

**Monterey Police Department**  
**Basic Bicycle Patrol Operations Course – 24 hours**

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**I. REGISTRATION AND ADMINISTRATIVE ISSUES**

- A. POST Roster
  - 1. Attendance – 10% Rule
    - a. When applicable the absolute attendance for colleges
- B. Facilities concerns – break and restrooms
- C. Schedule of training
- D. Staff and Student Introductions
- E. Safety briefing and policies
  - 1. Everyone is a safety officer
  - 2. Course or terrain hazards will be clearly pointed out
  - 3. Emergency communications availability and responsibilities will be identified.
  - 4. Closest emergency medical facilities will be identified
  - 5. Safety Policy associated with this course is a standard handout

**II. COURSE OBJECTIVES**

- A. Familiarization
  - 1. As a patrol function and of the bicycle officer in the daily operation of the bicycle
  - 2. Provide them with the skills and techniques used in bicycle patrol
- B. Specific objectives to be achieved are:
  - 1. Bicycle care and maintenance
  - 2. Knowledge of appropriate nutrition and fitness
  - 3. Riding techniques on various surfaces
  - 4. Bicycle patrol procedures
  - 5. Firearm tactics incorporating the bicycle (optional objective)
  - 6. Apprehension / Arrest techniques
    - a. Mobility asset
    - b. Stealth asset
    - c. Visibility
    - d. Directed enforcement – special events
  - 7. Stair climbing / Stair descending
  - 8. Crowd Control Management
- C. Student Performance Objectives demonstrating proper riding techniques utilized when riding on various types of terrain including:
  - 1. Low / high speed maneuvering
  - 2. Shifting / braking techniques
  - 3. Formation riding
  - 4. Nighttime riding
  - 5. Wet / loose surface riding

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6. Curb jumping
- D. Suggested Specific Exercises in the Course – other appropriate exercises may be developed to these basic maneuvers
1. Slow Cone Maneuvers - Maneuver the bicycle through the following three cone patterns
    - a. Box - The student will enter a coned box and make a complete circle and exit the box without knocking down a cone or place their feet on the ground.
    - b. Snake (slalom) - The student will negotiate in and out of a seven cone line without knocking down a cone or place their feet on the ground.
    - c. Star - The student will enter a coned star pattern and make a complete circle and exit the star without knocking down a cone or place their feet on the ground.
  2. Mounts and dismounts - Mount the bicycle from a standing position and dismount the bicycle from a riding position
    - a. Step through dismount – Dismount the bicycle while slowly coming to a stop by bringing the inside foot through opposite leg and frame of the bicycle
    - b. Single peddle mount – mount the bicycle while rolling forward using a power pedal stroke position
    - c. Kickstand dismount – Same as “step through dismount.” Additionally use the right foot to lower the kickstand upon dismount.
  3. Curbs & object jumping – Riding up curbs and over objects (such as 2-3 stairs) using proper body position, balance and technique.
    - a. Curbs – See Curbs & object jumping
    - b. Limbo Bar Exercise – The rider will use proper balance and technique in order to lower their body while riding under a height adjustable bar
    - c. Bump – At a slow speed, bump/deflect off of a fixed object with the front tire using proper balance and control
  4. Braking - Various surfaces
    - a. Front brake only – Cone to cone using proper weight transfer and balance
    - b. Rear brake only - Cone to cone using proper weight transfer and balance
    - c. Front and rear brake together - Cone to cone using proper weight transfer and balance
    - d. Emergency braking – cone to cone using proper braking pressure to front and rear brake. 70% rear brake and 30% front brake

