

# Vancouver Island Safety Council



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## **Introduction**

- Welcome to Safety council, a nonprofit society wholly self-supporting.
- Outline of the evening presentation
  - MSC and TSC Course
  - Safety Record
  - Break
  - Gearing up

## **Application for Training**

- Your application is a contract between VISC and the students.
- You pay VISC a fee and VISC provides training.
- The training and how it is done will be covered in the next hour or so.
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## **Course and Student Objectives**

### **Student Objectives**

#### **Question:**

Why have you chosen to take a professional rider training program? What do you hope to achieve, and what do you expect of us in the training program?

### **Course Objectives**

1. To help you develop control skills and riding techniques adequate for the demand of urban traffic.
2. To ensure that you are aware of your own limitations in skill, knowledge, and physical abilities, relative to the demands of motorcycling.
3. To develop an understanding of the hazards and problems which motorcyclists face and how to deal with them.
4. To provide information to help you purchase clothing, helmets, motorcycles and other equipment.

5. To provide an opportunity for you to qualify for a class 6 license.

## Course Outline and Training Methods

### Motorcycle Skills Course (Novice)

#### Course Structure

- The M.S.C. is a combination of classroom instruction and practical training
- 16 hours Practical training and 8 hours of Theory instruction.

		Day 1	Day 2	Day 3	Day 4
"Morning Group"	AM	<b>Tarmac</b>	<b>Tarmac</b>	<b>Tarmac</b>	<b>Tarmac</b>
	PM	Theory		Theory	
"Afternoon Group"	AM	Theory		Theory	
	PM	<b>Tarmac</b>	<b>Tarmac</b>	<b>Tarmac</b>	<b>Tarmac</b>

#### Group Structure

- Students are assigned to Instructor groups based on background experience. You may be re-assigned to a different group during the course.
- Practical training groups have a maximum of 5 students per Instructor.

#### Student Safety

- The training starts out assuming no prior motorcycling experience, and continues in a progressive manner according to your rate of progress.
- Instructors will not ask you to perform an exercise which they feel is unsafe or beyond your capability.
- Do not attempt to any exercise that is not clearly understood or that you do not feel reasonably comfortable about performing. Seek clarification from your Instructor as to objectives, techniques, speed, limitation, etc. prior to attempting the exercise. Misunderstandings can lead to problems.

#### Evaluation

- Your practical Instructor will evaluate your progress in writing on a daily basis. Your Instructor will discuss your evaluation with you, and you will be asked to initial the form at that time. (Hold up a copy of the evaluation form and briefly explain:
  - Incomplete = Did not complete the exercise
  - Needs Improvement = Completed exercise but did not perform to course standards
  - Acceptable = Performs exercise to course standards with minor errors

- Good = Performs exercise to course standards with NO errors
- You must achieve an **ACCEPTABLE** level of skill at each level of the practical training before being allowed to progress to the next level of performance.

## Traffic Skills Course

### Prerequisites

- Successful completion of the MSC is necessary before moving on to the TSC- you must pass the MSA Test, and Theory Examination.
- The TSC must be taken within 90 days of completing the MSC.

### Course Structure

- The TSC consists of 2 days of in-traffic riding with a 45-minute discussion/review session at the start of each day.

### Group Structure

- Groups of 4 students will travel to a variety of traffic areas, to experience conditions, environments, and maneuvers you will need to ride safely in traffic.

## Course Rules

- The Safety Council will absorb cost of accidental damage to our motorcycles. Damage costs resulting from deliberate misuse will be invoiced to the student.
- You are required to present your learners permit to your instructor at the beginning of each days riding session. **NO PERMIT, NO RIDING, NO EXCEPTIONS.**
- Riders must have appropriate riding gear each day. If you show up without correct gear and none can be borrowed - **YOU WILL NOT RIDE!**
- This should go without saying - the drinking of alcoholic beverages at lunch is prohibited.
- The use of prescription drugs and non-prescription drugs that cause impairment are not to be used.
- On the same subject - Do not go partying the night before a course day. If an Instructor finds anyone's ability obviously impaired from being overtired or hung-over, they will be taken off the motorcycle.

