

National Motorcycle Training Institute

Instructor **IG**

Begin2ride Course

Instructors are educators first, and motorcyclists second!

People are not as dumb
as you think they are,
and they are not as smart
as they think they are.

NMCTI

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Introduction

I hear and I forget,
I see and I remember,
I do and I understand!
Chinese Proverb

National Motorcycle Training Institute's (NMCTI) Begin2ride Course focuses participants on the basic operational knowledge required to operate a motorcycle with control. We do not encourage riding motorcycles on the street. It takes much more than basic operational knowledge to operate large and high powered motorcycles with control in traffic.

Begin2ride participants are not necessarily motorcyclists. They are people interested in learning about riding motorcycles. In general, participants do not know the difficulty nor the demanding nature of driving motorcycles. Also, participants are typically not aware of the risks of driving motorcycles.

Our goal is to provide these participants with Basic Motorcycle Operation Knowledge as well as a risk management technique that will both help participants perceive the risk and, if they choose to ride, give them a technique for lowering the risks of driving motorcycles. The overall goal of this program is to increase the Motorcycle Driver Fatality Resistance.

NMCTI research has found that many of the mishaps people have while learning to ride (self taught or during entry level courses) are unnecessary mishaps. The instructors' attention to eliminating participants' unnecessary mishaps during the training can greatly reduce the number of mishaps that occur during the Begin2ride course, as compared to other so called "Entry Level" courses.

Chapter 1: Introduction to Range Management

Striving for excellence motivates you;
striving for perfection is demoralizing.
Anonymous

This chapter introduces the instructor range management techniques. It is written assuming that you have complete and immediate knowledge of what is contained in the b2r outline document, the Student Booklet, and the exercise's Range Cards. Please study these documents first and thoroughly.

To evaluate yourself as an instructor, ask: Is my conduct that of an educator? How is my Visual Range Control (VRC)? What can I do to improve my communication? Am I mechanically correct? Did I finish the collateral duties?

We prepare the students to be successful in these sessions. This starts with first contact of the school by the student. Be familiar with the information flow from the office staff to the students. This out-going information has been carefully constructed so that the students'

education begins with initial contact. Instructors are required to know what this out-going information is and should use similar terminology when working with students and potential students.

Please remember we are teaching students how to ride our training motorcycles, not any and all motorcycles. We are teaching the students the physical skills of manipulating and effectively using the controls so that they may get underway smoothly, stop efficiently, control speed, and control direction of our training motorcycles on our riding range (not the street). Answer student questions appropriately, specifically drawing their attention back to the training motorcycles and the information needed to be successful in “today’s” activity.

Additionally we provide specific mental skills to manage risk, and a mental attitude (and example) for the students, i.e., that motorcycling is a choice. Memorize the techniques described in the student booklet. Those are the techniques to teach the students.

Focus the students on component skill development. Teach them to use this focus “on the calisthenics” and to become proficient through purposeful practice of the component skills. In particular, when a student is struggling with an exercise, evaluate which previous component skill the student did not gain confidence with, then have that student focus on just that skill first before re-trying the current exercise.

Much importance has been placed on having our instructors “choreographed”. When one instructor is doing what the other instructor expects, and vice versa, the appearance to our students is of a high level of professionalism. This, of course, is an accurate perception for them to have.

Visual Range Control (VRC): We instructors must observe all the range, all the time. Typically we coach, then scan for the other instructor. Be aware of what the other instructor is doing during the conduct of an exercise.

The cone movements and student breaks are included on the "Orientation" Card of the range cards. The riding instructor typically ensures the cones have been properly set up. However, both instructors are equally responsible for proper cone movements and set up, and both have equal responsibility of moving the cones.

Corner #1 is the first corner encountered after a rider has left the staging area. Corner #4 is the last corner rounded before staging.

Cones may be left on the range as long as they do not interfere with the current exercise’s path of travel. Do not stack cones on range.

As an instructor, you have to make judgment calls often. If you are in an “unknown” area and are uncomfortable, or unsure of how, to continue, stop. Call the office or another instructor for consultation. You, the instructors, are in charge of the educational environment of the class as well as using the principle of eliminating the unnecessary risks in the conduct of the class.

Late students: There is no perfect answer for managing every possible scenario. You must exercise good judgment and adhere to the educational principle we embrace. In general, a student is not late if the introductions have not been completed. The student is late and should be offered a reschedule for later that day, or that weekend, or the next weekend, if they have arrived after the bolded sentence, **“We do not encourage you to attempt any exercise that makes you uncomfortable. Please inform your instructor, at any time, if you are uncomfortable, or unsure of how to continue”** has been read.

Handling a crash/incident: Complete form. You may tell student, “Use your primary medical insurance. Our insurance is not primary medical insurance. After you have used your insurance, there may be insurance for an excess balance.”

Chapter 2: Demonstrating the Exercises

This chapter provides details to riding the demonstrations. It is written assuming that you have complete and immediate knowledge of what is contained in the b2r outline document, the Student Booklet, the exercise’s Range Cards, and Chapter 1 of this Range Guide. Please study these documents first and thoroughly.

The first and second demos of Session 1 are during the lecture. When reviewing page 1 in session 1, you will demonstrate putting on and removing a helmet. The second demo is done when reviewing the instructor signals on page 2. Remember in Session 1 you show and tell the signals. In Session 2 & 3, you show and the students tell.

All speeds are approximate, however 12.5 mph is easy to see on the speedometer since it is the center between the 10 mph and 15 mph hash marks. Interpret 12.5 mph as approximately between 10 and 15 mph.

Demonstrating Session 1

Exercise 1.1 – Getting introduced to your motorcycle:

For exercise 1, place motorcycles in rows of up to eight motorcycles, with six feet of separation, between the motorcycles laterally and six feet of separation between the front row’s rear tires and back row’s front tires. If there are two rows, the second row is positioned “Off-Set” to the first row so that both instructors can easily see the second row.

For exercises 1 and 2, gather the students to the center and in front of the motorcycles for the directions and demonstration.

Use a student bike in front, near the center. Demonstrate proper mounting, correct upper body posture, and dismounting. Do not put your feet on the pegs. When mounting, emphasize: squeeze the front brake with the fingertips. You are not required to wear your helmet for this demonstration.

While sitting, emphasize: slide forward on the seat to have bent elbows, cover the clutch; do not cover the brake. Show how to check your elbows by turning bars left and right. As you do this say, “Let the bike move under you.”

Show the students the right-wrist position and throttle roll-on/roll-off. Tell them, “Notice that my wrist is flat at the highest point, and it goes down from there as I roll on.” Emphasize the correct wrist position.

When dismounting, emphasize: squeeze the brake with your finger tips and check that the side-stand is fully forward and out. Say, “Check the side stand twice before leaning the weight to the left.”

Exercise 1.2: Practice looking well ahead, using the front brake, and holding on:

For exercises 1 through 2, gather the students to the center and in front of the motorcycles for the directions and demonstration.

Show how to straighten the motorcycle and put the side stand up while standing beside it. Do not demonstrate the straddle walk.

To demonstrate finding a comfortable position for holding the motorcycle, show and tell them: Straighten motorcycle and put side stand up. Notice that when it is straight and square it is the “lightest”. If you go too far to the right it feels uncomfortable, so we usually let it lean a little towards us.

Do not cover the brake or the clutch during the demo.

Exercise 1.3 – Starting controls and shifting when the engine is off:

For exercises 3 through 6, gather students to the left of the center motorcycle such that they can easily see the clutch lever and shift lever.

The three parts of this exercise are: 1. Point out starting controls, 2. Shifting with the engine off, 3. Starting and stopping the engine (and warming the engine).

Exercise 3 demonstration is integrated with directions.

Emphasize the required starting controls. Do not emphasize the fuel valve, students should leave it in the “on” position.

When demonstrating the shifter, do not use the clutch. The first shift of the demonstration is from N to 2nd. Take your time with this demonstration. Shift up to 5th, then back to N. At the end, demonstrate shifting from first to second, and second to first. Be sure to emphasize that you are using very little pressure on the lever and that it is the alignment by moving the synchronizers (by rolling) that matters for the smooth shift.