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**III. VEHICLE CODES AND POLICIES; ANATOMY OF A BICYCLE**

- A. Vehicle Codes – bicycle laws particularly and department policies
  - 1. Effectiveness of Bicycle Patrol discussion
- B. Equipment & Vendors - Lecture
  - 1. Informational handouts – commercial advertisements used as discussion of current products (with non-endorsement disclosure).
    - a. Uniforms
    - b. Helmet(s)
    - c. Gloves & shoes
    - d. Eye wear – daytime and nighttime
    - e. Lighting systems
    - f. Bike packs & racks
    - g. Safety gear – Sam Brown, baton, etc.
    - h. First Aid Kits
- C. Anatomy of a Bicycle – lecture/demonstration/participation
  - 1. Bicycle Nomenclature
  - 2. Equipment selection
    - a. Frame types and design
    - b. Tires
      - 1) Off-road tires
      - 2) On road tires
      - 3) Combination Treads
    - c. Components and how they work
      - 1) Groupo's (gear clusters)
      - 2) Shifters
      - 3) De-railers (gear changers)
      - 4) Brakes
      - 5) Handlebars and bar ends
      - 6) Kick-stands
      - 7) Computers
    - d. Sizing for the rider
    - e. Police Equipment
      - 1) Lighting
        - a) "Nightsun"
        - b) "Nightrider"
        - c) "Lights and Motion"
      - 2) Sirens
      - 3) Bike bags, packs and racks
      - 4) First Aid / CPR
      - 5) Tire kit & pump
      - 6) Tools
      - 7) Whistle
      - 8) Bike lock
      - 9) Gloves & hand cleaner

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- 10) Cite books
- 11) Report forms, 180's, tape recorder
- 12) Giveaways (baseball cards, stickers)
- 13) Print kit?
- 14) Water and Hydration Equipment
  - a) Bottles
  - b) Camel backs
- f. Clothing
  - 1) Uniforms
    - a) Color and design
    - b) Modern fabrics
    - c) Jackets
    - d) Shirts
    - e) Pants
    - f) Shorts
    - g) Underwear
    - h) Vests
- g. Safety Equipment
  - 1) Helmets
    - a) ANSI (American National Standards Institute)
    - b) SNELL (Snell Memorial Foundation, Inc.)
    - c) Size
    - d) Strap checks and adjustments
  - 2) Shoes
  - 3) Gloves
  - 4) Eyewear – day and night

**IV. NUTRITION AND FITNESS**

- A. Body Care
  - 1. Conditioning
    - a. Pre assignment to bicycles
    - b. Pre riding considerations
  - 2. Importance of water/hydration
    - a. Water and delivery systems
    - b. Energy drinks – careful of stimulants
    - c. Coffee – excessive caffeine issues
  - 3. Nutrition
    - a. Healthy food options
  - 4. Stretching all major muscle groups
  - 5. Factors that put you at risk
    - a. Pushing your endurance level
      - 1) Poor conditioning
      - 2) Improper technique / training
      - 3) Ignoring aches and pains

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- b. Personal Care – knowing your limitations
- c. Equipment fit and quality, footwear, seat too low or too high

**V. BICYCLE MAINTENANCE AND INSPECTION**

**A. Pre-Ride inspection**

- 1. A,B,C, Quick-Check
  - a. Air
  - b. Brakes
  - c. Crank & Chain
  - d. Quick releases
  - e. Check ride

**B. Inspection, repairs and routine maintenance**

- 1. Tires, rims and spokes
  - a. Tread and side-wall inspection
  - b. Fixing a flat tire
    - 1) Demonstration
    - 2) Exercise – each student will complete a front and rear tire removal, tube inspection and replacement
    - 3) Rim, spoke and hub inspection
- 2. Brakes
  - a. Function
  - b. Inspection
  - c. Cables
  - d. Adjustments
- 3. Drive train
  - a. Function
    - 1) Gear selection
    - 2) Pedal alignment and power stroke
    - 3) Mounting
  - b. Inspection
  - c. Cleaning and lubrication
  - d. Adjustments
- 4. Seat and Handlebar
  - a. Sizing
- 5. Frame and bearing inspection

