



Motorcycle competency standard

The WA Motorcycle Competency Standard¹ (the standard) underpins the current motorcycle rider training and licensing system, which aims to produce safe motorcycle riders on Western Australia's roads. It specifies the attributes of safe motorcycle rider performance and behaviour. It is a foundation for both training and assessment. Most, if not all, of this standard applies equally to moped and scooter riders although there are some obvious differences with operating this type of vehicle, such as use of automatic transmission. In most cases, where the term "motorcycle" is used in this standard it should be considered as encompassing these vehicles. This standard can be used by both motorcycle riders, as a self-guided activity, and by motorcycle instructors, as a teaching guide.

Using the Standard²

The standard is the foundation for the practical riding assessment, so it will be particularly useful for anyone teaching a person to ride. Professional motorcycle riding instructors can use it to develop checklists of learning points and devise comprehensive training programs.

Professional motorcycle riding instructors will find the standard explicitly describes the performance that the Department of Transport (DoT) requires from motorcycle riders. Units 1 to 4 will be most relevant when preparing students for the practical riding assessment. Instructors working with beginner riders will also find that the standard is a valuable source for assessing a student's progress and for evaluating whether a rider is ready to attempt the practical riding assessment with DoT.

Instructors working in post licence rider training can also make use of the standard. Organisations implementing safe riding policies can adopt the standard for establishing baseline performance for their riders. They can use it to run diagnostic assessment and subsequent training for personnel who do not perform to the standard.

Whenever a person is riding a motorcycle, they are operating independently. Riders **choose** how they ride and they **choose** the level of risk to which they expose themselves. This standard together with the *Ride Safe* handbook (a guide for Western Australian road users) promote rider safety. New and existing riders alike are encouraged to become familiar with these materials which are also available online at www.transport.wa.gov.au.

The standard outlines not only safe riding skills but also safe attitudes and behaviours. Behaviour results from many things, especially experience, the values and beliefs formed while gaining that experience, and the 'mental programs' (used for guiding responses) that come from repeated and varied experience. This is critical when it comes to discussing the notion of motorcycle rider competence and how to assess it.

There are two dimensions to safe motorcycle riding, the **skill** to ride safely and the **will** to do so.

¹ Please also refer to the Driver Competency Standard.

² Driver Improvement Consultancy Pty Ltd

Designing Competency Standards³

Competency standards specify performance. They do not concern themselves with how people learn to achieve that performance. A well-written standard attempts to capture an overall picture of a role or function. In this picture the whole is greater than the sum of the individual parts.

What is Competence?

Competence is a set of attributes necessary for a person to perform a role or function. The attributes enable people to:

- perform at an acceptable level of skill;
- organise their tasks;
- respond and react appropriately to the unexpected;
- perform a range of activities to fulfil a role in a specific occupational area; and
- transfer skills and knowledge to new situations (National Training Board, 1992).

DoT is using a competency standard approach for describing the levels to which the motorcycle rider is required to perform and the on-road behaviour that fosters rider safety.

The standard is focused on skills that competent motorcycle riders need to have, such as:

- vehicle control skills;
- ability to interpret and respond to events 'automatically';
- self-control in maintaining safe behaviour; and
- ability to anticipate and deal with problems.

Readers should not see the standard as a complete set of riding 'competencies'. It is a guide to understanding the standard to which assessors judge whether the people they assess are 'competent'. Again, the whole is greater than the sum of the individual parts.

Outline of the Standard

This section explains the origin of the units and provides a summary of the units listing their elements.

The following section 'standard in detail' further describes the units their elements and stipulates performance criteria. Most elements have further explanation and background information provided.

Tables 1, 2 and 3 below explain the structure of the standard.

Table 1: Structure of a Competency Standard

There is a key purpose of the function or role that must reflect the needs of an industry or enterprise.

What must happen in order to achieve this key purpose ...	Is reflected by a UNIT OF COMPETENCE . Units are worded in terms of an outcome.
What the individual must do to show they have achieved the unit ...	Is called the ELEMENTS . These are actions oriented towards performance, and have a start and a finish. Elements should be unambiguous, measurable and describe performance in terms of results not procedures.
What level of performance is expected in each element ...	Is called the PERFORMANCE CRITERIA . These should be realistic, attainable and measurable.
When and where this is to happen ...	Is specified by the RANGE OF VARIABLES
Contexts for assessing and specifying evidence ...	Is described in the EVIDENCE GUIDE . ⁴

³ Driver Improvement Consultancy Pty Ltd.

In this standard, the key purpose is for the individual 'to operate a motorcycle safely and effectively in the public traffic system'.

Table 2: Units in the Standard Come From Key Issues of Driver Performance

UNIT	DESCRIPTIONS
1. Familiarise yourself with the motorcycle	Knowledge and basic skills you need prior to learning to ride a motorcycle.
2. Operate and Control the Motorcycle	Basic skills that you need to operate the motorcycle safely, move off and stop. Actions to be performed accurately while riding to position the motorcycle on the road. (These are separate from dealing with traffic which is specified below.)
3. Ride in the Traffic System	Riding techniques you use in a traffic system. Obeying road rules. Applying these techniques effectively and consistently.
4. Identify and Respond to Threats / Hazards	Anticipating threats and hazards including the actions of other road users. Self-control skills that help you ride safely and avoid engaging in dangerous riding. These skills will reduce your likelihood of a crash by helping you to avoid trouble before it begins.
5. Manage Unexpected Situations	Reacting and responding appropriately to unexpected situations on the road. Although it is not possible to remove the number of unexpected situations on the road completely, it is possible to reduce the likelihood and severity of the impact.
6. Evaluate and Adjust Riding	Learning from experience and becoming a better rider. Road safety.

⁴ This standard does not have separate range of variables and evidence guide. Instead the designers attached the information that would go in these components to elements and performance criteria.

Table 3: Summary of Units and Elements in the Motorcycle WA Motorcycle Competency Standard

UNIT	ELEMENTS
To ride a motorcycle in the public traffic system you must be able to:	In order to demonstrate that you are competent within this unit you need to:
1. Familiarise yourself with the motorcycle	<ol style="list-style-type: none"> 1. Make sure the motorcycle is safe. 2. Prepare to ride.
2. Operate and Control the Motorcycle	<ol style="list-style-type: none"> 1. Move off. 2. Monitor and use instruments and switches. 3. Manoeuvre the motorcycle. 4. Manage the throttle. 5. Manage the brakes. 6. Manage the steering. 7. Use the engine's transmission. 8. Use and co-ordinate inputs. 9. Stop the motorcycle.
3. Ride in the Traffic System	<ol style="list-style-type: none"> 1. Use safe riding procedures. 2. Navigate the road system. 3. Negotiate the road and traffic system. 4. Interact with traffic. 5. Ride efficiently in the traffic system. 6. Respond to conditions of poor visibility.
4. Identify and Respond to Threats / Hazards	<ol style="list-style-type: none"> 1. Adjust to the environment. 2. Respond to situations within the environment. 3. Avoid stressful/difficult situations. 4. Respond to stressful situations. 5. Control your emotions.
5. Manage Unexpected Situations	<ol style="list-style-type: none"> 1. Avoid an imminent crisis. 2. Use and co-ordinate inputs to retain or restore control of the motorcycle. 3. Follow procedures in the event of a crash. 4. Follow procedures in the event of your motorcycle breaking down.
6. Evaluate and Adjust Riding	<ol style="list-style-type: none"> 1. Monitor and improve performance. 2. Monitor and modify behaviour. 3. Monitor other road users' behaviour. 4. Monitor and responds to risk factors.

THE STANDARD IN DETAIL

The standard detailed on the following pages specifies the role and function of riding in units, elements and performance criteria. Most elements have further explanation and background information shown in the boxes.