When warming the engine in the demo, use smooth and patient throttle control, however, do not emphasize that, since the next exercise is designed specifically for that practice. The

students are to experience the starting and stopping of the engines only, without involving the throttle. The choke is used here to warm the engines.

Exercise 1.4 – Practice patient throttle control and shifting when engine is on:

For exercises 3 through 6, gather students to the left of the center motorcycle such that they can easily see the clutch lever.

Exercise 1.4 demonstration is integrated with directions. First demonstrate the patient throttle control. This will help warm the engine for the shifting part.

The first shift of the demonstration is from N to 2nd. Take your time with this demonstration. Shift up to 5th, then back to N. At the end, demonstrate shifting from first to second, and second to first. Be sure to emphasize that you are using very little pressure on the lever and that it is the alignment by moving the synchronizers (by “wiggling” the clutch) that matters for the smooth shift.

Carefully demonstrate shifting from N to 2nd without the clutch. This will cause a stall. Then show that the motorcycle can be started in gear.

Exercise 1.5 – Adding more power while rocking and power-walking across the range:

Rocking:

Properly mount and start the motorcycle. Assume correct riding posture. First show the students your foot position. Then draw their attention to the releasing the clutch halfway and holding it there with your finger-tips. Work on the clutch several times. Then add a little throttle. Add more throttle when appropriate. Do each step slowly and deliberately.

Straddle/Power walking:

During the power-walk, open the throttle, and hold it steady. Release the clutch halfway and take large straddle steps stopping at mid-range by squeezing the brake and the clutch. (It is OK for the engine to rev some before you ease the clutch out.) Then repeat, stopping at the cone. Select neutral, briefly raise your left hand, then turn around using the same method as the students in exercise 1.2. Repeat same on return.

Exercise 1.6 – Getting underway smoothly:

Power-walk across the range without stopping at the center. Lift your feet several inches up for the middle part of the path. Do not drag your feet or put your feet on the pegs.

For the ride back, follow page 6 exactly, taking 4 straddle steps. As you stop, put both feet out and return to straddle walking, only using the front brake to stop.

Optional: Exercise 1.7 – Practice straight line riding:

In session 1, the instructors do not use the rear brake when stopping. However, students who demonstrate good controlled stops with the front brake may use both brakes.

Sequence:

- a. Start in Corner #2, ride toward the braking area stopping between the orange cones at the end of the brake chute.
- b. Using the front brake only, put both feet down as you stop.
- c. Do not shift to neutral. Power-walk to the next start cones.
- c. Repeat stopping in other brake chute. Power-walk under power to the next line and shift to neutral. After shifting to neutral and raising your hand, return the motorcycle to its original position. Narration includes “power-walk to line, shift to neutral while waiting in line.” On the second stop mention the demonstrators posture.

Demonstrating Session 2:

Exercise 2.1 - Practice, Session 1 review: No Demo.

Exercise 2.2 - Practice looking well ahead and holding on: No demo.

Exercise 2.3 – Building confidence with clutch control.

Rocking:

Mount and start the motorcycle. Assume the correct posture. First show the students your foot positions. Then draw their attention that you are releasing the clutch halfway and holding it there with your finger-tips. Rock with the clutch several times. Then add a little throttle. Add more throttle when appropriate. Do each step slowly and deliberately.

Straddle/Power walking:

During the straddle walk, open the throttle, and hold it steady. Release the clutch halfway and take large straddle steps stopping at mid-range by squeezing the brake and the clutch. (It is OK for the engine to rev some before you ease the clutch out.) Then repeat, stopping at the cone. Select neutral, briefly raise your left hand, then turn around using the same method as the students will use. Repeat same on return.

Note: Do not demonstrate getting underway smoothly. Focus the students here on clutch control. Since this is session 2, they have previously ridden. This exercise is to develop clutch control.

Exercise 2.4 – Practice Braking:

Sequence:

- a. Start in Corner #2, ride toward the braking area and stabilize your speed at about 12.5 mph. Roll off the throttle as your front tire passes the cue cones (first cones of the brake chute.
- b. Using the technique listed on page 6 of the students booklet, stop between the orange cones at the end of the brake chute.
- b. Do not shift to neutral. Power-walk to the next start cones.
- c. Repeat stopping in other brake chute. Power-walk under power to the next line and shift to

neutral. After shifting to neutral and raising your hand, return the motorcycle to its original position. Narration includes “power-walk to line, shift to neutral while waiting in line.” On the second stop mention the demonstrators posture.

Exercise 2.5 - Practice Straight-line stability

Similar to exercise 2.4. Be sure to keep your posture noticeable relaxed, especially relaxing your shoulders and your grip. Ride over the board no faster than 12 mph.

Exercise 2.6 – Practice looking well ahead

This demonstration emphasizes head position for visual directional control, proper speeds for stability, and smooth application of the controls. Although the demonstrator uses both brakes, do not emphasize using both brakes.

When demonstrating, start your acceleration just before entering the long sides and reach a speed of 15 mph well before the middle of the long sides. Adjust your throttle and do not exceed 15 mph. Stabilize your speed.

As you approach the end of the long side, about 60 feet before the corner dot (which is about 20 feet before the three-cone marker), gradually start turning your head and continue turning your head until you are looking across the range. The demonstration is emphasizing where the students should be looking, so begin gradually turning your head before braking. While you continue gradually turning your head, about 45 feet before the corner dot, slowing will mostly occur by rolling off the throttle, however the demonstrator also uses both brakes lightly to slow, reducing speed to about 8 mph, making a rounded turn onto the short side of the perimeter. Be sure to release your brakes before the corner dot of corners #1 and #3. Of course there is no slowing before corners #2 and #4 since you will be approaching #2 and #4 at 8 mph.

Maintain a speed of approximately 8 mph on the short sides. At the end of the short side, round off the corner without braking.

Since this is the first exercise the students will be leaning the motorcycles, be sure to not lean very much. Follow an oval path around the short end of the range, using up what room there is, appropriately leaving some space cushion to the outside of the path of travel. If a line is drawn between the two corner dots of the short side, the apex of the path of travel will be at least 20 feet from this line; and more than 20 feet if space cushion to the outside can be maintained.

Note the difference between the this demonstration and the “ovals” demonstration and the practicing adjusting speed demonstration. Here in Ex 2.6 is the first time true beginner students will be riding a motorcycle in a turn, so lean angles must be minimized. Our students are practicing visual directional control and speed for stability. So the “look” is the primary skill. The braking aspect of Ex 2.6 ride is to slow down students going too fast to gradually round off the corner with minimal lean, and/or for general speed adjustment. During the “ovals” and adjusting speed exercises, our students are practicing setting their

entry speed developing confidence in braking, so the braking is emphasized and the “look” is just the timing for the release of the brakes.

Sequence:

- a. Choose any student motorcycle and move it to the perimeter.
- b. Perform smooth “take-off” as in exercise 1.6 demonstration. Do not use your brakes prior to corner #1 after taking off. Do not exceed 10 mph prior to corner #1.
- c. Accelerate quickly to 15 mph on the long sides.
- d. About 60 feet from the corner, gradually start turning your head.
- e. Slow to about 8 mph before releasing your brakes when approaching the end of the long side. Maintain a steady speed of about 8 mph on the short sides. Do not use your brakes on the short sides.
- f. After rounding corner #4 for the second time, maintain speed and enter staging area.
- g. Stop with proper technique in the staging area. Use correct staging: stopping, shutting off engine and leave the motorcycle in first gear. Note, do not approach the staging area at a slow/unstable speed.
- h. You may, but are not required to, return the bike to the original position.

Exercise 2.7 – Introduction to leaning (5 cone)

Note: For exercise 2.7 and beyond, instructors do not take straddle steps when getting underway. Students may or may not take straddle steps. They should be encouraged to do whatever makes their take-off smooth and controlled.

This demonstration shows achieving speed for stability and using counter-steering to control lean.