**VI. FORMATION RIDING**

**A. Safety Brief**

- 1. Hazards
- 2. Muscle Stretching
- 3. Formation

**B. Field Exercise – First Ride**

- 1. Street riding

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- a. Road position(s)
  - 1) To the right
  - 2) Exceptions
    - a) Passing
    - b) Changing lanes
    - c) Turning
    - d) Avoiding hazards
    - e) Roadway width
2. Hazard recognition
  - a. Surface
  - b. Visual
  - c. Moving
3. Sidewalks and off road
4. Group / formation riding
  - a. Single file
  - b. Columns of two
  - c. Communication

**VII. RIDING TECHNIQUES – FIELD EXERCISES** *(See Appendix A)*

- A. Slow Speed Cone Maneuvers
  1. Box
  2. Snake (slalom)
  3. Star
  4. Concepts of “slow speed Maneuvers”
    - a. Low gearing (1-1, 1-2, 2-1, 2-2)
    - b. Continuous Pedaling
    - c. Drag or “feather” rear brake
    - d. Look ahead (to success) and surroundings
    - e. Look down fall down
    - f. Light front end
    - g. Weight centered
  5. Practicality of techniques and circumstances:
    - a. Crowds
    - b. Riding in Groups
    - c. Stop signs
    - d. Traffic
    - e. Tight spaces and around objects
  6. Limbo Bar “riding under low objects”
    - a. Tilt the bike to one side and lean the body in the other direction in order to lower your body position.
    - b. Move off the seat and straddle the bicycles top tube.
    - c. Look ahead and not at the crossbar.
    - d. Maintain continuous speed and control during the maneuver.

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- e. Encourage the rider to experiment with different positions and balances.
  - f. Low objects such as tree branches, tunnels and doorways may be encountered during bike patrol.
- B. Mounts and dismounts
- 1. Single Pedal Mount
  - 2. Step through Dismount
  - 3. Kickstand Dismount
- C. Curbs & object jumping or avoiding
- 1. Curbs
  - 2. Bump
  - 3. Limbo Bar Exercise
- D. Braking - various surfaces
- A. Front brake only
  - B. Rear brake only
  - C. Front and rear brake together
  - D. Emergency braking – cone to cone
- E. End of Ride/Day Routines
- 1. Clean Bikes
  - 2. Debrief and evaluation of training
    - a. Injuries – strains check
    - b. Mechanical issues check & repair

**VIII. TESTING**

- A. Written
- B. Performances
  - 1. Skills demo
  - 2. Obstacle Course

**IX. COURSE WRAP UP**

- A. Course and Instructor Evaluations by Students
- B. Course Certificates

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## Appendix A

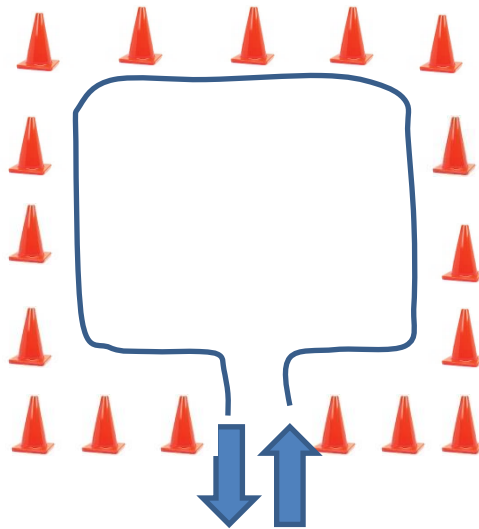
Slow Cone Maneuvers

“Box Diagram”

Number of cones: 17

Dimension: Entry and Exit - 48”