Unit 1 - Familiarise Yourself with the Motorcycle

You need to be familiar with the vehicle before riding it so that you can operate it in a safe manner. These are called familiarisation skills and can be broken down into two elements.

1. Make sure the motorcycle is safe.
2. Prepare to ride.

1.1 Make Sure the Motorcycle is Safe

1.1.1 Make sure that the motorcycle is legal to drive.

Check the:

- vehicle licence is current;
- tyre condition, inflation and valve caps;
- lights (all of them);
- indicators;
- horn;
- mirrors (one each side);
- silencer; and
- overall roadworthiness of motorcycle.

Should the motorcycle require that the engine is running in order to check the indicators and brake lights are working, make certain you are seated on the motorcycle and controlling the brakes

See section 6.1.6 of the 'Ride Safe' publication for further information.

1.1.2 Conduct a motorcycle maintenance check.

Essential pre-trip checks include:

- Correct air pressure in the tyres (according to the motorcycle's manual and/or manufacturer's specification);
- enough fuel (also check fuel tap, if fitted);
- fluid levels e.g. brake fluid, oil and engine coolant (if water cooled);
- brakes;
- clutch and throttle;
- electrical connections;
- lights/indicators;
- chain guard;
- drive chain/drive belt/shaft drive;
- footrests;
- kick start lever (if fitted);
- side and centre stand (if fitted); and
- nuts and bolts.

1.1.3 Make sure that when you leave the motorcycle it is parked safely.

Check that:

- the ground where you intend to park the motorcycle is level and firm;
- the motorcycle is in 1st gear with side stand down;
- you use the centre stand (if fitted) when parking for an extended period of time;
- the ignition is locked;
- the key is removed;
- the motorcycle is parked legally
(see Section 8.13 of the Ride Safe publication for further information); and
- the motorcycle is positioned either parallel or at an angle (if appropriate) with the rear wheel against the kerb.

the motorcycle is not at risk of damage or poses a danger to other road users.

If the motorcycle has a sidecar:

chock a wheel or slightly angle against the kerb; and
leave the motorcycle in low gear

1.2 Prepare to Ride

1.2.1 Check that you meet the legal requirements to ride.

Before you ride, check that:

you have your learner's permit or driver's licence with you;
the motorcycle has the proper plates front and rear (L or P);
you are wearing an approved helmet that is compliant with AS 1698:1988 and displays a relevant sticker (refer to regulation 244(1) of the *Road Traffic Code 2000*);
you are following any special conditions on the permit (for example, visual aids); and
you comply with any restrictions on your licence or permit.

1.2.2 Wear clothing that affords maximum protection.

Clothing that affords maximum protection from injury, cold, wet and heat includes:

bright coloured (fluorescent in daylight and reflective in the dark) long sleeve, jacket and trousers that fit over your ordinary clothes and are able to keep some kinds of injury to a minimum, and protect you against the elements;
boots or sturdy shoes that protect your feet, ankles and shins from knocks from the footrest or kick-start lever, reduce the risk of injury if you have a crash and protect your feet from cold and/or wet;
gloves or gauntlets that allow you to operate the controls easily and protect your hands in a crash; and
eye and face protection. Visors must be approved, compliant with AS 1609:1981 and display a relevant sticker (refer to Regulation 244(1) of the *Road Traffic Code 2000*).

1.2.3 Check that you can find the controls and that they work properly.

Check these controls whilst seated on the motorcycle (and with control of the brakes if the engine is turned on during the process):

steering lock – demonstrate knowledge of operation;
manual choke (if fitted) – should be in the off position when the engine is warm;
fuel tap (if fitted) – turn to the off position when leaving the motorcycle;
electric start button (if fitted) – usually found on the handlebar;
indicator switch – locate it and demonstrate how it works, in particular the cancel function;
engine cut-out switch – understand operation and meaning of the two marked positions;
clutch (if applicable) – locate it and demonstrate operation;
front brake lever – locate it, apply the brakes and confirm successful operation;
light switch – locate it and demonstrate operation;
throttle – locate it, demonstrate default position and operation; instruments – locate them and understand the information displayed; footbrake – locate it, apply the brakes and confirm it operates successfully; gear selector – understand the shift pattern, e.g. one down, four up; and other switches and controls (as applicable).

1.2.4 Take the motorcycle off the centre stand (if fitted).

These are the important points for correctly taking your motorcycle off the centre stand.

- Mount the motorcycle from the left-hand side;
- put both feet firmly on the ground;
- whilst gripping handlebars with both hands, rock the motorcycle forwards;
- cover the front brake should you need to secure the motorcycle; and
- make sure the stand is fully up.

1.2.5 Take the motorcycle off the side stand.

These are the important points for correctly taking your motorcycle off the side stand.

- Sit on the motorcycle and straighten the handlebars while holding the front brake;
- position the motorcycle so that it is upright;
- with your left foot (if the stand is on the left side), move the side stand to its up position;
- and
- make sure the stand is fully up.

1.2.6 Wheel the motorcycle.

This skill requires the rider to control the vehicle while pushing it. When wheeling the motorcycle:

- gently use the front brake with your right hand to control the speed;
- brake only when travelling straight (at a very low speed by using the front brake when turning the motorcycle may drop/lurch); and
- maintain balance throughout the task.

1.2.7 Sit on the motorcycle in a way that lets you control and operate it effectively.

When getting on the motorcycle, apply the front brake with the right hand to prevent it from moving, mount the motorcycle from the left side away from traffic. Once seated, level the motorcycle and raise the side stand (if fitted) so it is fully up.

When you are mounted on a stationary motorcycle you should be able to use one foot to keep your balance and the other to work the foot controls.

Here are the important points for achieving a good riding posture.

Seat – sit far enough forward so that both elbows are slightly loose when holding the handgrips and the handlebars can be turned without having to stretch.

Posture – should allow you to use your arms to steer rather than to hold your body up.

Hands – handgrips should be held firmly to maintain a grip over uneven road surfaces. Position the right wrist down so that you do not apply too much throttle when reaching suddenly for the brake lever.

Handlebars – adjusted to allow precise steering.

Knees – should remain in contact with the fuel tank to provide best balance.

Feet – should be placed firmly with the arches on the footrests to maintain balance.

1.2.8 Put the motorcycle on the side stand (if fitted) and get off the motorcycle safely.

These are the important points for correctly putting your motorcycle on the side stand.

- Select a firm flat surface.

- Apply the front brake.

- Push the side stand down with your foot.

- Lean the motorcycle on to the side stand.

- Dismount the motorcycle to the side on which the side stand is located.

Turn the handlebars to the lock position.
Maintain full control of the motorcycle throughout the task.

1.2.9 Put the motorcycle on the centre stand (if fitted).

Correctly putting your motorcycle on the centre stand means that you:

Stand on the left of the motorcycle holding the handlebars.

Stand the motorcycle up straight (if the side stand is down, put it up with the right foot).

Push the centre stand down with your right foot, keeping the left hand on the handlebar.

With the right hand grasp the frame near the seat (some motorcycles have a special grab handle).

Hold the stand down with your right foot (ensuring all stand supports are on the ground).

Push down on the centre-stand with the right foot and at the same time lift up and back with the right hand-

- Ensure the motor cycle is fully back on the centre stand.

1.2.10 Adjust the mirrors to see as much as possible.

Correct adjustment is when;

your view into the mirror shows the lane adjacent to you as much as possible and your lane behind you.

Unit 2 - Operate and Control the Motorcycle

These are the skills you need to accurately ride and position the motorcycle on the road. These will still apply but are independent of dealing with traffic which is covered in Unit 3. The skills are:

1. Move off.
2. Monitor and use instruments and switches.
3. Manoeuvre the motorcycle (which means carry out a particular task, like moving at slow speed or riding between obstacles on the road).
4. Manage the throttle.
5. Manage the brakes.
6. Manage the steering.
7. Use the gears.
8. Use the throttle, brakes, steering and gears smoothly in a synchronised manner.
9. Stop the motorcycle.

