact with computing technology  |  | 10 |
| MEM18001C  | Use hand tools  |  | 11 |
| MEM18002B  | Use power tools/hand held operations  |  | 12 |
| VU20909  | Develop an individual career plan for the engineering industry  |  | 13 |
| **Electives** |
| MEM30012A  | Apply mathematical techniques in a manufacturing engineering or  |  | 14 |
| VU20912  | Perform basic machining process  |  | 15 |
| VU20913  | Apply basic fabrication techniques  |  | 16 |
| VU20914  | Form bend and shape engineering materials  |  | 17 |
| VU20907  | Participate in basic engineering maintenance  |  | 18 |
| **VCE VET Units 3–4** |
| **Compulsory** |
| MEM12024A  | Perform computations  |  | 19 |
| MSAENV272B  | Participate in environmentally sustainable work practices  |  | 20 |
| VU20910  | Produce basic engineering sketches and drawings  |  | 21 |
| MSS402040A  | Apply 5S procedures  |  | 22 |
| VU20911  | Handle engineering materials  |  | 23 |
| **Electives** |
| VU20905  | Assist with the design of a basic mechanical system  |  | 24 |
| VU20915  | Perform basic welding & thermal cutting processes to fabricate engineering structures  |  | 25 |
| VU20903  | Produce basic engineering components and products using fabrication and machining  |  | 26 |
| VU20904  | Perform cutting, grinding and turning operations  |  | 27 |

List any other units you are undertaking and include comments regarding additional units on page 28.

What interests you about the industry?

|  |
| --- |
|  |

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 engineering 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

MEM13014A Apply principles of occupational health and safety in the work environment

This unit covers **Occupational Health and Safety** (OHS) procedures in an engineering or similar work environment.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| Describe the personal protective equipment (PPE) you wore in the workplace during your placement. |  |
| How did you learn about the emergency and evacuation procedures in the workplace? |  |
| Who would you report a workplace hazard to and what procedure would you follow? |  |

MEM16006A Organise and communicate information

This unit covers accessing, organising and communicating information related to processes or tasks.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| What sorts of daily communication occurred in the workplace? |  |
| What was the work role of your supervisor/s and how did they communicate with you? |  |
| What forms of workplace documentation did you read or fill out? |  |

MEM16008A Interact with computing technology

This unit covers accessing, inputting and storing information used in manufacturing, engineering or related environments, using computing technology.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| Where was the computing technology located in the workplace?  |  |
| What sorts of software programs and applications are commonly used in this workplace? |  |
| Describe a task you undertook that involved the use of computing technology. |  |

MEM18001C Use hand tools

This unit covers using a range of hand tools for a variety of general engineering applications.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| What types of hand tools did you use in the workplace? |  |
| What was the workplace procedure for end-of-day maintenance and storing of hand tools? |  |
| If you found a faulty tool, what were you required to do about it? |  |

**MEM18002B Use power/hand held operations**

This unit covers using a range of hand held power tools and fixed power tools for hand held operations for a variety of general engineering applications.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| What types of power tools did you use in the workplace?  |  |
| What personal protective equipment did you wear when using power tools?  |  |
| What were the skills you learned in your work placement about using power tools? |  |

VU20909 Develop an individual career plan for the engineering industry

The purpose of this unit is to provide the participant with the skills and knowledge to determine opportunities and pathways, and to apply for work in the manufacturing and engineering industry.

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| --- | --- |
| **Respond to the following** | **Comments/observations** |
| Describe the type of manufacturing carried out in this workplace. What industry sector does this company/ factory belong to?  |  |
| What is the job role of the person who is supervising you in your structured work placement?  |  |
| Thinking about your career and in relation to this workplace, what type of work would you like to do and how would you achieve this goal? |  |

MEM30012A Apply mathematical techniques in a manufacturing engineering or related environment

This unit applies the concepts of mathematics to appropriate and simple engineering situations within the individual’s area of engineering expertise.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| Describe a situation where you had to apply your mathematical knowledge to an engineering task.  |  |
| What sorts of mathematics learned in school have been relevant for you in the workplace?  |  |
| When faced with a problem to solve, how did mathematics help you find a solution? |  |