Inside measurement from cone to cone – 8’6” square





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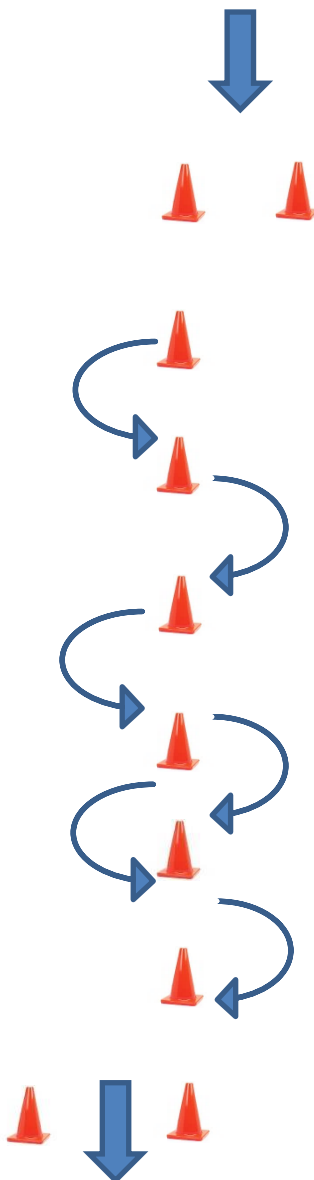
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Slow Cone Maneuvers

**“Snake Pattern”**

**Number of cones:** 10

**Dimension:** Cone to cone – 40”. Entry and Exit - 48”. 124’ from start of obstacle course (light pole) to start of snake.



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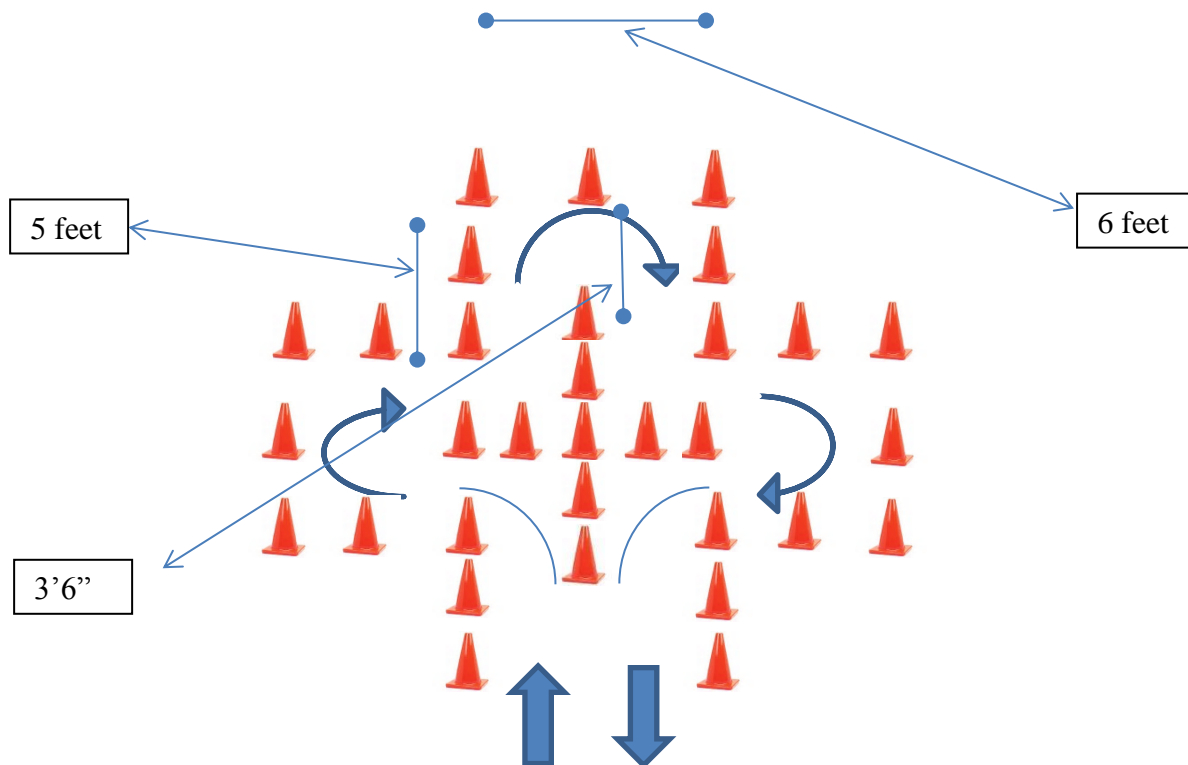
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Slow Cone Maneuvers