2.1 Move Off

2.1.1 Start the engine with an electric start (if fitted).

Mount the motorcycle from the left-hand side as per **1.2.7**.

Turn the fuel tap to ON (if required) and apply choke (if required for cold start).

Ensure the engine cut-out switch is set to the RUN position.

Start the motorcycle according to the manufacturer's instructions so that it will run, and keep running. The motorcycle should be standing still when you start the engine.

Make sure you know what to do if the engine does not start the first time or if it does not keep running.

2.1.2 Start the engine with a kick start (if fitted).

Mount the motorcycle from the left-hand side as per **1.2.7**. **(please note that some mopeds/scooters can only be started with the centre stand down)**.

Turn the fuel tap to ON (if required) and apply choke (if required for cold start).

Ensure the engine cut-out switch is set to the RUN position.

Set the controls in accordance with the manufacturer's instructions.

Fold out the kick start lever (on some motorcycles you may have to fold up the footrest).

Place your foot on the kick-start lever, crank the lever until resistance is felt, then push down firmly.

Repeat until the engine starts.

Allow the kick-start lever to return to the normal position under guidance from your foot.

Fold back the kick-start lever immediately after the engine starts.

Allow the engine to run in accordance with the manufacturer's instructions.

2.1.3 Select gear.

Keep the motorcycle stationary and hold it with the front brake prior to selecting gear.

The gear you select will be the one that lets the motorcycle move off without straining the engine.

2.1.4 Move off smoothly.

You should move off with smooth operation of the throttle and clutch (if applicable).

If you make a mistake while moving off, you should be able to correct it immediately and

not allow the mistake to affect other parts of your riding.

2.1.5 Move off on a hill.

This can be either uphill or downhill.

You should be able to move off without rolling back when starting uphill. The use of the footbrake is essential for larger motorcycles.

You should move off with smooth operation of the throttle and clutch (if applicable).

If you make a mistake while moving off, you should be able to correct it immediately and not allow the mistake to affect other parts of your riding.

2.2 Monitor and use instruments and switches.

2.2.1 Check the gauges and warning lights after the engine starts.

You must know how to respond to the information that is presented especially if warning lights are triggered or if the gauge readings signify a problem.

Your response should occur in less than thirty seconds.

2.2.2 While driving, respond to gauges and warning lights by taking the necessary action.

You must know how to respond to the information that is presented especially if warning lights are triggered or if the gauge readings signify a problem.

Your response should occur in less than thirty seconds.

2.2.3 Use switches and other controls as you need them.

The switches and other controls include:

lights;

indicators, horn and hazard lights;

engine cut-out switch;

cruise control; and

equipment for entertainment and communications.

2.3 Manoeuvre the Motorcycle

2.3.1 Wheel the motorcycle.

This skill requires the rider to control the vehicle while pushing it.

Assessment of wheeling the motorcycle may include moving the vehicle around to the left and right, and stopping it by braking.

The following elements apply whilst riding the motorcycle.

2.3.2 Make u-turns (figure 0).

This may be assessed as an exercise in a confined area.

To be successful it should be completed without placing either foot on the ground or touching the boundary.

2.3.3 Weave to the left and right.

This may be assessed by weaving between cones and at a speed of no more than 40km/h.

2.3.4 Brake when approaching a curve.

This may be assessed at a speed of 40km/h and braking in a straight line on the approach.

2.3.5 Parallel forward park.

This may be assessed as a practical or simulated exercise. It involves stopping close to and parallel with the left hand boundary of a two way street or either kerb in a one way street.

2.3.6 Safely perform an emergency stop in a straight line.

This may be assessed as a simulated exercise at 50 km/h. Stopping should occur within a distance of 12 metres in dry weather and 16 metres in wet weather (reaction time not included).

2.3.7 Straight line balance.

This may be assessed by riding between two parallel lines no more than one metre apart, over a distance of thirty metres and in no less than twenty seconds.

2.3.8 Make the manoeuvre legal.

Making it legal includes:

how and where you stop; and
where you park.

Further information can found in the *Ride Safe* publication, section 8.13.

2.3.9 Before you start the manoeuvre, check your mirrors, signal with the indicator and check the rear blind spot.

To give others enough warning, you need to signal for at least five seconds before moving off; and as long as is necessary before you stop, turn, diverge or park.

2.3.10 Check that the manoeuvre is safe.

Observe and consider the whole area and intended path of motorcycle for the manoeuvre, before commencing it.

Continually assess the safety of the manoeuvre as it being performed in respect of your actions and that of other road users.

The manoeuvre should only be performed while it is safe to do so.

2.3.11 Keep watching.

You may use the mirrors to help you.

You may look in more than one direction while you are manoeuvring, but you must look in the right direction at the right time. For example, when you are doing turns, you must keep the head (eyes) level and look through the turns.

2.3.12 Control direction and speed precisely.

While you are performing the manoeuvre, the motorcycle should move in the way you want it to.
The movements must be steady and smooth.
You need to keep the speed slow enough so that you can compensate for any mistakes you make.

2.3.13 Sit in a position that allows you to effectively control the motorcycle.

See 1.2.7.

2.3.14 Stop and park the motorcycle in a safe place

See 1.1.3

2.4 Manage the Throttle

2.4.1 Move the throttle smoothly on and off to change speed.

'Smoothly' means in small movements. When you use the throttle it should not jolt the motorcycle.

2.4.2 Use the throttle to keep a steady speed.

On a level road, you need to keep a steady speed for a certain time by adjusting the throttle smoothly.

2.4.3 Use the throttle when riding up or down a hill.

When you ride up or down a hill and you don't need to change gears, you need to be able to adjust the throttle to maintain the same speed.

2.5 Manage the Brakes

2.5.1 Brake efficiently.

Efficiently means:

- both brakes are used as the main means of slowing the motorcycle;
- the brakes are used mainly while the motorcycle is upright and travelling straight;
- the brakes are applied smoothly using mostly the front brake;
- when going down hills, engine braking is used to help the motorcycle's brakes;
- the motorcycle does not skid; and
- the brake pressure is varied according to changes in the road surface and weather conditions.

Avoid braking hard if a sidecar is attached and it has no brake of its own as this will cause a pull to the right.

2.5.2 Brake smoothly and steadily.

Apply both brakes at the same time.
Apply greater pressure to the front brake (all four fingers should be used where

possible).

Brake gently at first, and then increase the pressure smoothly until the motorcycle slows to the speed you require.

Just before stopping, ease off the pressure on the brake lever (this will avoid jolting especially when carrying a pillion passenger), and then ease the pressure back on.

At low speeds (walking pace), use the rear brake only. Incorrect application of the front brake may disturb your balance.

2.5.3 Stop accurately at a point.

Vary the brake pressure to make the motorcycle come to a steady stop.

Stop the motorcycle within 500mm of the chosen stopping point.

2.6 Manage the Steering

2.6.1 Steer smoothly to make the motorcycle go in the desired direction.

Steer the motorcycle with both hands on the handlebars.

Don't grip the handgrips any tighter than you have to.

When you are cornering and 'straightening up', steer the motorcycle along the intended path.

If the motorcycle is fitted with a sidecar, steer with a deliberate turn of the handlebars as you cannot lean the motorcycle over.

2.6.2 Steer an accurate course when riding in a straight line.

An accurate course means that the motorcycle maintains a legal road position, without adversely affecting people, vehicles or property.

A straight line means a constant direction without wandering, crossing lanes or centre lines.

The motorcycle is steered with both hands. Handgrips should be held firmly (but not too tightly) with wrists down.