First gather the students in front of you and demonstrate the press to initiate lean. Use lightly applied pressures with small wheel deflection. Let the bike lean under you.

When riding the perimeter, round off and to the outside of the corners, if run-out room is sufficient. As you enter the long sides of the perimeter, accelerate to 12.5 mph, which is easy to see on the speedometer since it is exactly half way between the 10 and 15 mph hashes. Keep your head up, and look well ahead. Keep your body centered and lean the motorcycle beneath you.

Ride the weave at a steady speed. On the first pass, barely lean the motorcycle, on the second pass use moderate lean riding about 4 feet from the cones as you pass the cones. On the third pass, while maintaining the same speed as before, increase lean such that you pass the cones 6 to 10 feet out. Do not allow the pegs or any other parts to scarp the pavement. Your path of travel should have you crossing the center line at the midpoint between cones.

Sequence:

- a. Choose any student motorcycle and move it to the perimeter.
- b. Demonstrate the “press” with the engine off.
- c. Start smoothly, straddle steps not required.
- d. Begin weaving on the far side of the range. Continue weaving on the near side and again

on the far side of the range.
e. Stop exactly as in exercise 2.6.

Demonstrating Session 3:

Exercise 3.1 – Practice for Efficient braking:

Part a. Demo is the same as exercise 2.4.

Part b demo is the same path of travel as part a.

Part b. demo: Gather the students on the brake side of the brake chute. Focus them on your right hand and how you will do the progressive squeeze, increasing intensity as you stop. Do Not perform a quick stop. Stop just beyond midway of the brake chute.

Exercise 3.2 – Practice adjusting speed:

Path of travel is the same as exercise 2.6. However, the riding technique is different.

In this demo, quickly speed up to and stabilize at 15 mph. Approximately 40 feet before you round off the end of the long side, quickly slow to 7 mph. Maintain a speed of 7 mph on the short sides.

Exercise 3.3 – Practice controlling lean:

Path of travel: Ride up the middle of the range and demonstrate the weave riding to the right. Emphasize constant speed of 12-13 mph. Demo is similarly to exercise 2.7.

Exercise 3.4 – Basic cornering technique

This demonstration introduces the cornering technique of leaning and gradually accelerating. Primary emphasis is on the initial gradual roll-on, then the gradual roll-on throughout the turn. The secondary emphasis is on effective braking to set entry speed for the turn to permit the gradual acceleration throughout the turn.

To demonstrate, approach at 15 mph, slow with both brakes to 7 mph before each entrance cone. You must release the brakes and turn your head to look to the exit cone before the front tire passes the entry cone. Begin the gradual roll-on of the throttle as your front tire passes the entry cone. The motorcycle should not be accelerating as your front tire passes the entrance cone because there is a slight delay from the beginning of the roll-on to when the motorcycle begins the gradual acceleration.

Be careful to only open the throttle slightly at the entrance so that you can continue to increase the opening of the throttle throughout the turn. As you pass the 3 o'clock point of the oval, be sure to be looking well ahead to the next entrance cone.

Sequence:

a. Choose any student motorcycle and move it to approximately 12 feet from the entrance

- cone. Leave on the sidestand with the front wheel pointed straight ahead.
- b. With your feet on the pegs, demonstrate the brake-look-roll with the engine off, looking to the left since the motorcycle is leaning left on its sidestand.
- c. Start the riding demonstration by riding straight into the turn, do not use your brakes here.
- d. Complete a total of five corners riding outside the oval. Exit ovals entering the perimeter riding to the left.
- f. Stop exactly as in exercise 2.6.

Exercise 3.5 – Smooth shifting while moving:

This demonstration shows the shifting procedures detailed in the student booklet, with special emphasis on releasing the clutch about 90% out and holding it there, without opening the throttle. Note that this exercise is emphasizing clutch release to match engine speed with road speed.

To demonstrate, ride the perimeter rounding off the corners to the outside if run-out room is sufficient. Since the downshift cone is the first cone you reach, demonstrate the throttle roll-off, clutch squeeze/release only.

For the upshift side, start your acceleration just prior to entering the long side and accelerate to 13 MPH. Lightly lift and hold the shift lever at the cue cones and maintain your speed. Do not move your foot back to the peg until the clutch is fully released. Do not exceed 15 mph. For the downshift side, lightly press and hold the shift lever at the downshift cone and immediately begin to ease the clutch out to the 90% point and hold it there. Do not use the throttle on the downshift and do not use your brakes. Do not return your foot to the peg until the clutch is fully released. The clutch should be fully released before rounding off the corner.

Sequence:

- a. Choose any student motorcycle and move it to the perimeter.
- b. Demonstrate shifting as described above.
- c. Demonstrate the up-shift for two passes.
- d. Stop exactly as in exercise 2.6.

Exercise 3.6 - Practice skills in combination

Similar to exercise 2.5, with the addition of upshifting to 2nd gear before the board.

The sequence for stopping is written on page 6 of the student booklet. Roll off the throttle at the cue cones, then apply the brakes. After the brakes are applied, squeeze the clutch and downshift. The downshift can be timed anywhere between the application of the brakes and before putting the left foot down.

Optional Session 3 Exercise 3.7: Basic skills practice:

Chapter 3: Conducting the Exercises

This chapter provides details to conducting the Begin2ride exercises. It is written assuming that you have complete and immediate knowledge of what is contained in the b2r outline document, the Student Booklet, the exercise's Range Cards, and Chapter 1 & 2 of this Range Guide. Please study these documents first and thoroughly.

Note that your proficiency to demonstrate the exercises will be directly connected to your proficiency to coach students in the exercise. Be able to demonstrate every exercise exactly the same as the students should ride the exercise.

Instructor Objectives:

We are teaching the basic skills needed to operate a beginner motorcycle with confidence and control, while riding in a parking lot.

By the end of Session 1, students must be able to:

First, understand and exhibit good posture

Second, demonstrate some skill and knowledge of the controls

Third, get underway (start) and stop smoothly (note: Students who cannot demonstrate these skills will require remediation prior to attempting Session 2. This may be accomplished by having the student repeat Session 1 or a one-on-one session outside of the regular sessions.)

Students who were unfamiliar with motorcycles will now have some familiarity.

By the end of Session 2, students must be able to:

First, continue to exhibit good posture

Second, demonstrate increased skill and knowledge of the controls

Third, get underway (start) and stop smoothly with increased control

Fourth, demonstrate an introductory level of skill and knowledge of turning and leaning

By the end of Session 3, in addition to previously learned skills, students must be able to:

First, adjust speed and position with control

Second, demonstrate understanding of turning left and right with control

Third, demonstrate smooth operation of combination skills to include shifting while moving and adjustment of speed and position while turning

Conceptually, Session 3 graduates should be able to ride their first bike home from the dealer or seller.

Again, we are teaching the basic skills needed to operate a beginner motorcycle with confidence and control, while riding in a parking lot. **Do not** relate anything contained in the Sessions 1, 2, & 3 exercises to street riding, (except that, skillful application of "the basic physical skills" will be crucial to operating a motorcycle with control, anywhere). Students at times seem preoccupied with street riding, keep them focused on the component skills.

You may relate that a particular exercise is “designed to practice the basic physical skills of controlling a training motorcycle in ‘this’ parking lot”.

We are using a building block process technique of instruction. In general, focus your directions and efforts on the main component emphasized for the particular exercise. Note: On the card, near the end of the directions, the statement, "Remember ..." is the component you are emphasizing.

Students (and other human beings, including instructors) learn by doing. We emphasize simple, brief, and clear directions, clean demonstration, and clear and “un-wordy” narration.

How to use the cards: In general, read the cards!

The components are:

The Title

The Introduction

Point out path of travel

The Directions

Demonstration, narration includes “Remember” points

Ask for questions and answer appropriately

If necessary, briefly Q & A to ensure student understanding of the main component of the exercise.

When moving the students to the staging area for the first time, order the students from approximately fastest to slowest as you determined during the previous exercise.

Coach the students into and out of staging. Stand in front of the staging area, facing the perimeter. Return the students to the staging area after each exercise that begins from the staging area.