*“Star Pattern”*

Number of cones: 32

Dimensions: See Diagram. Measurements are from inside cone to edge to inside cone edge



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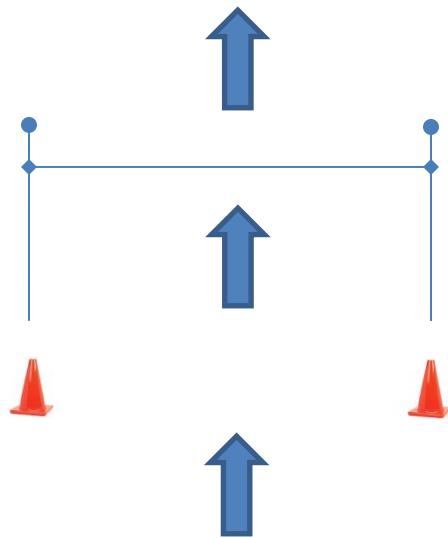
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Riding Under Low Objects

“Limbo Bar”

**Number of cones: 2**

**Dimension: Entry and Exit: 6 Feet from cone to cone**



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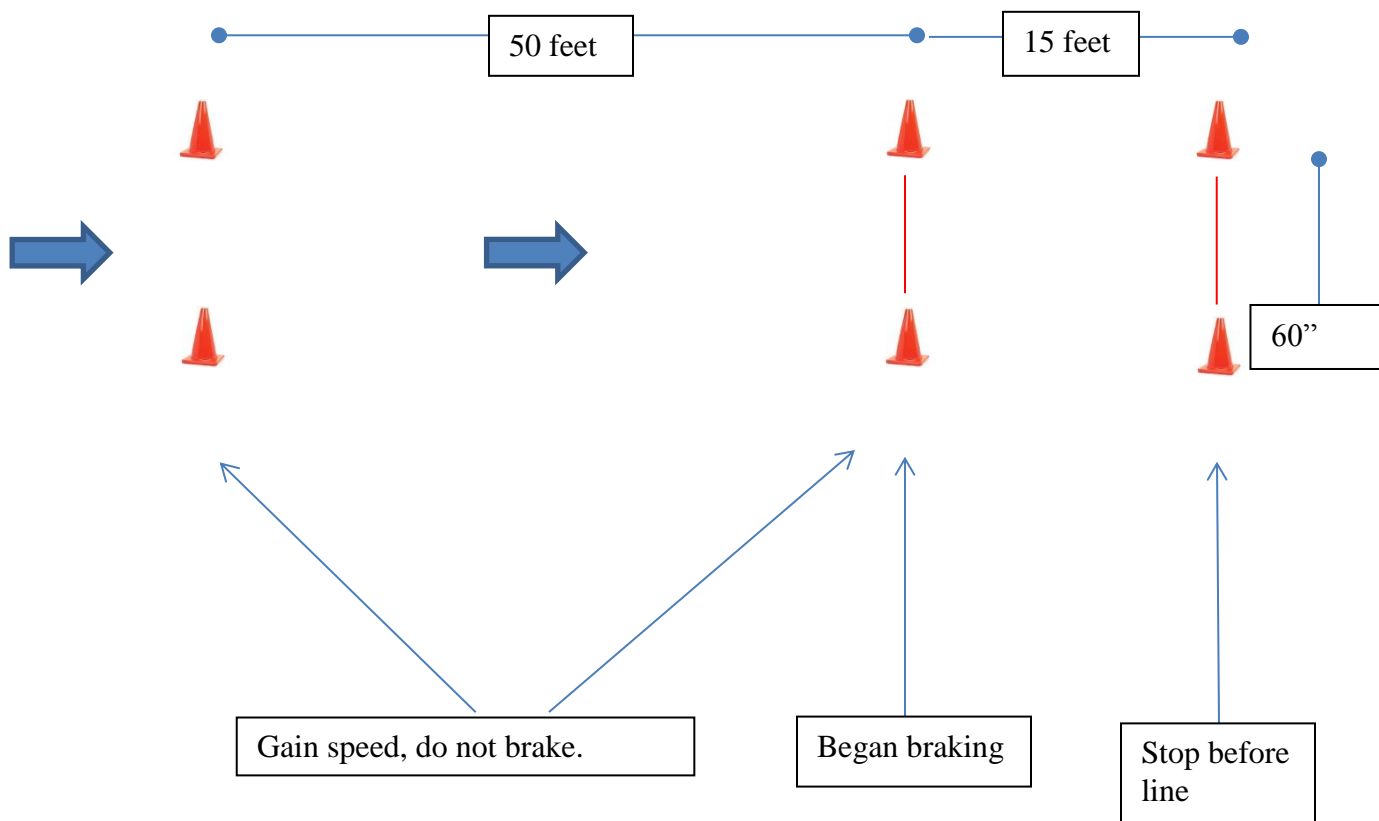
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Braking