- If you are late in the morning you may be sent home, depending on the reason, how late you are, and what you have missed.
- Start time for the morning course is 8:00 am, so please be there 15 minutes earlier.
- If, for any reason, you need to arrive late or leave early on any of the days, see the Course Supervisor as soon as you know.
- Your safety during training is of top priority; we will strictly enforce our safety rules.

## **Student Preparedness**

- Training is physically demanding, so be prepared for this. You will be expected to:
  - Swing legs over a motorcycle
  - Grasp and use hand controls over a hundred times over the course
  - Stand on concrete outside for 15-20 minutes during tarmac lessons
  - Balance a 2-wheeled vehicle
  - Push a motorcycle
  - Turn head side to side over a hundred times over the course
  - Do ½ day training outside
  - Do ½ day in classroom setting
- Get lots of sleep and eat a hearty breakfast.
- Bring some juice and nutritious snacks too, to keep your energy level up during training. Also, caffeine is dehydrating, so we recommend lots of water and juice instead of too much coffee.

## **Mental Preparedness**

- Make sure you are free of distractions: family, work or business.
- If you are experiencing stress in your life now is not the time to start motorcycling.
- If you experience life stresses during the course, please notify your instructor; it will help them help you.
- Make sure you are prepared to
  - Learn a lot of new things about how motorcycles work
  - Learn a lot of new things about how to use hand and foot controls

- Learn in a group/team environment with people of various ages/genders and experience levels

## Standards and Graduation

- Students **MUST** attend all course sessions, in order, and must have completed the entire curriculum to an **ACCEPTABLE** standard to qualify for testing and certification.
- Motorcycle Skills Course standards are based on the knowledge and performance demanded by the real world.
- Basic skills **MUST** be achieved during training:
  - Adequate balance
  - Clutch/Throttle co-ordination
  - Low & High Speed Steering
  - Power band & Transmission
  - Brake Control
- Not everyone has the same background prior to training, and therefore cannot expect to progress at the same pace as other students. Do not compare yourself to others, as everyone learns at their own rate
- If you have no motorcycle or bicycle experience, it is recommended that you practice bicycling in advance of training, if possible. Likewise, if you have no driving experience, you may want to take some driving lessons to gain some traffic experience before taking the Traffic Course.
- You must pass both the written examination (71 %) and the skill evaluations before going on to Traffic. All elements of the exams are covered during the course or in reading assignments.
- Most people who do not reach an **ACCEPTABLE** during the course or who do not successfully complete the skill evaluations require additional training, which is

available at a cost of \$ 45.00 + GST per hour with a two hour minimum. Your other option would be to leave us, practice on your own and go to the MVB to take the licensing test.

- Generally, success is a reflection of background, co-ordination, and hard work.

## License Certification Procedures

- Upon successful completion of the Motorcycle Skills Course and the License certification tests, you will receive an Initial Certification form.
- This form can be turned in at the Motor Vehicle Dept. where you took out your Learner's Permit. This will result in the "supervision and speed restrictions" being removed from your Learner's Permit.
- The Motor Vehicle Branch will not waive waiting periods for road testing. You cannot be tested before the date on your learners permit.

## Motorcycles in Traffic - Motorcycling Today

- Technological advances over the past decade have transformed motorcycles from recreational vehicles into reliable transportation with state-of-the-art braking systems, suspension, engine control and traction.
- Car technology has also improved dramatically. Modern cars can demonstrate the same braking ability as modern motorcycles.
- In years gone by, most motorcycles were aimed at general all around riding; however, today's motorcycles are specially designed to fulfill a narrow range of applications; i.e.: touring, around-town cruising, sport riding, motocross, trials, enduro, scooters, mopeds, etc.
- In terms of performance, motorcycles range from easy-to-ride, low performance machines for riding around the block, to large cruisers and thinly disguised grand prices racing machines capable of accelerating from 0 to 100 km/hr in just under 3 seconds or up to a top speed of 260 km/h (140 m/h) - IN STREET LEGAL FORM!
- The licensing system for motorcyclists generally does not distinguish between the skill and knowledge needed to safely operate these machines.

**QUESTION:** How many of you have bought motorcycles already?

What kind of motorcycle did you buy, and what kind of riding do you intend to do?

