

EXPANDED COURSE OUTLINE

MOTORCYCLE- DUAL PURPOSE COURSE

I. Registration and Orientation (Classroom) 15 minutes

A. Registration

1. Class registration
2. Introductions

B. Safety Rules and regulations

1. Training motorcycles will only be ridden by students under direct supervision of an instructor
2. Obey all traffic laws
3. Motorcycle maintenance will be performed everyday prior to riding.
4. A safe margin of space will be adhered to when riding inline. (Two second rule)
5. If a mechanical problem is encountered, move motorcycle out of path of other riders.
6. Reckless operation of a motorcycle is grounds for dismissal.
7. No falling out of line or riding out of an exercise unless directed by instructor.
8. Mounting/dismounting will be done from the right side of motorcycle while applying pressure to front brake.
9. Sitting on motorcycle while side-stand is in down position is prohibited.
10. Do not associate with inmate workers.
11. There must be an EVOC Instructor with students at all times.

II. Introduction (Garage) 2.5 Hours

A. Familiarization with facility

B. Preventative maintenance

1. Students will be learn areas of routine maintenance and conduct a inspection of their own motorcycles
 - a. Engine
 - i. Oil checks
 - ii. Oil changes
 - iii. Valve adjustments
 - b. Battery/ Electrical system checks
 - i. Connecters
 - ii. Fuses
 - iii. Battery
 - c. Drive train
 - i. Wheels/Tires
 - ii. Sprockets/Chain

- d. Suspension
 - i. Settings
 - ii. Fork/ Shock maintenance
- e. Cables
 - i. Brake
 - ii. Clutch
- C. Motorcycle and Equipment Inspection
 - 1. Nomenclature
 - 2. Stand up Downed Motorcycle
 - 3. Assist student in developing techniques consistent with the safe operation of a motorcycle.
- D. Students will learn and perform a safety check on their motorcycle prior to riding
 - 1. Tire/ wheel inspection
 - 2. Chain tension
 - 3. Brake/clutch cable inspection
 - 4. Suspension check
 - 5. Steering adjustments
 - 6. Fuel/oil check

III. Basic Riding Skills (training pad) 17 hours 15 minutes

- A. The students will be taken to the motorcycle training pad to learn and review basic pavement riding skills
 - 1. **Basic Braking**
 - 1. Straight Line Braking using high visual horizon with shoulders upright and head and eyes looking straight.
 - 2. All braking and down shifting done prior to turns. No Braking in turns.
 - 3. Front and Rear Braking Ratios (70 front – 30 rear)
 - 2. **Emergency Stopping**
 - 1. An Emergency stop is executed by simultaneously turning off the throttle, disengaging the clutch, applying a controlled squeezing pressure to the front and rear brake in a controlled manner.
 - 3. **Turning the motorcycle**
 - 1. Inertia –Any mass in motion will remain in motion unless acted upon by an external force.
 - 2. Stability- A motorcycle will stay upright at any reasonable speed.
 - 3. Gyroscopic Effect- Motorcycles turn at higher speeds by leaning in the desired direction.
- B. Students will conduct a learning activity and practice basic pavement riding skills on the motorcycle training pad
 - 1. **Warm Up's**
 - 1. Circle's and Figure 8's
 - i. Ride within coned diameter circle transitioning to a Figure 8 (alternating directions)

- ii. Lock to lock turn required
- iii. Proper balance, control, and coordination of clutch and throttle.

2. **Cone Patterns**

1. Offset 90 degree turns (Flat & Incline)
 - i. Ride within coned area of a series of 90 degree turns.
 - ii. Promotes control of motorcycle at slow speeds in confined areas.
 - iii. Lock to lock turns required.
2. Intersection
 - i. Ride within coned intersection (alternating directions).
 - ii. Assists in beginning lock to lock turn in preparation for 18' enclosed circle in other exercises.
 - iii. Represents various turning situations in field of operations.
3. "S" Curves – Test Pattern
 - i. Various coned weave patterns incorporating lock to lock turns causing a change in direction.
 - ii. Three to four cone patterns set up, each increasing in difficulty.
 - iii. Promotes proper balance and control of motorcycle through proper use of clutch and throttle at slow speeds.
4. 40 MPH Deceleration – Test Pattern
 - i. Collision avoidance exercise.
 - ii. Promotes proper use of coordinated brake and clutch applications.
5. 30 MPH Cone Weave – Test Pattern
 - i. Collision avoidance exercise
 - ii. Develops muscle memory while learning to counter steer.
6. 180 degree Deceleration/Diminishing clearance – Test Pattern
 - i. Collision avoidance exercise.
 - ii. Incorporates proper braking and proper clutch/throttle control while maneuvering through a series of "S" patterns.
7. Key hole
 - i. Locked wheel circular turns within a coned pattern. (Alternating directions)
 - ii. Promotes balance with clutch and throttle control.
8. Stopping and Turning – Inclines
 - i. Coned weave patterns incorporating lock to lock turns causing a change of direction on both flat and inclined surfaces.