“Emergency Braking Diagram”

**Number of cones:** 6

**Dimension:** 50’ from first set of cones to second set of cones  
15’ from second set of cones to third set of cones  
Entry and Exit – 60”



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“Mounts & Dismounts”

Goal:

- The student will successfully demonstrate how to properly mount the bicycle from a standing position and dismount the bicycle from a riding position utilizing the following techniques.
  1. Single Pedal Mount
  2. Step through Dismount
  3. Kickstand Dismount

Objective:

- The student will successfully demonstrate a Single Pedal Mount:
  1. The instructor will teach the student the following concepts of a Single Pedal Mount:
    - Bicycle in an upright “standing” position
    - Rider positioned next to bicycle with both hands on the handlebars
    - Place outside foot (left leg/left pedal) on pedal inside retention cage
    - Bring pedal to a “power” position at 3 O’clock
    - Push off the ground with rear foot to propel bicycle
    - Using a power pedal stroke, push the pedal down to propel forward movement (always looking ahead)
    - Bring opposite leg over the bicycle and sit on the saddle
    - Place other foot on pedal inside retention cage
- The student will successfully demonstrate a step through dismount:
  1. The instructor will teach the student the following concepts of a step through dismount:
    - Looking ahead
    - Lift body off the saddle (standing position)
    - Take one foot out of retention cage (balance weight on bicycle)
    - Bring unsecured foot to the opposite side of the bicycle (body is positioned only on one side of the bicycle)
    - Bring inside foot through opposite leg and frame of bicycle
    - Apply gentle pressure to the brakes, allowing bicycle to come to a gradual slow.

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- Just before bicycle comes to a resting position, plant inside foot on the ground
- Remove outer foot from retention cage and lay bicycle down or apply the kickstand
- The student will successfully demonstrate a kickstand dismount:
  1. The instructor will teach the student the following concepts of a kickstand dismount:
    - Apply the same concept as a step through dismount
    - Looking ahead
    - Lift body off the saddle (standing position)
    - Take one foot out of retention cage (balance weight on bicycle)
    - Bring unsecured foot to the opposite side of the bicycle (body is positioned only on one side of the bicycle)
    - Apply gentle pressure to the brakes, allowing bicycle to come to a gradual slow
    - Just before bicycle comes to a resting position, using inside foot, apply the kickstand by pushing it down in a locked position (towards ground)
    - Bring inside foot through opposite leg and frame of bicycle
    - Just before bicycle comes to a resting position, plant inside foot on the ground
    - Remove outer foot from retention cage and allow bicycle to rest in a propped up position supported by the kickstand
- Help students understand the practicality of these techniques and in what circumstances it may be effective:
  - Practical exercise: The instructor will first demonstrate each mount/dismount. Students will practice each dismount and show that they are competent in each
  - Practicality: Discuss with students when it is most appropriate to utilize a step through dismount vs. a kickstand dismount
  - Officer Safety: Discuss the importance of distance to other riders from where the officer mounts, as well as distance to persons/objects when the officer dismounts