**QUESTION:** Do you feel the course we have outlined for you will provide the training you need to be safe in today's traffic environment?

## The Highway Environment and Hazards

- The modern highway environment is a compromise between the needs of the various vehicles which use it, weighted by the numbers of those vehicles.
- Motorcycles represent what portion of all vehicles on the road? In BC: In 2006 there were 2,955,857 actively licensed drivers holding a BC driver's license, and 229,496 licensed motorcyclists = 2.6%<sup>1</sup>
- Motorcyclists do not receive any special attention in Road Design
- Problems motorcyclists encounter because of the highway system design include
  - road camber
  - pot holes
  - road crown
  - painted/plastic lines
  - rain grooves, tar patches
  - variable radius curves
  - limited visibility areas
  - inadequate merge/yield areas
  - railway crossings
  - metal/wood bridge decks
  - service covers
  - on demand traffic signals

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<sup>1</sup> Deduced from numbers provided in the ICBC Traffic Collision Statistics, 2006

**QUESTION:** What other kinds of hazards do motorcyclists face in the urban traffic environment?

**ANSWER:**

- other vehicles turning across our path
- potholes
- other vehicles pulling out in our path
- other vehicles crowding from the side
- other vehicles tail-gating us
- pedestrians and animals
- grease strips/spilled liquid/wet leaves, tar strips
- rain and large puddles
- loose materials on road surface/sand/gravel debris on road surface
- unsecured loads on other vehicles
- impatient, discourteous drivers, road rage

**QUESTION:** What do you think is the main reason other vehicle operators cause so much trouble for motorcyclists?

**ANSWER:** ***THEY JUST DON'T SEE US!*** Motorcycles are relatively small vehicles, and therefore are inconspicuous in the traffic stream.

Other vehicle operators have great difficulty spotting the motorcycle, and in determining range and speed accurately.

**QUESTION:** And what is the most serious hazard motorcyclists' face?

**ANSWER:** INTERSECTION COLLISIONS! **NO LONGER TRUE**

Collision Location in 2006 in BC:

- Between intersections: 48.83 %
- At intersections: 34.8%
- Intersection and driveway: 6.74%

## 2006 Motorcycle Facts from BC

(From ICBC Traffic Collision Statistics, 2006)

### Road Conditions:

- 91.21% of all mc accidents in 2006 happened on a dry roadway surface. Only 10.9% of mc accidents happened on a wet road surface (103 injured, 4 fatalities)

### Daylight:

- 79.51% of all accidents happened during daylight
- 19.08 % happened at dark or dusk.

### Weather

- 76.24 % during clear weather
- 18.52 % during cloudy weather
- 4.12 % during rainy weather

### Age of rider

- 16 – 21            11 %
- 22 – 30            15.14 %
- 31 – 40            16.74 %
- 41 – 50            21.37 %
- 51 – 60            14.54 %
- 61 – 75            13.08 %

### Single Vehicle ( Motorcycle) Accident

- 60% rural
- 37% urban
- 3% other

21.14 % of speeds exceeded 50km/h

## Multi-vehicle accident involving Motorcycle

- 71% urban
- 25% rural
- 4% other

### In British Columbia

- There were 91,844 motorcycles licensed in British Columbia in 2006. The number of motorcycles licensed showed an increase of 10.4 % from 2005
- In 2006 there were 229,496 drivers licensed to operate motorcycles.
- 2006 Motorcycle Accidents: 1025 injury crashes resulting in 1209 injuries and 41 fatalities
- **Passenger fatalities:** Two motorcycle passengers were killed during the year.
- **Helmets:** Motorcyclists whose helmet usage was known, 4.47 % were NOT wearing a helmet. Among motorcycle drivers killed, 4.9 % were not wearing a helmet. In injury related motorcycle accidents, 17.94 % of drivers suffered from a head injury while wearing a helmet ,while 30.95 % of motorcycle drivers suffered head injuries while NOT wearing a helmet.
- **The top five contributing factors assigned to motorcycle drivers** (as a percentage of total motorcycle collisions) were, in order of magnitude:
  1. Speeding (21.1%)
  2. Driver inattention (20.8%)
  3. Driver error/confusion (20.3%)
  4. Follow too closely (6.4%)
  5. Alcohol (5.4%)
- **The top five contributing factors assigned to other drivers** colliding with motorcycles (as a percentage of total motorcycle collisions) were, in order of magnitude:
  1. Failing to yield to right of way (14.3%);
  2. Driver inattentive (16 %);
  3. Driver error/confusion (6.5%);
  4. Improper turn (5.0%);