All reversals are done from the short side of the perimeter, down the middle of the range. This also applies to instructors working alone. All reversals are typically initiated by the senior instructor or as directed by the senior instructor.

Students do not always perform “path of travel” or reversals as expected. Choosing a strong front or “lead” rider and being clear with instructions can reduce unexpected actions. If they happen, stay calm and stage if necessary to repeat instructions. In general students should be directed to follow the rider in front of them.

If you need to stop a student for remediation during an exercise,

Separate them, from others by moving toward the center of the side you will be stopping the student on. Instruct the student to stop and go to neutral. Stand such that the student is between you and the range.

Coach them, while maintaining VRC.

Rejoin them, Direct the student to begin riding to the outside of the perimeter and the

corners, and merge when there is enough space to merge. State that it is OK for them to take a complete lap outside the perimeter. Direct traffic as appropriate. (Note: Do not have the student merge into the exercise from where you had stopped the student.)

When working with multiple instructors, instructor movements should in general be choreographed and professional. When necessary, movements should be communicated prior to exercises so both instructors know “where” and “what” they should coach.

Instructors share responsibility for “conducting the exercises as designed” however, the senior instructor is “in charge” and is ultimately accountable.

Many beginners apply extra attention to squeezing the clutch so as not to stall. This in turn creates too much “squeeze” on the front brake (grabbing brake). Coach this immediately. Tell the student it is more important to learn how to use the front brake correctly than it is to stall while stopping (the motorcycles are electric start). For students having difficulty with grabbing the brake, coach them to squeeze both levers lightly.

Conducting Session 1:

Exercise 1.1 – Getting introduced to your motorcycle:

Place motorcycles in rows of up to eight motorcycles, with six feet of separation between the motorcycles laterally and six feet of separation between the front row’s rear tires and back row’s front tires. If there are two rows, the second row is positioned off-set to the first row so that both instructors can easily see the second row.

The students should be assigned to an appropriately-sized motorcycle before exercise 1 is started. Students are required to be able to touch the ground with both feet while seated.

Have them walk around the bike and briefly inspect it and memorize the number on the head light so they can easily identify it. Then gather the students in front for the directions and demo.

Read the exercise name and introduction, then direct the students through the exercise by having them perform component skills while you direct the practice. The first time they mount, lead them through the mounting sequence. The first time they dismount, lead them through the dismount sequence. On subsequent mounting and dismounting, coach individually as appropriate.

Evaluation of posture is very important. Use extra time to establish the students good posture here. Have them assume the correct riding posture and then evaluate and coach every student on their posture before moving on. The evaluation of the students’ posture is your guide to make sure the motorcycle “fits” the student. Students are reminded throughout the exercise to keep their wrist down on the throttle and their left fingers covering their clutch.

Leaning and turning the handlebars in this exercise assists you in establishing posture and “fitting” the motorcycle to the students. The students are directed to turn the bars all the way

to the left and right several times, have them scoot forward toward the gas tank and turn left and right again, ask if they feel they have more control. They should do this on their own several times, and be able to turn the bars without turning their shoulders or completely extending their arms. The students should then be directed to lean the bike to the left and right several times. They should lean the motorcycle back and forth underneath them several times, while keeping their head up.

Guide the students through dismounting, congratulate them on not falling and have them remount on their own so we can practice using the primary controls.

Part 1 b

When mounted, remind students to assume correct posture or “fix their hands”(cover the clutch not the brake, throttle wrist down)

It is important for the students to actively manipulate the primary controls.

When identifying the throttle, instructors must evaluate the student's throttle operation to assure smooth roll-on and roll-off application. Direct them to hold the throttle comfortably (not tightly). Then ask the students to perform the 1/4, 1/2, full, and close throttle movements. As you tell the students to move the throttle smoothly with patience, carefully evaluate that they are operating it smoothly with patience, and that their wrist down stays in the level and then down position.

After introducing the wrist down and throttle use, have them place their wrist up and then simulate that they inadvertently over-revved the engine, as a result they would lean back causing even more acceleration. This why it is important to keep the wrist down ‘while learning’ to ride”. Practice with the wrist down once or twice more before moving to the front brake lever.

The first thing they need to practice on the brake is releasing the brake and returning their fingers to the throttle. Simple squeeze and release commands work well. Once they know to release the brake and return their fingers to the throttle, explain that the brake is not used with only one intensity. Have them lightly squeeze, then squeeze more, then more. This is what we mean when we say “a progressive squeeze”.

For the clutch have them squeeze it in quickly (they should already be covering it,) then instruct them to release it half way and hold it there. Tell the students that the last part of the release is when all the power is delivered to the wheel.

Have them squeeze both levers at the same time. They should notice the difference in the feel of these controls. Working the hands simultaneously and in combinations is important here.

We do not manipulate the gear shift lever in this exercise since it will be thoroughly addressed in later theory and exercises.

Students need to know where to place their feet on the pegs.

They should be able to place the balls of their feet on the respective peg without touching the brake or gear shift lever (one at a time of course). Tell them it is okay to look at first, however once they gain confidence they should perform this without looking down.

We briefly work the rear brake; however, do not emphasize the rear brake here. In this exercise, do not address braking technique for efficient stopping, or using both brakes at the same time. All of session 1 is to emphasize properly using the front brake only.

Review of controls in combination:

Tell them to relax their hands to their sides. Then place their hands in the proper position on the controls.

Perform a short review of the hand controls.

Have them practice closing the throttle and squeezing the front brake lever, while keeping the throttle closed. Coach individuals how to squeeze the brake and keep the throttle closed, as appropriate.

Then practice the light squeeze of the brake while squeezing the clutch, then releasing the brake followed by easing the clutch. Mention that this sequence is common for riders and they should be able to feel the difference in controls.

Exercise 1.2 – Practice looking well ahead, using the front brake, and holding on:

If there is a “most important exercise of the Begin2ride program” exercise 1.2 is likely it. Do not rush exercise 1.2. Spend extra time here and follow the card closely.

This exercise requires the student to move the motorcycle while walking beside it and while straddle walking with the engine off. The student must be able to touch the ground with both feet, and be able to complete the straddle walk by propelling the motorcycle with their own feet while sitting on the motorcycle.

At the end of the directions, show the stop signal and ask, “What is this signal?” Remind them to only use the front brake for this exercise. Note that front brake use is the only required braking for all of session 1.

The instructor may assist by pushing on the saddle during the straddle walk of appropriate students to help reduce the chance of student fatigue. A remedial technique if there are many students without strength to push the motorcycle on their own is to pair up the students, and have one student give a gentle push while the other student straddle walks, then switch positions after confidence is gained.

The first instructor position is about 30 feet directly in front of his/her group, then carefully walk backwards.

Check that all the motorcycles are in neutral and that students are not covering their clutch (this allows better control while pushing for the first time). Signal them to walk forward about 3 feet and stop. Note that for the very first push the students will often drop their head.

Expect and allow this looking down while they get the “feel” of the exercise. After they get the “feel” of the push, command them to start with their head up, looking forward, before they begin moving.

Have the students move forward a minimum of 20 feet before you give the stop signal. You may repeat this step as appropriate. Next have the students turn toward the staging area (don’t call it that as they do not know what it is yet), creating a single file and assign them to a cone, where they should stop with their front tire next to it. Tell them to put their sidestand down.

During this exercise, watch for students who grab the front brake. (Now is the time to establish the feeling of the progressive squeeze on the front brake.) To do this, begin by instructing them to keep their fingers curled around the throttle without squeezing the grip. When it is time to brake, they should reach for and lightly squeeze the lever, then increase pressure on the lever to increase braking force. When finished braking, their hand should return to the throttle, it should not be covering the front brake lever.

For the straddle walk portion, have them make 4 passes (2 Round Trips).

1st pass: Stop at midrange. Straddle walk speed should be slow.

2nd pass: No stop required. Straddle walk speed typically is faster.

After 2nd pass turn-around, have students shake out arms and catch their breath.

3rd pass: No stop required. Encourage a faster straddle walk on this pass.