Pressure of grip is adjusted consistent with the required steering effort and road surface.

2.6.3 Steer an accurate course in curves.

The motorcycle is steered with both hands. Handgrips should be held firmly (but not too tightly) with wrists down.

Pressure of grip is adjusted consistent with the required steering effort and road surface.

When steering through a turn or curve, the rider should maintain a posture (counter-balance) enabling effective control and operation of the motorcycle.

An accurate course means one that allows for cornering lines without adversely affecting people, vehicles or property.

A posture enabling effective control means seated with your back reasonably straight, far enough forward so that your shoulders and arms are relaxed with elbows in and slightly bent with wrists down. The handlebars adjusted so that the hands are even with or below the elbows. Knees always gripping the fuel tank and feet placed firmly with the arches on the footrests.

Counter-balancing

Applied to riding a motorcycle, counter-balancing is a term sometimes used to describe a balancing technique. At low speed, when a motorcycle is leaned over to make a tight turn, gravity pulls it down. To counter this effect, the rider leans the upper part of his/her body away from the turn that makes it easier to balance the motorcycle. This is sometimes referred to as the 'lean out' technique.

At riding speeds when a motorcycle is leaned to negotiate a curve, there is a force resisting this and there is a tendency for the motorcycle to want to travel straight ahead. To counter this effect, the rider leans his/her body into the turn that can make cornering smoother and safer. This is sometimes referred to as the 'lean in' technique.

2.7 Use the Engine's Transmission

2.7.1 Change gears smoothly.

'Smoothly' means that changing gears does not jolt you or your pillion passenger. Finish selecting a gear in 3 seconds or less. (Time this from when you first move the clutch lever until you have fully released it again). When you change to a lower gear, smoothly match the engine speed to the road speed.

2.7.2 Use a suitable gear for the speed and driving conditions.

A suitable gear means the engine is not over-revving or straining. Select a gear that minimises the likelihood of locking the back wheel. Complete the selection of gears prior to the situation in which the required gear will be needed, for example ahead of a hill or bend.

2.7.3 Change gear mainly while the motorcycle is travelling in a straight line.

A gear change is not over until you have fully released the clutch lever and pressure on the gear lever. This means that you should also release the clutch lever where practicable while you are travelling in a straight line. Where possible, avoid changing gears while turning or leaning into a corner or bend. There are some occasions where you may need to change gear when turning, for example at a wide intersection. In these circumstances do so very smoothly as a sudden change in power to the rear wheel can cause it to lock or skid.

2.7.4 Adjust your speed prior to changing to a lower gear.

Adjust your speed so that when you change gear it does not jolt the motorcycle or make the engine over-rev. Slow down first using the brakes before you change gear. To select first gear on many motorcycles you must use your brakes to slow down to walking speed before changing. This is because first gear is very low.

2.7.5 When going down hills, select a suitable gear.

A suitable gear is one that will help you with braking if necessary. It means that you do not have to use the brakes too hard, or for too long. When changing down, momentarily increasing (blipping) the engine revs will assist in matching the lower gears.

2.8 Use and Co-ordinate Inputs

2.8.1 When braking into a turn ease off the brake pressure.

If you are braking firmly as you come into a turn, you should ease off the braking as

you start to lean the motorcycle. This is necessary for the tyres have enough grip for you to maintain control.

2.8.2 When leaning into a turn keep the speed steady.

This means that if the motorcycle accelerates, it is only by two or three km/h.

2.8.3 When riding out of turns accelerate to match the motorcycle straightening up.

This means that acceleration increases as the angle of the lean decreases.

2.8.4 Adjust steering, braking and acceleration to variations in the road surface.

Motorcycles are especially vulnerable to road surface conditions and to stay upright the tyres must have a firm grip on the road surface. Any surface that affects the tyre's grip will affect its stability. Surfaces that provide poor grip include:

- slippery or painted surfaces;
- uneven surfaces or obstacles;
- unsealed or gravel roads;
- railway tracks;
- grooves and gratings;
- metal; and
- sloping surfaces.

You need to quickly identify a dangerous surface and adjust smoothly so that the motorcycle handles any major changes in speed or direction safely.

Successful application means:

- your adjustments do not unsettle you and/or your pillion passenger;
- the tyres keep their grip; and
- the motorcycle does not skid.

2.8.5 Combine braking and gear changing efficiently.

Efficiently combining braking and gear changing occurs when:

- the motorcycle is upright and travelling straight;
- the action does not jolt you and/or the pillion passenger;
- the motorcycle does not skid;
- gear selection is completed within a reasonable time;
- the engine speed is appropriate as you finish changing gear; and
- the rear wheel is driving before you lean the motorcycle.

2.9 Stop the motorcycle

2.9.1 Stop the motorcycle.

When you stop, you should put down the appropriate foot only. Where fitted, the right foot should be on the rear brake in order to secure the motorcycle.

You should not strain any of the motorcycle's mechanical parts.

The motorcycle should stand safely, with the engine running.

2.9.2 Switch the engine off.

Switch the engine off as per manufacturer's specifications. This typically means:

Fully close the throttle.
Select 1st gear.
Switch the ignition to the OFF position (lock and remove key if leaving).
Turn the fuel tap to the OFF position (if necessary).

2.9.3. Put the motorcycle on the side stand (if fitted) and get off the motorcycle safely.

See 1.2.8

2.9.4 Put the motorcycle on the centre stand (if fitted).

See 1.2.9

Unit 3 - Ride in the Traffic System

These are riding techniques that are used in a traffic system where everyone is required to obey the rules. You should:

1. Use safe riding procedures.
2. Navigate the road system.
3. Negotiate the road and traffic system.
4. Interact with traffic.
5. Ride efficiently in the traffic system.
6. Respond to conditions of poor visibility.

3.1 Use Safe Riding Procedures

Riding procedures are drills or routines that help riders to stay safe in the traffic system. Competent riders engage these routines habitually.

3.1.1 Before the motorcycle is moved to the left or right, check in the mirrors, use the signals and look in the rear blind spot.

This is required in situations like diverging when starting off, changing lanes, entering slip lanes or turning lanes, when you come up to intersections, lanes ending and merging, entering and leaving traffic flow, u-turns, entering and leaving freeways, or responding to emergency vehicles.

Your indicators should be on for at least 5 seconds when starting off and as long as is necessary before starting the move left or right and stay on until you have finished it. You must turn them off within three flashes after completing the move.

Check your blind spot to the rear just before you start to move sideways.

3.1.2 Before entering any area that could cause you to slow down or stop, check in the mirrors, adjust your speed and select the best gear.

This is especially relevant at places like intersections, roundabouts and crossings (pedestrian crossings, pelican crossings, railway crossings).

Other places include those where you find pedestrians, cyclists, parked vehicles and road works.

You should:

Coordinate the use of the mirrors and the brakes, if required. This means you check the mirrors just before you brake.

Select an appropriate gear for the situation.

Stop or accelerate as required.

3.1.3 Before turning the motorcycle at an intersection, check in the mirrors, use signals, adjust the speed and change gear.

Do this anywhere that roads meet, for example intersections, roundabouts and turning into driveways.

Your indicators should be on as long as is necessary before starting the move and stay on until you have finished it.

Signals must be turned off within at least three flashes of completing the move.

See 4.2.1 for more relevant information.

3.1.4 Before you enter a curve, check the mirrors, brake and change gear as needed.

Do this at curves in all areas.

Coordinate the use of the mirrors and the brakes, if required. This means you check the mirrors just before you brake.

3.1.5 Before you overtake, check the mirrors, use the signals, adjust your speed, do a shoulder check and change to the appropriate gear as needed.

Overtaking in this case applies to overtaking on the right hand side on a two-way section of road.