Method of instruction:

1. Instructor will *discuss* the aforementioned concepts to the student
2. Instructor will *demonstrate* the concepts by performing each maneuver

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3. Instructor will *observe* each student as they practice each maneuver and give constructive critique and praise
4. Instructor will *individually instruct* students to successfully complete the objective depending on the student's ability to understand the techniques
5. The *Student will demonstrate* each skill by successfully performing each technique several times

*“Object Jumping”*

Goal:

- The student will successfully demonstrate “Object Jumping” utilizing precision bicycle control techniques.

Objective:

- The student will successfully ride up a normal sized curb.
- The instructor will teach the student the following concepts of “Object Jumping”
  1. Low gearing (gear should allow you to keep your momentum)
  2. Slow Speed
  3. Ratchet you pedals until one foot is up in the power pedal position in order to apply power through the curb
  4. Pedal through
  5. Light front end and pull up on the handle bars
  6. Shift weight to the rear
  7. Set the front wheel on top of or on the other side of the object
  8. As soon as the front wheel has hit the ground, shift the weight forward to minimize the weight on the rear tire
  9. Look ahead (to success) and surroundings
  10. Look down, fall down
- Help students understand the practicality of this technique and in what circumstances it may be effective:
  1. Curbs and stairs to ascend
  2. Know your ability and when to walk your bike up the stairs

Method of instruction:

- Instructor will *discuss* the aforementioned concepts of “Object Jumping” to the student.
- Instructor will *demonstrate* the concepts by ascending a curb.
- Instructor will *observe* each student as they practice ascending curbs and give constructive critique and praise. *Instructors will post on each side of the*

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curb for safety. Their task is not to prevent the rider from falling, but to soften their fall and guide the student to the ground if needed.

- Instructor will *individually instruct* students to successfully complete the objective depending on the student's ability to understand the techniques.
- The *Student will demonstrate* "ascending stairs" skills by successfully performing the technique two times and pass the obstacle course test.

"Braking"

Goal:

- The student will successfully demonstrate "Planned Braking" and "Maximum (Emergency) Braking" on various surfaces utilizing precision bicycle braking control techniques.

Objective:

- The student will successfully demonstrate planned braking, as well as the maximum braking technique, while maintaining control of the bike. The student will also demonstrate the ability to identify unstable and various surfaces while braking.
- The instructor will teach the student the following concepts of "planned braking"
  1. Observe all surroundings (surface condition, traffic, obstacles, lighting etc.)
  2. Fingers contacting both brakes
  3. Pedals flat
  4. Weight off the seat
  5. Weight transfer if needed
  6. Rear brake smooth application to control speed (CONTROL is vital)
  7. Be prepared for front brake application if needed
  8. Keep a wide field of view, and be prepared for the unexpected
- The instructor will teach the student the following concepts of "maximum braking"
  1. Observe all surroundings (surface condition, traffic, obstacles, lighting etc.)
  2. PEDALS flat. Max leg extension to move weight back on bike. Important!
  3. BUTT completely off and behind saddle and over rear hub. Must be in position prior to braking, difficult to overcome inertia .