Conduct the “Centering yourself on the motorcycle” practice by holding on with the knees.

4th pass: Encourage the students to straddle walk as quickly as they can while maintaining good control.

To turn the students around, after all the students have stopped, with their front tires within approximately 6 inches of their target cone, command them to turn the handlebars right and straddle walk the motorcycle 90 degrees to the right (until parallel with the perimeter). Command them to look over their left shoulder, turn the handlebars to the left, and complete the turn by straddle walking forward and to the left until they come full circle, lining up the front tires within 6 inches of the target cones.

If necessary, gently coach them to place their front tire next to the cone. Often if they are too far from the cone, they did not go far enough to the right before turning, be sure to show them exactly where if necessary. If a student asks which side?, tell them to the right of the cone, however, what really matters is that they are near the cone, on either side. The student being able to stop the front tire near the cone is a measure of their directional control.

Exercise 1.3 – The starting controls and shifting when the engine is off:

See Card. Note that exercise 1.3 and 1.4 require greater instructor preparation as the directions are not read directly from the cards, they are instead integrated with the demo.

Exercise 1.4 – Patient throttle control and shifting when the engine is on:

See Card.

Exercise 1.5 –Adding more power while rocking and power-walking across the range:

Exercise 1.5 has two parts, rocking and straddle walking under power.

The students are learning how to coordinate throttle roll-on and clutch-release, with emphasis on controlling the clutch.

Instruct the students to mount, start engines and warm the engines for about a minute. Have them practice patient throttle control in neutral.

Rocking step (take plenty of time here):

Stand about thirty feet in front of your group. Command them to start engines and warm them using patient throttle control. Do not have them place motorcycle in gear until the engine can run smoothly with the choke off.

When ready to start the rocking practice, command them to squeeze the clutch, place motorcycle in 1st gear, and put both feet down. The students should practice the rocking with no throttle until they gain some confidence with their clutch control.

When individually coaching a student, direct the student through the steps until you are satisfied that they have sufficient control to practice on their own. Position yourself in front of the motorcycle and slightly to the student's left to avoid intimidating the student. Be sure to maintain visual range control, monitoring the students who have started.

If the students are too short to rock back with their heels on the ground, it is sufficient if they can reach the ground with both feet to move the motorcycle slightly to the rear.

When students are demonstrating good clutch control without the throttle, tell them to practice while adding power with the throttle.

Power walking:

The students should not start power walking until they have confidence with their throttle roll-on and clutch-release coordination. If a student attempts the straddle walk and is having difficulty, have that student practice the rocking step again. The goal is that the students do not stall (or “wheelie”) the motorcycle.

Complete two trips across the range (one round trip), having the students stop in the middle of the range each time. End the exercise after one round trip. Typically we only conduct one round trip of the power-walk in exercise 1.5 since the beginning of the next exercise the students will continue to practice the power walking without stopping in the middle of the range.

As they power walk listen for abrupt throttle roll on or uncontrolled use of the clutch, coach as appropriate. Failure to accomplish this skill is the most common reason students require remediation prior to session 2.

Exercise 1.6 - Getting Underway Smoothly:

Even though the class only needs to power walk once across the range, individual students

may need to be coached to continue power walking until they can confidently begin moving. For students who need additional practice of power walking, tell them not to put their feet on the pegs, however, they may lift their feet off the ground during this practice.

This is where coordination of throttle roll-on and clutch release is established and deserves extra emphasis. The students should be confidently power walking quickly on the last trip across before you tell them to put their feet on the pegs. After their speed and performance is increased, encourage them to lift their knees higher and higher, until they can put their feet on the pegs.

For any of the students, do not over coach their first two tries at putting their feet to the pegs. Remember students learn by "doing". Only coach for them not to put their feet to the pegs and return to the above bolded paragraph, if appropriate. If an individual student has difficulty maintaining a straight path when starting out, tell them to straddle walk quickly at least five steps before lifting their feet..

However, if a student can smoothly get underway in a straight line while bringing his/her knees to the tank as they accelerate without straddle walking, that is to be encouraged.

If a student needs more practice coordinating throttle roll-on and clutch release, command that student to power walk in exercise 1.6 until you direct otherwise. Command them not to lift their feet to the pegs. These students, if they decide to continue to session 2, will be required to repeat all of Session 1 before continuing to Session 2.

Occasionally, riders ride with greater skill than the average beginner, ask only them "how is the pace of the course for you" if they say it is about right then have them continue, if they seem or say they are bored ask them to try using both brakes. If they can stop with control while using both brakes they may be encouraged to try session 3 next.

Session 1 is where the instructor will decide if a rider needs more practice before session 2, is an average student learning at the proper pace or rate, or needs more challenge.

To end the exercise, after the final pass across the range, have the students shut off the engines after they turn the motorcycles around, ensuring that their key is off. Have them dismount, put their gear away and meet at the table for the Session 1 wrap up.

Optional: Exercise 1.7 – Practice straight line riding:

Do not over coach this exercise. If you need to coach many items, end the exercise and wrap up the session.

Students are not required to use the rear brake in this exercise.

On the first pass, in general you do not coach unless there is a specific safety issue. On the second pass you may coach students to speed up. Do not coach braking unless students have enough speed and are stable.

End this exercise once you know how you will grade the students: Repeat b1, yes for b2, challenge b3.

Conducting Session 2:

Exercise 2.1 - Session 1 review:

Be sure each student is proficient at each skill reviewed. This is practice time to make these skills second nature. Congratulate the students on their progress.

1a. Be sure that each student can confidently lean the motorcycle under them. Practice this until the students agree the motorcycle feels much smaller than the last time.

1b. The students must have confidence in shifting the motorcycle before starting the engine. Warm the engines with patient throttle control practice so that they are idling smoothly with the choke off. Be sure each student can easily find neutral with the engine on before finishing this exercise.

Exercise 2.2: - Practice looking well ahead, using the front brake, and holding on:

See card.

Exercise 2.3 – Building confidence with clutch control:

In your coaching, use the idea, “We know you can ride the motorcycle, we saw you do that last time. The purpose of this exercise is to practice your clutch control which is a skill you will use all the time!”

Exercise 2.4 – Practice Braking:

If there are two instructors, set up two sets of brake chutes. One start gate in corner #2 and one in corner #1. Have half the students line up in corner #1 and the other half in corner #2 start cones

To end the exercise: When the lead rider is at the start cones for the brake chute you are coaching, signal the lead rider to kill their engine. After all students are “stacked” in line, have them dismount and walk their bikes in single file to the staging area.

The coaching position is between the brake chute stop cones and the starting gate of the return brake chute.

Use the evaluation technique, "head, shoulders, hands, knees, feet." By the end of this exercise students should be stable, and be able to use both brakes to stop. However, if a student has trouble when using both brakes, coach the student to continue to practice using the front brake only and use the rear brake lightly when they are comfortable.

Be careful not to lose visual range control while coaching the stopped rider. Position yourself so you are facing the rider while speaking, keeping your back to the short side of the perimeter. After you have signaled the stopped rider to return to the end of the line, be sure to scan the range.

Do not end this exercise until all students can control their speed, with good throttle control, and stop with confidence. Do not proceed to the next exercise (i.e. eliminate this unnecessary risk) until all students are confident with these skills. This skill is required before acceptance to Session 3.

Students should maintain their speed and not roll off the throttle until their front tire passes the first cones of the brake chutes.

Note: If a student is able to get underway smoothly, and with control, that student may start with a foot on the peg. If not remind that student to take a few straddle steps before lifting placing feet on pegs and that they will need some speed before doing so.

Exercise 2.5 - Practice Straight-line stability

The rudimentary skill of straight-line stability is practiced to build confidence in the new rider. Beginner riders cannot know that many discontinuities they see are inconsequential for riders with straight-line stability. After this exercise the students will know just how common and easy it is to handle discontinuities if they have the skill of stability.

The board is a finished 1X6, 5 to 6 feet long, and is placed such there is equal distance from the start cones to the board and from the board to the first cones of the brake chute.