Your need to indicate your intentions for as long as is necessary before starting the manoeuvre.

Check the rear blind spot just before you start to move sideways.

Use the appropriate gear which means selecting the right gear for the road speed.

Perform the overtaking manoeuvre safely.

The indicators need to stay on until you have finished the manoeuvre.

You must turn the indicators off within three flashes after completing the manoeuvre.

3.2 Navigate the Road System

3.2.1 Plan a route for the journey.

This is planning a general route to where you want to go: in the suburbs, between suburbs, and between towns or cities.

This kind of navigating does not necessarily involve using maps. You may already know where to go, or someone may be directing you.

3.2.2 Use information, signs and features of the landscape to find the way.

You need to interpret information, signs and features of the landscape while you are moving and in traffic.

This applies especially if you are not familiar with riding in the area.

3.2.3 Use road signs and markings to help you get to where you are going.

For some particular manoeuvres it is necessary for you to choose the correct lane in order to reach the desired destination.

3.2.4 After making a mistake in navigation, adjust the route legally and safely.

Competent riders can still make mistakes finding their way. This can be a problem, especially in one-way traffic systems.

You should be able to 'get back on track' safely.

3.3 Negotiate the Road and Traffic System

To successfully move through the road and traffic system, you must obey the road rules, carry out your riding procedures, navigate, process information and respond. Competent riders can do all these things simultaneously. Through on-road experience they have developed a range of mental programs that help them cope with a wide variety of situations. It is not possible to list these here.

This element describes what you have to do in three general situations comprised of riding in built up areas, country areas and special road systems. . These three situations are then broken down further accordingly to accommodate differences in the 'thinking' time that a competent rider would require.

3.3.1 In every riding situation always follow the road rules.

You must do this in all riding situations whether they are mentioned in this document or not.

3.3.2 Ride through a built-up area with not much traffic, dealing with situations in good time.

This is a 'quiet' situation where:

- you need to decide about the road user movements from only one direction at a time;

- you may have to select suitable gaps in the traffic to progress safely; or
- most of the traffic travelling in your direction is moving at a similar speed to you.

'In good time' means:

- you can carry out your manoeuvres smoothly and steadily;

- you do not have to act suddenly because you have made a late decision; or

- you do what other road users expect.

You do not have to ride through a quiet suburb to find this situation. Multi-lane intersections controlled by traffic lights, for example, would provide these conditions very early in the morning when there is little traffic about.

Locations include all those that you would normally find in a built up area.

3.3.3 Ride through a built-up area with plenty of other road users, dealing with situations in good time.

This is a 'busy' environment where:

- you need to decide about road user movement from several directions at a time;

- you must accurately select suitable gaps in the traffic to progress safely; or

- the traffic going in your direction is moving at various speeds compared to you.

'In good time' means:

- you can take the right action and complete manoeuvres smoothly and steadily;

- you do not have to act suddenly because of late planning or late decisions; and

- you do what other road users expect.

What makes this situation different from the 'quiet' one is not just the number of other road users; it is the amount of information you have to deal with, and the complicated decisions you have to make. A road that is normally 'busy' may sometimes require you to deal with a lot of different things at once.

Locations include all those that you would normally find in a built up area.

3.3.4 Ride through a country area with not much traffic and not much change in road conditions, dealing with situations in good time.

This is an environment where:

- you need to make decisions about other road users who are coming from only one direction at a time;
- you may have to select suitable gaps in the traffic to progress safely;
- most of the traffic going in your direction is going at the same speed as you; and
- you will probably not have to make complex decisions about traffic disruptions, the surface, the tightness of corners or the steepness of hills.

'In good time' means:

- you can take the right action and complete manoeuvres smoothly and steadily;
- you do not have to act suddenly because of late planning or late decisions; and
- you do what other road users expect.

The number of other road users and the vehicle types are not as important as the amount of information you have to work with and the complexity of decisions you have to make.

Locations include all those that you would normally find in a country area.

3.3.5 Ride through a country area where there is a lot of other traffic and some variations in road conditions, dealing with situations in good time.

This is an environment where:

- you need to decide about road user movements from several directions at a time; or
- you must accurately select suitable gaps in the traffic to progress safely;
- the traffic travelling in your direction is not all travelling at your speed; and
- you will probably need to make complex decisions about road blockages, surfaces, the tightness of curves or the steepness of hills.

The important thing here is the amount of information you have to deal with and the complexity of the decisions you have to make, not the number of other road users. A normally 'quiet' rural road may sometimes have a lot of activity on it, which means you will have to make complex decisions.

In good time' means:

- you can take the right action and complete manoeuvres smoothly and steadily;
- you do not have to act suddenly because of late planning or late decisions; and
- you do what other road users expect.

Locations include all those that you would normally find in a country area.

3.3.6 Ride on special road systems, dealing with situations in good time.

Special road systems include:

- freeways;
- highways requiring long distance riding; and
- remote riding on sealed and unsealed roads.

'In good time' means:

- you can take the right action and complete manoeuvres smoothly and steadily;
- you do not have to act suddenly because of late planning or late decisions; and
- you do so in compliance with the road rules and regulations.

3.4 Interact With Traffic

This element adds an additional level of complexity to the previous element. Each section within this element gives riding tasks and events that are 'special' - either because they are non-routine or because they require you to judge things more precisely.

3.4.1 Completes riding manoeuvres in traffic legally and in good time.

You need to apply the road rules and regulations and exercise caution when:

- entering a traffic stream from a parked position or from a driveway;
- leaving a traffic stream to get into a parked position or a driveway;
- changing lanes;
- merging;
- entering or leaving multi-lane roads and freeways;
- overtaking; and
- doing U turns.

'In good time' means:

- you can take the right action and complete manoeuvres smoothly and steadily;
- you do not have to act suddenly because of late planning or late decisions; and
- you do so in compliance with the road rules and regulations.

3.4.2 Deal with special events legally and in good time.

Special events include:

- emergency vehicles;
- obstructions;
- road works;
- substantial changes in the road surface;
- narrow bridges; and
- animals.

'In good time' means:

- you can take the right action and complete manoeuvres smoothly and steadily;
- you do not have to act suddenly because of late planning or late decisions; and
- you do so in compliance with the road rules and regulations.

3.4.3 Respond to pedestrians legally and in good time.

You are likely to find pedestrians:

- between or near parked vehicles;
- on a footpath;
- on a median strip;
- on a road way; or
- at a crossing.

'In good time' means:

- you can take the right action and complete manoeuvres smoothly and steadily;
- you do not have to act suddenly because of late planning or late decisions; and
- you do so in compliance with the road rules and regulations.

3.4.4 Respond to low speed vehicles legally and in good time.

Low speed vehicles could include:

- cyclists;
- mopeds;
- powered wheelchairs; and
- tractors or other plant machinery.

'In good time' means:

- you can take the right action and complete manoeuvres smoothly and steadily;
- you do not have to act suddenly because of late planning or late decisions; and
- you do so in compliance with the road rules and regulations.

3.5 Ride Efficiently in the Traffic System

Experienced riders observe and cooperate with other road users to keep the traffic flowing. Their actions do not surprise other riders or drivers or cause them unnecessary trouble.

3.5.1 Ride in such a way that other road users do not change the way they are riding or driving to fit in with you.

Situations include:

- picking gaps in the traffic on an intersecting road;
- moving into the traffic stream;
- merging;
- changing lanes; and
- overtaking.

3.5.2 Where your free flow is about to be interrupted and there are safe and legal options available, act in good time to get around the problem.

An example could be where a rider or driver in front of your vehicle is stopped waiting to make a right turn and it is safe to overtake on the left, or a delivery van is blocking the left lane ahead of you and it is safe to change lanes to pass the vehicle.