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- Problems (baggy shorts, wide seats, rear rack pack, bike frame too big)
- 4. BRAKES. Ensure pedals and Butt are correct, then it's safe to apply both brakes.
  - Front brakes should be applied 2-3 times harder than rear. Essential to be prepared to release some pressure to reduce rear tire skid, if necessary.
  - Front brake needed to stop quickly. If misused = eject button. Expose in small steps to build confidence.
- 5. Complete stop three point stance (two tires and one foot)
  - Problem may be found with weight transfer and the rear rack pack.
  - Foot movement out of toe clip to ground. Practice. Inertia adds to difficulty. That means that while they are moving their body forward, they have to move their foot backwards, to get it out of the toe clip. These counter-directional movements tend to exaggerate the problems with inertia, especially for beginners.
  - Common tendency of most cyclists is to move their weight to the front of their saddle again before coming to a complete stop. If this weight transfer is too quick, inertia will catch up and you will be at risk of an "endo". Stay behind the saddle. Staying back isn't used every time you stop; it is saved only for those rare emergencies. It may not be pretty, but it works. Most importantly, it increases safety.
- Common mistakes for the instructor to be aware of
  1. Failure to move the weight (center of balance) back far enough;
  2. Failure to come to a complete stop at the conclusion of the drill;
  3. Failure to use toe clips, or using toe clips that are cinched too tightly;
  4. Releasing or increasing the brake while moving forward over the saddle;
  5. Failing to train students to establish a stable base by putting a foot down at the conclusion of the drill;
  6. Using a saddle that is too wide, or a bike frame that is too large, to allow the rider to get far enough back on the bike
  7. Failing to recognize rear wheel skid or load lightening, and adjusting front brake pressure accordingly.

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- Help students understand the practicality of these techniques and in what circumstances it may be effective:
  3. Proper braking is a vital component of safe bicycle operation. Emergency braking enables a cyclist to stop quickly and avoid striking vehicles, pedestrians, or any other object that suddenly blocks the path.
  4. Know your ability and maintain control
  5. In an emergency, the rider needs to come to a complete and controlled stop as quickly as possible.

Method of instruction:

- Instructor will *explain* the aforementioned concepts of “braking” to the student, and the practical exercise (attached in Emergency Braking Diagram)
- Instructor will *demonstrate* the concepts by braking, both planned and maximum/ emergency, on mixed surfaces (concrete, dirt, wet/slick). Complete emergency braking practical exercise.
- Instructor will *observe* each student as they practice braking and give constructive critique and praise. One instructors will post at the beginning of the maximum braking station, and one at the acceleration location. Their task is not to prevent the rider from falling, but to repeat and reinforce the importance of the maximum braking techniques.
- Instructor will *individually instruct* students to successfully complete the objective depending on the student’s ability to understand the techniques.
- The *Student will demonstrate* “planned braking,” maximum (emergency) braking” and “various surface braking” skills by successfully performing the technique two times and pass the obstacle course test.

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*“Bump Maneuver”*

Goal:

- The student will successfully demonstrate “bumping against an object” with the front wheel utilizing the below listed bicycle control techniques.

Objective:

- The student will successfully bump head on into a fixed object at a slow speed, maintain balance and continue riding. The object should be a fixed smooth surface, such as a cement retaining wall.
  
- The instructor will teach the student the following concepts of the “The Bump Maneuver”
  1. Ride head on to the fixed object at a slow speed
  2. Maintain a power stroke pedal position
  3. Brake slightly before the impact
  4. Bump the object with the front tire
  5. At impact, release the brake, allowing the impact to push the bike backwards
  6. Turn away from the object and peddle away
  
- Help students understand the practicality of this techniques and in what circumstances it may be effective:
  1. Officer will ride at slow speeds around confined areas with fixed objects.

Method of instruction:

- Instructor will *explain* the aforementioned concepts of the “Bump maneuver” to the student.

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- Instructor will *demonstrate* the concepts by performing the bump maneuver.
- Instructor will *observe* each student as they practice the bump maneuver and give critique and praise.
- Instructor will *individually instruct* students to successfully complete the objective depending on the student's ability to understand the techniques.
- The *Student will demonstrate* the "bump maneuver" skill by successfully completing the bump maneuver two times and successfully passing the obstacle course test