As exercise 2.5 is ending, evaluate the students speed and confidence. For the next exercise, the fastest and most confident riders are put in the front of the staging area. The slowest and least confident riders are placed at the rear of staging. Do this sorting in as non-obvious a manner as is reasonably possible.

Exercise 2.6 – Practice looking well ahead

Using tack and not being too obvious, place the fastest riders on the front staging tees and the slowest riders on the rear staging tees. The slowest rider should be put on the last staging T. Always use straight-line single file staging when available.

Explain to the students that they will always stage (park) at the end of the exercise in the direction the motorcycles are now with the front tire on the T. They should not pass any rider and stay in this order unless directed by an instructor to do otherwise. Tell them that after stopping they are required to kill the engine with the kill switch. They are to remain mounted until the last rider has stopped and all engines are off. They may leave the motorcycle in first gear.

Show all the students the signal for staging and tell them to stay at a stable and controlled speed when they come into the staging area and use their brakes to stop with control near their T. Fully brief the lead rider regarding signals to stage before the lead rider's first time

out.

The students start from the staging area. The path to the outside of the corners if run-out room is sufficient. If there is not sufficient run-out room then cut the corners, but be sure the students ride to the outside of the perimeter boundaries (outside the weave cones). The path of travel should look more like a large oval than a rectangle.

If a student is unable to start when signaled or stalls the engine, have the student straddle walk the motorcycle out of the path of travel. Ask that student to stand-by and you will help him/her in a moment. When that student is clear of the path, signal the next student to go.

After coaching the stalled student, if you are going to let the student rejoin the exercise, assist the student as follows: Direct the student to begin riding to the outside of the perimeter and the corners, and merge when there is enough space to merge. State that it is OK for them to take a complete lap outside the perimeter. Direct traffic as appropriate. Note: Do not have the student merge into the exercise from where you had stopped the student. Have the student look straight ahead and get underway smoothly first, riding to the outside of the path. After the student is stable, the student should begin looking to merge back with the other students.

After all students have started for the first time, stay near the staging area. Position yourself in front of the staging area with your body positioned so you can see the entire range. The purpose of this exercise is to get the students to use smooth throttle control and accelerate to a speed that is stable, as well as having them practice looking well ahead. Do not over coach the first two laps. Simply start the exercise, refrain from over-coaching. Stage the students after two to three laps if they are still moving too slow. After staging, direct the students to place their hands to their sides and take a deep breath. Briefly remind them of the objective and restart the exercise.

Emphasize visual directional control in this exercise. Coach the students to look well ahead, where they are going. If you don't need to stop them, or after you have re-started the exercise, move to the outside of corner #4 facing the students as they approach you from the short side. Coach the students to look by pointing down the long side and command, "Look well ahead!"

If necessary to encourage speeding up, move inside corner #4 to coach the students while they are still on the short side. As they are approaching corner #4, coach the students to accelerate, both verbally and with signals as they round corner #4. Since several students may be looking at you, point at and call to the student that needs to be encouraged to accelerate.

Watch for students squeezing the clutch in this exercise and coach them not to squeeze the clutch while slowing in this exercise. Explain to these students that the motorcycle can travel at a very low speed in first gear without the clutch being squeezed.

If rolling off the throttle slows them enough so they make the turn easily, that is adequate

slowing for this exercise. Be sure to evaluate these students are using their front brakes when stopping in the staging area.

If the class is in general having difficulty, stage the students and coach by correction. Coach them as a group and individually as necessary while they are stopped. Again, remind them of the objectives (let the bike lean beneath you, look ahead, speed for stability) and restart the exercise.

After the students can confidently ride to the left, stage them and explain that they will now practice riding to the right. For the next series of laps, assuming that the entire class is accelerating to at least 12 mph by the middle of the long sides, stand outside the path of travel up from corner #4. The coaching position is in the area where the students moving at 15 mph are applying their brakes to slow for rounding the corner since their speed has increased to the speed limit.

For students moving 12 mph or faster, coach them to slow with their front brake (stronger students can be challenged to try to practice with both brakes, if appropriate). Do not coach any student to slow if they are not above 12 mph at mid range. Be careful here, it is a common junior instructor error to mix up the coaching and goals of this exercise, “Practice looking ahead”, with the exercise in Session 3, “Practice adjusting speed”.

To reverse so they can stage going to the left: Give explicit directions to the lead rider before you start the riding-to-the-right portion of the exercise, the other students will follow the lead rider. One lap before you reverse them, signal the lead rider to slow, and indicate there is one more lap before the reversal. To return them to riding to the left, stand at the top of the perimeter between corner #1 and #2. Stand such that the riders can see you and would have difficulty riding past you without turning down the middle of the range. Direct both verbally and with signals to travel down the middle of the range and turn left, and stage.

Exercise 2.7 – Introduction to controlling lean (5 cone)

Briefly coach the students on the press and lean while their feet are on the ground. Stand in front and command press right and lean right, press left and lean left. Tell them to let the motorcycle lean beneath them. Watch for students steering and coach appropriately.

Once you are satisfied with the students practice in the staging area, start the riding portion. Initially move to inside corner #4 (or #2 if appropriate) and coach maintaining a steady speed of 12 mph. Initially encourage them **not** to lean but to concentrate on maintaining a steady speed of 12 mph.

Once the class is moving at a steady speed, position yourself in front of the staging area with your body positioned so you can see the entire range. The purpose of this exercise is to introduce counter-steering. Of course it is assumed that all the students are riding at a speed that is stable and are able to look well ahead. Do not over coach the first two laps. Simply start the exercise, refrain from over-coaching. Common coaching at this point would be to signal the students to relax and let the motorcycle lean beneath them.

If the students stage the students are still not comfortable or are unable to maintain a steady 12 mph after two to three laps, stage them. After staging, direct the students to place their hands to their sides and take a deep breath. Briefly remind them of the objective and restart the exercise.

Important note: If all the students are moving at a speed to maintain their uniform space cushion, then the students speeds will be different . This is because the students with confidence in leaning will travel wider around the cones (and hence longer distances) at a slightly higher speeds than those that are less confident in leaning and travelling less distance around the cones and slightly lower speeds.

Coach students who continue to travel slower than 12 mph to ride outside the cones until they catch up to the students in front of them, then return to weaving with very little lean.

Reversing:

Stage the students before reversing. Explain to the lead rider how to execute the reversal. Command the other students to follow the lead rider.

Conducting Session 3: Combination Skills:

Exercise 3.1 – Practice efficient braking:

The set up is similar to exercise 2.4.

Note that for efficient braking the clutch can be squeezed anytime after the application of the brakes and before the left foot goes to the ground.

Exercise 3.2 – Practice adjusting speed:

Using tack and not being too obvious, place the fastest riders on the front staging tees and the slowest riders on the rear staging tees.

Emphasize speed adjustment with control in this exercise. To do this, emphasize they to quickly speed up as they enter the long sides, then stabilize at 15 mph. As the exercise progresses, the students should be able to delay their braking until near the end of the long side, then quickly reduce speed to 8 mph, release brakes and round of the end. Coach students to maintain about 8 mph on the short sides.

The students start from the staging area. Make the path to the outside of the corners if run-out room is sufficient. If there is not sufficient run-out room then cut the corners, but be sure the students ride to the outside of the perimeter boundaries (outside the weave cones).

If a student is unable to start when signaled or stalls the engine, have the student straddle walk the motorcycle out of the path of travel. Ask that student to stand-by and that you will help him/her in a moment. When that student is clear of the path, signal the next student to go.

After all students have started for the first time, stay near the staging area. Position yourself

in front of the staging area with your body positioned so you can see the entire range. The purpose of this exercise is to get the students to confidently adjust speed by using smooth throttle control, accelerating quickly to 15 mph and stabilizing at 15 mph, and to have them practice using their brakes to quickly reduce speed to 8 mph.

Once you are satisfied that the students are stable, and assuming that the entire class is accelerating to at least 12 mph by the middle of the long sides, stand outside the path of travel up from corner #1. The coaching position is in the area where the students moving at 15 mph are applying their brakes to slow for rounding the corner.