5. Following too closely (2.3%)

- The most common occurrences for motorcycle collisions were off-road right (15 %) followed by left turn across oncoming traffic (11.3 %), rear-end collisions (12.8 %)
- In 67% of all casualty collisions, the motorcyclist was going straight ahead or making a left turn

## The Safety Record:

- 25% of motorcycle accidents are single vehicle; meaning only the motorcycle was involved.<sup>2</sup>
  - 75% are multi-vehicle accidents.<sup>3</sup>
    - An Ontario report shows the motorcyclist was at fault in 38% of all fatal multi-vehicle collisions
    - This means that approximately 44% of all motorcycle accidents are the fault of the motorcyclist
  - Alcohol: 27% of fatally injured motorcyclists in Ontario were “alcohol involved” in 2000.\*
  - A 1980 study entitled Accident Cause Factors and Countermeasures found that urban accidents typically happen within 6 minutes of a ride’s commencement\*
  - A survey from a Saskatchewan insurance company between 1997 and 2001 found that 68% of motorcycle settings happen in an urban environment\*
  - In Ontario, riders under the age of 25 continue to make up a high percentage of motorcycle fatalities\*
  - A 2002 US Study (National Highway Traffic Safety Administration) showed an
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<sup>2</sup> Statistic from Canada Safety Council’s “Gearing Up” Manual

<sup>3</sup> CSC

alarming increase in collision-involvement in motorcyclists over the age of 40.\*

## **US Study<sup>4</sup>:**

Findings from FARS (FATALITY ANALYSIS REPORTING SYSTEM) data provide insight into possible reasons for motorcyclist fatalities in single vehicle motorcycle crashes and could aid in the design of crash prevention programs:

- More riders age 40 and over are getting killed;
- More motorcyclist fatalities are occurring on rural roads;
- High BAC levels are a major problem among motorcycle operators;
- Half of the fatalities are related to negotiating a curve prior to the crash;
- Over 80 percent of the fatalities occur off roadway;
- Undivided roadways account for a majority of the fatalities;
- Almost two thirds of the fatalities were associated with speeding as an operator-contributing factor in the crash;
- Almost 60 percent of motorcyclist fatalities occur at night; (NOTE BC stats are very different)
- Collision with a fixed object is a significant factor in over half of the fatalities;
- Braking and steering maneuvers possibly contribute for almost 25 percent of the fatalities;
- Helmet use among fatally injured motorcyclists below 50 percent; and,
- Almost one third of the fatally injured operators did not have a proper license.

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<sup>4</sup> National Center for Statistics and Analysis Research and Development, Technical Report “Fatal Single Vehicle Motorcycle Crashes” DOT HS 809 360 October 2001.

## Priorities for Safe Riding

**QUESTION:** In light of all we have just discussed - what are the most important things for you to learn in order to ride safely?

**ANSWER:**

- Understanding the problems and hazards motorcyclists face in traffic, and of the best ways of dealing with them.
- Adequate skill in normal and emergency maneuvers to deal with unexpected situations.
- Understanding of the motorcycle's capabilities and limitations.
- Awareness of the rider's own capabilities and limitations.
- Self-discipline.

## **Before you Start**

### **Gear and Helmets**

**Teach** sections D-1 to D-12 "Before you Start". Discuss this section on gear and helmets (approximately 1hour)

### **Reading Assignment**

Assign the students to read the Safe Riding Guide before Day 1.

Point out:

- Technical Inspection pages 40-41
- 5 case studies
- Read over but DO NOT fill out the final exam page 49
- Review Chapters 1, 2, and 3.
- Read Chapter 4 "The Basics", and Chapter 5 "Riding Tactics" before Day 1

### **Final Words**

- We would like you to start thinking like motorcyclists from now on
- Watch other riders in traffic, look for what they do right and wrong
- Be more aware of how you drive your car.
- Practice looking further down the road, etc.