3.5.3 Co-operate with other road users.

Examples include helping riders or drivers merging, changing lanes, vehicles entering traffic (especially when it is busy), helping others when they have 'got it wrong' (such as attempting a u-turn when there is not enough room) and waiting for pedestrian stragglers on crossings.

3.5.4 Use the brakes and ease off the throttle early and smoothly when a situation may cause you to change speed.

This type of smooth riding also helps to save fuel and cuts down wear on the brakes.

Situations could include:

traffic lights in the distance turn to red;
riding on hills and on approaches to curves; and
approaching slower-moving traffic.

3.6 Respond to Conditions of Poor Visibility

3.6.1 Adjust your speed so that you can stop within the distance you can see clearly.

At night, limit your speed so that the motorcycle can stop within the range you can see in the headlight.

Reduce speed in heavy rain, dust, mist, fog or smoke, so that you can stop within the distance you can see.

3.6.2 Use the headlight effectively.

Dip the headlights within 200 metres of approaching vehicles, or when riding less than 200 metres behind another vehicle.

(See the *Drive Safe* publication, Section 3.3.1 for further information).

At night, use high and low beams to give you the best view, but avoid dazzling other road users.

Dip the headlights on the crest of hills, intersections and before corners to help you see if there are other road users coming.

During the day, it is good practice to turn on the headlight to make it easier for others to see your motorcycle.

3.6.3 Dealing with glare at night.

Adjust your speed and position; and
turn your eyes down to the side of the road away from the other vehicle's lights.

3.6.4 Prepare yourself and the motorcycle for night riding.

Wear reflective clothing (fluorescent clothing will not show in the dark);
make sure the lights are clean, in working order and correctly adjusted (carry a spare set of globes);

clean the windshield and/or visor on your helmet; and
keep your reflective number plate clean.

Unit 4 – Identify and respond to threats / hazards

Riding conditions will not always be ideal. In spite of the rules, people make mistakes and take chances. Riders need to avoid trouble before it starts. See Part 7 of the *Ride Safe* publication for more information.

To prevent or minimise the risk of conflict:

1. Adjust to the riding environment.
2. Deal with situations in the riding environment.
3. Avoid stressful or difficult riding environments.
4. Make safe decisions in stressful situations.
5. Controlling emotions (refer Part 7 of the *Ride Safe* publication for more information).

4.1 Adjust to the Environment

As things change around you — the road conditions, the traffic, the weather - you should change with them, so that you can deal with the changes in that environment. This is often called 'riding to the conditions'.

This element looks at how you perform over a period of time, rather than just at one time or place. The riding environment can change quickly; but once it has changed it will usually stay the same for a while. For example, a narrow city street with cars parked either side is a particular type of environment. It might change to a different one, by becoming a wide-open road on the other side of an intersection, and then stay like that for a number of blocks. You will be assessed in different environments.

4.1.1 Adjust your speed to suit the environment.

Travel at a speed that will allow you to:

deal with unforeseen situations arising from the environment; and
cooperate with other road users.

When you change your speed, it must suit the traffic, weather and road surface conditions.

If you slow down for an environment, you must do so before you enter it. If you decide to go faster, do it as you enter that environment.

In order to make these speed changes in good time, you will need to look, and think ahead.

4.1.2 Match your path (the course the motorcycle is following) to the environment.

In every environment you need to obey the law, observe and respond to hazards while accommodating the conditions. You need to position your motorcycle safely in respect of:

parked vehicles (leave at least 1.5m to allow for car doors opening);
'repeating hazards,' for example driveways, on either side of the road; and
traffic coming the other way.

On a road where lanes are not marked, your path will usually follow that of most other riders or drivers, usually to the left of the centre of the road.

On roads with more than one lane, you should be in the left lane whenever you can.

4.2 Respond to Situations Within the Environment.

On the road, there will be many hazards you must deal with. For example, if another other road user breaks the law, or does not ride or drive safely and reasonably, their path might cross yours.

Even if other road users don't do the right thing, you can deal with it by keeping a safe distance between your motorcycle and the other road user. This is considered as **defensive** riding and reduces your crash risk.

To ride defensively you should try to predict and adjust your riding for what might happen.

When you can not see what could be ahead, for example as you approach a blind corner, be prepared for another road user's mistake. On the blind corner, you could slow down and move away from the centre of the road to allow for a road user cutting the corner from the opposite direction. This is called being **proactive**.

When you can see other road users but you are not entirely sure what action they might take, be prepared and adjust your riding accordingly. Continue to observe and adjust as you approach them and the situation changes. This is called being **interactive**.

In these situations often the safest strategy is to adopt a 'just in case' approach.

When one hazardous situation arises soon after another (for example, in busy streets) you will be anticipating hazards long before you have to make changes in direction or speed. In these busy environments your observation skills, concentration and responses will be in high demand so adjust your riding accordingly.

You should always keep enough space around you to avoid a crash..

4.2.1 Turn your eyes to things that may become an immediate threat.

'Immediate threats' are situations where other road users' paths may cross yours – in other words, where things could hit you, or you could hit them. This may include
places like blind intersections and curves;
pedestrians and cyclists; and
vehicles manoeuvring (coming the other way and turning right, pulling out from the side of the road, waiting at give way signs).

4.2.2 Position your motorcycle in a way that will allow you to see as much as possible.

Staying safe and legal, you should operate in way that allows you to see more and be seen by others more easily. Examples of this are:
increasing the distance between your motorcycle and a large vehicle in front (like a bus) to see more of the road ahead; and
when you come up to a blind intersection on your left, move towards the centre of the road so that you can see further 'round the corner.'

4.2.3 Match your speed to the distance you can see in front of you and to the sides.

This is particularly important at:
blind intersections;
blind curves;
hill crests; and
vehicles parked on the side of the road.

When you approach a blind intersection, decelerate or brake until you can see it is safe to ride on. It is safe when you can see down the side road and ascertain that there are no other road users who could enter the intersection at the same time as you. Do the same on blind curves and hillcrests; you should be able to stop in the distance you can see in the clear space ahead.

4.2.4 Move your motorcycle about on the road to keep you away from danger.

This response may be 'proactive' or 'interactive'.

Examples of 'proactive' responses could be moving to the left when coming up to a hill crest, or moving more towards the centre of the road before a row of parked vehicles.

An 'interactive' response could be moving to increase the space between you and another road user – like a pedestrian on the side of the road or a vehicle coming the other way which is hugging the centre line.

4.2.5 Do the right thing in good time when other road users engage in unsafe behaviour.

'In good time' means you would have time to brake, accelerate or move smoothly to another part of the road to avoid a crash.

You should plan ahead. This means observing and assessing the situation, predicting how it might change and taking action ahead of time.

Actions you might take include:

- easing off the throttle;
- starting to brake;
- increasing braking smoothly and steadily; and
- steering away from the hazard to increase the distance between you and it.
- counter-steering technique to swerve quickly round an object at higher speeds

In some situations the right thing to do could be to accelerate (for example, when a vehicle is closing in quickly from behind).

4.2.6 When you make a mistake and put yourself in an unsafe or illegal situation, correct it immediately.

All riders make mistakes but competent riders correct them before they cause trouble.

4.3 Avoid Stressful / Difficult Situations

4.3.1 Stop the motorcycle until conditions improve.

You might decide to stop riding in very bad weather, or in very bad road or traffic conditions, if you are finding it difficult to cope.

4.3.2 Go by a different route.

You might decide to change your route for several reasons, for example:

- to avoid bad weather and road surface conditions;
- to avoid particular environments that you think are difficult or unsafe because of local traffic conditions (for example, a complex intersection); or
- to avoid environments in which you don't feel confident.