Coach the students to obtain and maintain speed. To coach this, you may have to move more to the outside of the student's path of travel to coach a particular student. Since several students may be looking at you, be sure to point to the student you are signaling to prevent confusing the others. Point at the student just as they round the corner and start to approach you. Then give them the speed up signal in an animated fashion.

If some of the students are not quickly accelerating to 15 mph, you may have to move to the inside of corner #4 to coach acceleration, as in exercise 2.6. Note: Students who are allowed to begin session 3 have demonstrated previously that they can ride at 12 mph with control. If a student is having difficulty accelerating quickly to 12 mph in exercise 3.2, then the student should not have been allowed to join Session 3 by the Session 2 instructor. Also, exercise 3.1 is not ended until the entire class is accelerating above 12 mph for the braking exercise. Tactfully excuse the student who cannot quickly accelerate to 12 mph in this exercise.

Once the students are accelerating to stable speeds, encourage students to delay their braking, then brake firmly near the end of the long side to quickly slow to 8 mph. This helps students develop confidence in braking. Coach them early enough such that they may release the brakes and make an easy turn in a sweeping arc at the end of the long side of the perimeter. If a particular student is not using the front brake, instructors should simulate braking with the right hand and command "brake." Front brake use is required in exercise 3.2.

There is no reversal of exercise 3.2; students only practice adjusting speed to the left. They will practice controlling lean while riding to the right in exercise 3.3.

Exercise 3.3 – Practice controlling lean:

This exercise is conducted with students riding to the right. Instruct the students to ride around corner #1, then turn up the middle, ride to the end and turn right. They should begin on the far side of the range.

After all students have started for the first time, stay near the staging area. Position yourself in front of the staging area with your body positioned so you can see the entire range. The purpose of this exercise is to practice counter-steering and leaning at constant or "steady" speed. Of course it is assumed that all the students are riding at a speed that is stable and are able to look well ahead. Do not over coach the first two laps as long as no safety issues are present. Simply start the exercise, refrain from over-coaching.

Important note: If all the students are moving at a speed to maintain their uniform space cushion, then the students speeds will be different . This is because the students with confidence in leaning will travel wider around the cones (and hence longer distances) at a slightly higher speeds than those that are less confident in leaning and travelling less distance around the cones and slightly lower speeds.

If necessary move to inside corner #1 (or #3 if appropriate) and coach maintaining a steady speed of 12 mph. Initially encourage them **not** to lean but to concentrate on maintaining a steady speed of 12 mph.

Exercise 3.4 - Basic Cornering Technique:

Basic Cornering Technique is a combination of some basic component skills. By this exercise the students should have the skills from earlier exercises such as getting underway and stopping confidently, riding at stable speeds, good braking to adjust speed, adequate throttle control, good visual directional control and ability to look around while riding, and leaning (counter-steering) control. In this exercise they are going to improve their throttle control and leaning control.

Divide the class into two groups of six students or less. Put one group on the oval with a single instructor while the other group and instructor watch from the staging area while mounted with their engines off. Complete the oval to the left, then stage the first group and start second group. The instructor remaining in the staging area coaches the staging students. Typically, the instructors trade positions when the groups switch.

Direct the riders out of the staging area for a partial perimeter lap, then wedge them onto the ovals. Coach at least five laps to the outside of the oval. Additional laps can be conducted if students need more time to grasp the concept. Then wedge riders for a perimeter lap and stage.

At this point in the program, students should be proficient at braking to adjust speed and looking around while riding. The first element to practice in this exercise then is the gentle acceleration throughout the turn. To coach this stand outside the oval and back toward the apex, coach (do not yell) “roll a little, now a little more, now some more, and now some more...” This helps students understand that they should roll slightly at first, then continue rolling on the throttle throughout the turn. This coaching also helps to get their speed up as they exit the turn so the braking or setting entry speed, portion can be accomplished.

As they improve with their throttle control, coach as needed their leaning control. You may move inside the turn if necessary.

For setting entry speed, students must learn how to time the proper braking. Once they have the timing, then they add speed to develop confidence in braking to adjust speed for cornering. Proper timing of the braking in this exercise means rolling off the throttle and touching both brakes at the appropriate time before the turn, then releasing both brakes prior

to the entry cone. Once they have developed their speed, they, of course, will have to apply the brakes with more intensity.

Lastly, coach the look portion, and coach students appropriately (which includes no coaching at times). If a student can confidently brake to adjust speed, control throttle to adjust speed, and counter-steer to control lean, They can look anywhere they want to and still ride this oval! If you are over-coaching the “Look” in this exercise, immediately re-evaluate the student and detect what is really missing in the students skill set, particular not the throttle control and counter-steering/leaning confidence.

Use your right hand to simulate braking for both the left and the right turns. Use your right hand to point for the left turns, and use your left hand to point for the right turns.

If a student continues to start the braking “late”, before the student is approaching, move your coaching position forward even beyond the entry cones and into the approach area. As the students approaches, simulate and command “brake!”

Once the second group is finished practicing to the left, direct the first group out of staging, around corner #1 and up the center to reverse. Repeat the practice riding to the right the same way as riding to the left. Be prepared to command the students to take an additional perimeter lap if time and space are needed.

Note: In terms of practicing, there is no difference between riding to the right and riding to the left. Often students feel a difference between turning to the left versus the right. Coach these students to loosen their grip on both hand grips by “snugging” in their knees, and let the motorcycle lean more under them. Then focus them on loosening their grip on the throttle so as the motorcycle leans, they don’t inadvertently change the throttle position.

Exercise 3.5 – Smooth Shifting While Moving:

For 3.5a See Card.

For 3.5b

It is important that the students do not feel “rushed” at the beginning of this exercise. Tell them that they can stay in **first gear** and practice squeezing and releasing and holding the clutch at the cue cones for as many laps as they need to get comfortable.

For the first portion, the cue cones are placed with the two upshift cones at mid-range near the staging area. The single downshift cone is place symmetrically on the other side.

Be sure the students understand that they should accelerate prior to up-shifting to above 10 mph. Then maintain speed after up-shifting of about 12 mph, without exceeding 15 MPH. After some time, they should be able to shift without looking down.

After all students have started for the first time, stay near the staging area. Position yourself in front of the staging area with your body positioned so you can see the entire range. The main purpose of this exercise is for students to learn s clutch release to match engine speed to

road speed. Remember, they do not have to shift to learn clutch release for matching engine speed to road speed.

Do not over coach the first two laps. Position yourself inside the range near the upshift cones, and coach the lift and hold. Simply start the exercise, refrain from over-coaching, and stage the students after two to three laps. After staging, direct the students to place their hands to their sides and take a deep breath. Briefly remind them of the clutch release and hold technique and restart the exercise.

After several laps of coaching at the upshift cones, move your position to inside the perimeter at the downshift cue cone. Time your coaching by watching the students' left hands. Immediately after they squeeze their clutch for the downshift, simulate the releasing the clutch by extending your left arm and open your left hand until the fingers are extended with tips curled, and command "hold it at 90%".

Note: The amount of power being delivered to the rear wheel is related to, but not linearly proportionate to how far the lever is released. Emphasize any "ease" at the end of the clutch release. Of course each motorcycle's amount of clutch lever release and percent of power delivery are slightly different and can be adjusted. Typically, on the downshift, one can release the clutch quickly to 90% out, then hold it there with the fingertips, with the final 10% of release happening after the engine speed and road speed have "matched".

The principle of clutch release is the same for upshifting or downshifting. Any difference is attributed to the time of matching engine speed to road speed. For the sake of discussion, let us define 0% clutch release as when the lever is touching the grip and 100% clutch release when the lever is to the outmost position with no fingers touching it. One can imagine that from 0% to 50% lever release, almost no power is delivered and this part of the release can be done quickly. From 50% to about 90% some power is being delivered and clutch release must be done with more care. It is to be emphasized that from 90% to fully release the ease is most important for controlled power delivery.