**VU20912 Perform basic machining processes**

This unit of competency sets out the knowledge and skills required to undertake basic machining operations under supervision.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| Describe the OHS preparation you received before using any machining equipment.  |  |
| Describe the tools you used in a machining process and the purposes of the tools.  |  |
| Describe the procedure for cleaning up after a machining task. |  |

VU20913 Apply basic fabrication techniques

This unit of competency sets out the knowledge and skills required to perform basic fabrication tasks under supervision.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| Why is a work plan important when using fabrication to complete tasks?  |  |
| Briefly describe a fabrication technique you used in the workplace and its purpose.  |  |
| What sorts of problems can occur with fabrication equipment? |  |

VU20914 Form, bend and shape engineering materials

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

|  |  |
| --- | --- |
| **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? |  |

**VU20907 Participate in basic engineering maintenance**

This unit of competency covers the skills and knowledge required to participate in basic engineering maintenance.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| How did you find out about the workplace policy for conducting maintenance activities?  |  |
| What sorts of things does a maintenance activities record cover?  |  |
| Describe a maintenance task that you conducted. How often did you perform this task? |  |

**MEM12024A Perform computations**

This unit covers estimating approximate answers to arithmetical problems, carrying out basic calculations involving percentages and proportions, and determining simple ratios and averages.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| What sorts of calculation methods are commonly used in the engineering workplace?  |  |
| What process did you follow for checking that you accurately understood and performed a task requiring mathematics?  |  |
| Describe a situation where you had to produce a graph or chart for an engineering task. |  |

**MSAENV272B Participate in environmentally sustainable work practices**

This competency covers the performance outcomes/skills and knowledge required to effectively measure current resource use and carry out improvements, including those reducing negative environmental impacts of work practices.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| How did you find out about the workplace procedures for reporting environmental incidents?  |  |
| In the event of an environmental incident who would you go to in the workplace for reporting and guidance? What would your role be? |  |
| Thinking of the tasks you performed in your work placement, how did you take account of environmental issues? |  |

VU20910 Produce basic engineering sketches and drawings

This unit of competency sets out the knowledge and skills required in the identification, selection and interpretation of a drawing or sketch, and the preparation of sketches and drawings.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| What necessary information would you check for in sketches and drawings?  |  |
| How did you use a sketch or drawing or the information contained in them in your placement?  |  |
| Briefly describe how you produced a sketch or drawing as part of a work task. |  |

**MSS402040A Apply 5S procedures**

This unit of competency covers the skills and knowledge required by an employee to apply 5S procedures to their own job and work area.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| How did you learn about the 5S system in the workplace?  |  |
| What was the routine you followed at the end of the working day?  |  |
| Who was in charge of ensuring the 5S system was followed? |  |

**VU20911 Handle engineering materials**

This unit of competency sets out the knowledge and skills required to safely handle materials in accordance with occupational health and safety requirements and enterprise procedures.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| How did you find out about hazardous materials in the workplace where you undertook structured work placement?  |  |
| What sort of teamwork were you involved in? Describe a situation where you worked as a team to solve a work problem.  |  |
| What methods did you use to lift heavy machinery or materials? |  |

**VU20905 Assist with the design of a basic mechanical system**

This unit covers contributing to basic mechanical system design by preparing a design drawing from a given preliminary sketch/drawing specification.

|  |  |
| --- | --- |
| **Respond to the following** | **Comments/observations** |
| What type of mechanical system or componentry was the subject of your design drawing?  |  |
| What was the job role of the person you worked with?  |  |
| How did you go about the task? |  |

**VU20915 Perform basic welding and thermal cutting processes to fabricate engineering structures**

This unit of competency involves identifying the welding/cutting requirements, preparing materials and equipment, and welding and cutting components.

|  |  |
| --- | --- |
| **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. |  |

**VU20903 Produce basic engineering components and products using fabrication and machining**

This unit of competency sets out 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 practise 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? |  |

**VU20904 Perform cutting, grinding and turning operations**

This unit of competency sets out the knowledge and skills required to produce a range of basic engineering components and products by cutting, grinding and turning techniques.

|  |  |
| --- | --- |
| **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 and turning?  |  |
| Where would you go in the workplace to find out about risk control measures?  |  |
| How did you find out about OHS policies and procedures relating to cutting, grinding and turning operations in this workplace? |  |

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**