4.4 Respond to Stressful Situations

4.4.1 Reduce speed and make conservative decisions in novel or complex riding situations.

Novel situations are those that differ significantly to situations the rider has previously experienced. These can include differences between previous riding experience in other Australian Jurisdictions or overseas. In novel or complex situations:

Reduce your speed to the point where you have the capacity to process and

respond to information.

Riders who are unable to do this typically change speed and direction abruptly, breaking the smooth flow of their riding.

4.4.2 When you are riding a motorcycle that is unfamiliar to you, familiarise yourself with it.

Practise finding and using controls and switches before you move off.

Keep speed down.

Make cautious decisions.

Be more careful when overtaking, cornering and picking gaps in traffic (the unfamiliar motorcycle may be less/more powerful than you think).

4.4.3 If something is distracting you while you are riding, take action to rectify it.

This can include;

requesting your pillion passenger to be quiet; or
pulling over to deal with any problems.

4.4.4 If you are uncertain about a riding situation, make a cautious decision.

An overtaking manoeuvre or a gap in the traffic are typical examples where you might be cautious. Your decisions should make the risk as small as possible, for example you could choose to:

stay back instead of overtaking;
wait for the next gap in the traffic; or
pull over to let the other rider/driver past.

4.4.5 Respond appropriately to other road users if they put you under pressure.

An example of this situation might be if you perceive that a road user who is travelling behind wants you to go faster or move out of their way. Responding badly could cause a conflict so you should consider:

thinking or reminding yourself to stay calm;
breathing deeply;
concentrating on other riding tasks;
avoiding being critical of other road users' behaviour;
pulling over to let the other rider/driver past; or
going a different way.

4.4.6 Respond appropriately if frustrating things happen in traffic.

Things you can do include:

Going another way;
keeping a safe following distance;
breathing deeply and trying to relax your jaws and shoulders;
avoiding being critical of other road users' behaviour;
thinking about what you might gain by behaving cautiously, and what it might cost you to behave in a risky way.

4.5 Control Your Emotions

'Emotions' can be considered as feelings or thoughts inside us. They underpin our behaviour and can motivate our actions. The way in which emotions can influence riding is part of what makes 'good' or

'bad' riders. You should use the emotions that motivate you to ride well and try to control the emotions that make you take risks and ride unsafely.

4.5.1 Ride in a way that shows you value life and property.

Safe riders value life and property. They want to avoid being harmed and they want to avoid causing harm.

4.5.2 Control your emotions so they don't interfere with safe riding.

Examples of emotions that may interfere with safe riding, include:

- aggression;
- depression;
- unhappiness;
- happiness;
- frustration;
- impatience; and
- anxiety from worries.

A useful technique is thinking or talking to yourself; ask if you are benefiting from letting your emotions affect your riding. Consider what adverse affect this might have on your safety.

4.5.3 Notice yourself taking risks.

When you notice that you are engaging in risky behaviour on the road, think about the benefits and costs of both risky riding and cautious riding. Your decision, responses and the effects could have consequences you have to live with.

If you want to be safe, but are a bit short of skill, your 'safety motivation' will make up for the lack of skill. But it doesn't work so well the other way. Remember that if you have a tendency to take risks you will not be a safe rider in spite of your skills or ability.

Unit 5 – Manage unexpected situations

You can reduce many of the potential conflicting situations on the road, but you can never completely remove them all. Most riders at some time find themselves in trouble.

Competent riders frequently have appropriate responses to unexpected situations and can avoid them, or at least reduce the severity of the impact. The skills you might need for this are:

1. Avoid a crash that is about to happen.
2. Do the right things to keep control (or to get back control).
3. Take the correct action after a crash.
4. Take the correct action if your motorcycle breaks down.

5.1 Avoid an Imminent Crisis

Crashes don't happen often, which is why they can take you by surprise. Even defensive riders are surprised when other road users actually break the rules of the road. Because it's hard to predict when crashes are going to happen, defensive riders always keep enough distance around their motorcycle and capacity within their skills to avoid a crash in case of the event when a mistake is made — either by themselves or by someone else.

5.1.1 Let other road users know that a situation is dangerous.

You could sound your horn or flash your headlight.

5.1.2 Keep enough distance around you so that you can avoid crashing.

If you are trying to avoid a crash, it is safer to try to stop than it is to swerve — as long as there is enough space to stop.

The table below shows how much space you need to stop (with reasonable brakes, tyres and rider, on a reasonable and flat road) at various speeds. To help with judging these 'braking distances' while you are riding, the time each one takes is also shown. Just as you can use a three-second gap to judge the right following distance, you can use these times to judge braking distance.

For example, at 60 km/h, if your foot and hand are ready on the brakes and a car has pulled out one and a half seconds in front of you, you will be able to stop to avoid a collision. If your foot and hand are not ready on the brakes it will take you much longer to stop. An extremely quick reaction on to the brakes will take about half a second. Studies have shown that when riders **aren't expecting something** it takes them about **two and a half seconds to react**. This is why you must always be ready to brake when a situation looks risky.

(Does not include reaction time)

Speed	20 km/h	60 km/h	80 km/h	100 km/h
Distance (Metres)	3.6	13.7	24.4	40.2
Travel Time (seconds)	0.5	1.5	2	2.5

5.1.3 When you do not have enough stopping space to avoid the threat of a crash, choose the best escape route.

Caution - swerving is not reliable. The road may be slippery or there could be another obstacle in your path.

You will need to think about what may happen if you swerve.

Swerving takes nearly as much space as stopping.

Avoid braking whilst swerving

You have choices about where to swerve to, and you will need to pick the best one.

Into the next lane;

onto the shoulder of the road; or

off the road.

5.1.4 If you accidentally ride off the road on a straight, take the right action to get safely back on the road.

Your actions could include the following:

Stay at a steady speed and keep in a straight line parallel to the road;
find a smooth road edge to get back on the road; and
steer gently back onto the road to avoid swerving.

5.1.5 If you enter a curve too fast, take the right action to fix your mistake.

Your actions could include the following:

Brake firmly if the motorcycle is still travelling straight, then ease off the brakes as you go into the turn;
if you are already in the turn, ease off the throttle and brake gently using the rear brake only;
look towards the end of the curve as this will help you know where to steer; and
brake as you straighten up (if required).

5.2 Use and Co-Ordinate Inputs to Retain or Restore Control of the Motorcycle

This element is about avoiding skids and escaping from them. A skid means the motorcycle has lost the grip of one or both tyres so that you no longer have complete control of the motorcycle.

If you watch the changes in your riding environment and do things in good time, you should never get into a skid. If a tyre does skid it means you have made a serious mistake. It's a sign of bad riding.

However, mistakes do happen, and a competent rider needs to know how to deal with them. Don't think you need to be able to control skids to be a safe rider. These skills are only one tiny part of being fully competent. Some people get advanced training, but this can make them over confident. If you want to do advanced rider training, choose a course that teaches you about risks and how to avoid them.

5.2.1 Keep some extra tyre grip in reserve.

If a crash is imminent you will need to take the appropriate action to avoid it. Often you will brake or swerve. When you do this the tyres should not skid.
You can keep some extra grip in reserve by riding smoothly.

5.2.2 Identify and correct a front wheel skid

To regain a reserve of tyre grip, release the front brake immediately then reapply it smoothly and progressively.

5.2.3 Identify and correct a rear wheel skid

To regain a reserve of tyre grip in a skid, with both feet on the footrests, steer slightly in the direction of the skid slowly letting up on the brake so the wheel can turn.
To regain a reserve of tyre grip in a skid caused by applying too much power, with both feet on the footrests, slowly ease the throttle down.

5.2.4 Know when the motorcycle is aquaplaning, and take the right action to get back a reserve of grip.

Aquaplaning happens on wet roads when the tyre's tread can't get rid of the water between the tyre and the road. This results in the front or both wheels skidding. Decrease speed to allow tread to remove excess water.