If a student is having difficulty with smooth clutch release, coach by correction. Tell the student not to shift on every lap. If they miss the shift, they should stay in the same gear for a lap or two. Then tell the student to practice releasing the lever past the 75% point and to hold or hesitate at that point while NOT shifting, so as to get the feel of the matching speed process.

Normally engine braking slows the bike sufficiently for the corner. If braking is necessary, coach the student to not accelerate as much next time. The clutch should be fully released before the corner is rounded off. A common student error is to downshift too late and not have enough time to ease the clutch out before making the turn at the end of the range. The student is to lift or press on the shift lever as the leading edge of the front tire arrives at the cue cone. If students do not understand this, stop the exercise and explain.

Do not over-coach the first couple of laps. Stage the students after two or so laps. Direct them to place their arms to their sides and take a deep breath. Then briefly remind them of

the objectives and restart the exercise.

After the group has demonstrated understanding of the exercise and they are consistently shifting smoothly, Stage them, and adjust the cones so they can shift twice per lap, upshifting on the turns and downshifting on the long sides. Remind them not to accelerate after upshifting and not to exceed 15 mph.

Notice that adjusting the throttle during the downshift is not used during this exercise. The throttle is to remain closed until the clutch is fully released. If a student asks about it, acknowledge that it is normal to adjust the throttle while shifting, but for instructional reasons it is not part of this exercise. Emphasize that smooth clutch release (without throttle adjustment) is our main objective. By the end of the exercise, students may be using the throttle during the shift. As long as they have good clutch control, this is acceptable.

Exercise 3.6 - Practice skills in combination

Similar to exercise 2.5, with the addition of upshifting to 2nd gear before the board.

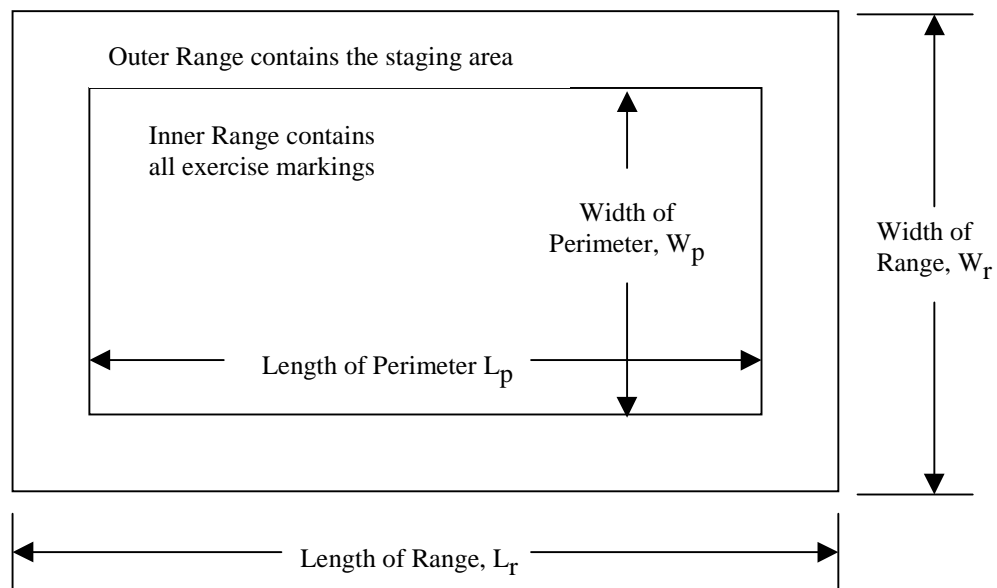
The sequence for stopping is written on page 6 of the student booklet. The students should roll off the throttle at the cue cones, then apply the brakes. After the brakes are applied, they should squeeze the clutch and downshift. The downshift can be timed anywhere between the application of the brakes and before putting the feet down.

Optional Session 3 Exercise 3.7 – Basic skills practice:

No demo. Start weaving in 1st or 2nd gear (student choice) using the 5 cone weave. May go to 7 cone weave (20 foot).

Appendix A: Range Layout

We define the Riding Range (simply referred to as “Range”) as the rectangular area of total suitable surface for riding. For convenience, we define an inner range and an outer range. Except for the staging area, all markings for exercises are contained on the inner range. The perimeter is defined as the lines connecting the four corners of the inner range forming a box. The outer range extends from the perimeter to the edge of the suitable surface. When speaking of length, the long sides will be referred to as “Length, L” and the short sides will be referred to as “Width, W”.



Standard size Range for up to 12 students:

The space from the outer perimeter to the edge of the range must be a minimum of 30 feet. This allows space for student to form lines during exercises, passing space, stage area space, and space for students stopping for various reasons.

The maximum class size is 12 students with two instructors. The total perimeter circumference = $L_p + W_p + L_p + W_p$ must equal 680 feet, and $100 \text{ feet} < W_p < 120 \text{ feet}$.

The perimeter circumference must be maintained at 680 feet so there is 56.7 feet of perimeter per student with 12 students. Do not make the perimeter greater than 680 feet even if there is room available. If inner range is larger than this max, coaching and range management is adversely effected.

The following table (units of feet) lists the potential range sizes for classes of 12 students:

<u>Perimeter</u>	<u>Wp</u>	<u>Lp</u>	<u>Min Lr</u>	<u>Min Wr</u>
680	100	240	300	160
680	105	235	295	165
680	110	230	290	170
680	115	225	285	175
680	120	220	280	180

Perimeter markings (dots) for student spacing:

Dots/marking are placed along both long sides of the perimeter at a 20 foot spacing. It is recommended that the inner 16 dots (suggested yellow) are a different color than the 8 dots (suggested white) at and nearest the corners. An additional 4 dots (suggested green) should be positioned at the center of each of the four sides.

Brake chute space requires 70 feet by 180 feet.

The braking exercises require two chutes, with opposite travel directions, separated by 25 feet, center to center separation. The brake chutes' start, entrance, and stop cone pairs are spaced five feet apart. The start and entrance cones are 100 feet apart. The entrance and stop cones are 30 feet apart. The total block of space needed for the brake chute exercises is: $20+5+20+5+20=70$ feet by $30+100+20+30=180$ feet.

Weave dots:

There are 5 cones for the main weave/leaning exercise. Starting from corner #4 (#2) and moving towards corner #1 (#3) place a cone at 40 ft, 80 ft, 110 ft (center dot), 140 ft, and 180 ft.

Basic Cornering space requires 110 feet by 210 feet:

For the basic cornering exercise, the entrance and exit cones are placed on the corners of a 50 foot by 100 foot box. This boxed is centered inside the total minimum area of $(30+50+30)$ 110 feet by 210 $(30+25+100+25+30)$ feet.

Range for 8 students: Lr > 210 feet, Wr >160 feet

A smaller range accommodating 8 students is of interest. Some instructors qualify to teach 8 students by themselves. The cornering exercise must be conducted with six students or less. The total perimeter circumference = $Lp+Wp+Lp+Wp$ will be greater than 460 feet (max 680) accommodating the required 56.7 feet of perimeter per student for all cases due to other exercise space requirements.

$Lp > 150$ feet to accommodate the cornering exercise.
Also, $100 \text{ feet} < Wp < 120$ feet,

<u>Perimeter</u>	<u>Wp</u>	<u>Min Lp</u>	<u>Min Lr</u>	<u>Min Wr</u>
500	100	150	210	160

510	105	150	210	165
520	110	150	210	170
530	115	150	210	175
540	120	150	210	180

Range for 6 students: Identical to 8 students, except the cornering exercise does not have to be done in two groups.

Small and modified ranges:

The most space intensive exercise is Exercise 2.6 “Practice looking Well Ahead”. This will define the minimum Wr and Wp. Extra care in this exercise is warranted when conducting training near the minimum dimensions.

Range for 4 students:

Lr > 210 feet, Wr > 110 feet

Lp > 100 feet, Wp > 50 feet

Other exercise modifications required, please inquire.

Range for 1 student:

Lr > 190 feet, Wr > 90 feet

Lp > 100 feet, Wp > 50 feet

B1 exercises only, 1 student: Min is 140 feet by 50 feet