5.3 Follow procedures in the Event of a Crash

5.3.1 Take the correct action immediately to prevent any more injury or damage.

This could include the following.

- Stop and switch off the engine (with cut-out switch if necessary);
- turn on the hazard warning lights (if fitted);
- protect the area [using warning devices]; and
- care for the injured.

5.3.2 Carry out the requirements of the law and of the insurance regulations.

In these instances you must:

- Notify police when: someone has been injured, or the individual or combined property damage exceeds \$3000, or the owner or any property damaged is not present at the scene of the crash;
- exchange names, addresses, licence details and insurance details as appropriate;
- locate witnesses; and
- note crash details as required for the insurance report.

5.4 Follow procedures in the Event of Your Motorcycle Breaking Down

5.4.1 If you notice or suspect that something is wrong with the motorcycle, stop it safely.

Before you ride you should make sure that your motorcycle is roadworthy.

A roadworthy motorcycle is one that is safe to ride and meets the standards required by law.

Your motorcycle's roadworthiness should be checked every time before you ride.

If you are unsure of the operation or condition of any feature of your motorcycle, check the manufacturer's manual or seek qualified advice.

No matter what checks you make before you ride things could also go wrong while riding, such as:

- brakes failing;
- irregular running;
- running out of fuel; or
- tyre(s) failing.

5.4.2 After a breakdown, act immediately to make sure that you are safe and so are other road users.

Consider:

- moving off the road if possible;
- stopping and switching off the engine; and
- turning on your hazard warning lights.

5.4.3 Carry out minor running repairs.

- Vehicle repairs can take many forms and may include repairing a flat tyre.
- If you are unsure of the operation or condition of any feature of your motorcycle, check the manufacturer's manual or seek qualified advice.

Unit 6 – Evaluate and Adjust Riding

This unit describes how you can learn from experience and become a better rider.

To review and adjust riding, do these things.

1. Monitor your own riding and improve it.
2. Think about how you behave on the road, and change it if necessary.
3. Watch how other road users behave.
4. Watch out for things that cause risk, and do something about them.

6.1 Monitor and Improve Performance

6.1.1 When your riding is getting poor, take action to improve it immediately.

The key issue here is that you are having difficulty processing and responding to information.

Indications that your riding is getting worse include:

- sudden braking or steering movements;
- not responding to other road users;
- not responding to environmental conditions;
- staring straight ahead;
- a clenched grip of the handlebars;
- sweating;
- shallow breathing; or
- sitting stiffly.

Things that you can improve include:

- conducting more scanning of what is happening around you;
- concentrating solely on riding;
- stopping distractions (for example ask your pillion passengers to be quiet); or
- taking a rest break.

6.1.2 After making a mistake, correct it.

'Mistake' means that your performance slips below an acceptable standard. You need to be able to tell when you have made a mistake, and describe how you have changed your riding as a result.

6.1.3 Avoid repeating your mistakes.

The steps to avoid repeating a mistake are:

- spot the mistake;
- know why it happened; was it lack of skill, not paying attention, not knowing how to do it, or was it not wanting to do it correctly?;
- work out the difference between what happened and what should have happened;
- and
- take action to avoid repeating the mistake.

6.1.4 Compare yourself to this standard when rating your performance.

Don't judge yourself against other riders. If you compare yourself to your opinion of another rider, you can end up thinking you are better than you really are. This can make you over confident.

A valid and reliable method of assessing your riding may not be available at this time. However, the element may be used to guide you in your training and education programs.

6.2 Monitor and Modify Behaviour

6.2.1 Identify if you taking an unacceptable risk, and change your riding to avoid doing it again.

Inappropriate risk-taking behaviour is any behaviour that could result in an outcome that would be inconsistent with your safety values.

6.2.2 Identify if your behaviour is inconsistent with legal riding and adjust your riding accordingly.

6.2.3 Demonstrate in your riding style that you are aware of your responsibility for any riding incident you are involved.

A 'riding incident' is any event that you would prefer not to happen. When people explain these events in a way which recognises that they are at least partly responsible for any riding incident, they are taking a 'my mistake' view of riding. A 'my mistake' view can help you learn from your mistakes.

This process is described by causal attribution theory, which suggests that people who attribute cause to events modify their behaviour.

Riders can be questioned after driving incidents to reveal their thinking style. Their answers will indicate whether they have a 'My mistake' view or a, 'I had nothing to do with it' view.

6.2.4 No matter how often you may have got away with risks in the past, you still need to be cautious.

Riding can be dangerous, but crashes and even near misses are rare events for most riders. The result is that most riders do not feel that riding is dangerous. They have become cynical of the risks, because they have been in so few crashes.

You should be cautious about risks, no matter how often you have 'got away with them' in the past.

6.2.5 No matter how many safety features your motorcycle has, continue to ride cautiously.

Safety features may include things like track control, cruise control, ABS (anti-lock braking system), ventilated disks, multi-piston callipers on the braking system and a dual braking system footbrake.

Some riders believe that because their motorcycle has many safety features, they themselves don't have to try so hard.

Studies have shown that some car drivers with anti-lock brakes (ABS) fitted to their vehicles drive faster in wet conditions, and follow closer to other cars, than they did before they had ABS. They end up at the same or worse level of risk as they were before.

6.3 Monitor Other Road Users Behaviour

6.3.1 Observe the way other road users behave, and think about the reasons for their behaviour.

Do not rate other riders or drivers as 'good' or 'bad' – especially not 'bad', as this can make you too confident about your own riding.

Watch what other riders do, and think about why they do it. A rider or driver who makes a gap to let you out into the traffic, for example, is being courteous. If you add some of

that courtesy to your own riding, you will gain something from it, and so will the next person.

If you see someone being impatient, think about why they are impatient, and watch for it in your own riding. Take note of all the riders or drivers who are doing the right thing (and you'll see that most of them do, most of the time).

6.3.2 When you see another rider or driver make a mistake, remember it so that you can avoid making the same mistake in the future.

Mistakes, no matter who makes them, can be learned from. The more you use the lessons from mistakes, the more chances you will have to improve your riding.

6.4 Monitor and Respond to Risk Factors

Many things may cause risks. Some are more obvious than others. A less obvious cause is protective clothing (see 1.2.2). If you are cold and wet you will not concentrate fully, you may take risks and you may take more time to react. Without proper clothing you are a danger to yourself and others.

6.4.1 Be aware that risk is higher when riding at night - particularly on Thursday, Friday and Saturday night.

6.4.2 Do not ride with an illegal blood alcohol concentration, or any drug that can affect your riding.

6.4.3 Ride safely with a pillion passenger

Avoid showing off, especially with family or friends as pillion passengers.

6.4.4 Do not ride beyond your ability.

This is particularly applicable when riding in a group.

6.4.5 Know when you are tired and take appropriate action.

Symptoms of tiredness include:

- not keeping the motorcycle on a steady speed or course;
- rubbing your face;
- moving around on your seat;
- yawning often;
- heavy eyelids;
- dry mouth;
- sore eyes;
- shivering; or
- double vision.

Things you can do about tiredness include:

- stopping as soon you notice any of these symptoms and it is safe to do so;
- resting; or
- sleeping.

6.4.6 Take action to avoid getting tired.

Things you can do to avoid getting tired while riding include:

- stopping and taking a rest break of 10 minutes or more at least every one and a half hours or 150 kilometres;
- eating light meals rather than heavy ones;

drinking plenty of water;
increasing your scanning of the riding environment; and
paying attention to the way you sit.

Things you can do before riding include:

avoiding riding during normal sleeping hours;
avoiding riding after a long period of hard work – either mental or physical;
getting enough sleep; avoiding
heavy meals; improving your
physical fitness;
arranging regular eyesight checks; or
not drinking alcohol.