- ii. 3 to 4 patterns set up, each varying in difficulty.

IV. Riding Test- Pavement 1 hour

- A. Students will be required to perform and complete the following skills exams on the pavement motorcycle training pad
 1. Circles and Figure 8's
 2. Offset 90's Intersection
 3. Cone Patterns 1,2, and 3 (S turns)
 4. 40 mph Deceleration
 5. 30 mph Cone Weave
 6. 180 Deceleration
 7. Cone Pattern 3 (S-Turns)
 8. 30 mph Cone Weave
 9. 40 mph Deceleration
 10. 180 Deceleration

V. Introduction to Dirt Riding 1 hour

- A. Lecture
 1. Differences between road and dirt
 - a. Traction
 - b. Terrain
 - c. Techniques
 2. Motorcycle capabilities in dirt or off road terrain
 - a. climbing hills or inclines
 - b. moving through soft terrain
 3. Motorcycles capabilities in different terrains
 - a. Water
 - b. Rocks
 - c. Dips
 - d. Sand
 - e. Mud
 4. Braking capabilities in off-road terrains
 - a. Water
 - b. Rocks
 - c. Dips
 - d. Sand
 - e. Mud
- B. Videos
 1. Off road riding techniques
 - a. Instructors will show a video that displays techniques in various off road riding situations

- b. Clutch
- c. Throttle

VI. Basic off road riding Skills **2 hours**

- A. Students will be introduced to basic off road riding skills in a flat dirt section of the EVOC training facility
 - 1. Braking
 - a. Students will demonstrate straight line braking in dirt
 - i. Students will start by demonstrating a lock rear wheel skid in dirt
 - ii. Students will apply 70% rear and 30% front brake in dirt
 - iii. Students will apply 80% rear and 20% front brake in dirt.
 - b. Students will demonstrate braking and accident avoidance using the broadside slide technique
 - i. Students will be required to approach a static cone at no more than 20 mph and apply a rear brake skid to stop and avoid an accident
- B. Students will demonstrate basic off road riding skills in various terrains types around the EVOC training facility
 - 1. Turning
 - a. Students will learn and demonstrate various turning techniques on flat and inclined dirt sections
 - i. U turns
 - ii. J-turns
 - iii. K-turns
 - 2. Terrains- Sand, Rock
 - a. Students will be taken to a sandy terrain and demonstrate the techniques required for riding in sandy terrain
 - i. Students will learn how to un-weight the front wheel while riding in sand
 - ii. Students will understand having excessive weight on the front wheel while riding in sand can cause the front end of the motorcycle to sink
 - b. Students will be taken to a rocky river bed to learn how to control a motorcycle in rocky sections of terrain
 - i. Student will learn how to use slow speeds to maneuver through rocky terrain
 - ii. Students will learn how the front suspension and steering works in rocky terrain
 - 3. Hills- Accents and Descents
 - a. Students will be taken to areas with various size hills and learn different techniques for ascending hilly areas
 - i. Gear selection
 - ii. Changing gears during accent

- iii. Terminating mid accent
 - iv. Angle of attack
 - v. Body positioning
 - vi. obstacles mid accent
 - b. Students will learn and demonstrate how to descend various size hills
 - i. Gear selection
 - ii. Front vs Rear braking
 - iii. Body positioning
 - iv. Dealing with obstacles mid decent
- 4. Hazard course
 - a. Students will demonstrate learned techniques at a slow speed hazard course containing various obstacles
 - i. Rock
 - ii. Off camber terrain
 - iii. Ruts
 - iv. Railroad ties

VII. Off Road Ride 6 Hours

- A. Students will participate in multiple learning activity rides that will require the application of all learned techniques in areas similar to the students enforcement areas
 - 1. Wrightwood training ride
 - a. Students will ride on fire roads and forest service roads from the EVOC training facility to the community of Wrightwood.
 - i. The students will encounter various terrain types and will return to EVOC via the same route

VIII. Evaluation and test ride 9 Hours

- A. Students will participate in multiple learning activity rides that will require the application of all learned techniques in areas similar to the students enforcement areas
 - 1. Lake Arrowhead Evaluation and test ride
 - a. Students will ride pavement, fire roads and forest service roads from the EVOC training facility to the community of Lake Arrowhead.
 - i. The students will be evaluated on their ability to ride numerous terrain types and their utilization of learned riding techniques
 - ii. Students will return to the EVOC training facility via the pavement for highway 18.

IX. Course Evaluation 1 hour

- A. Course Critique
 - 1. Student will complete a course evaluation critiquing if the course and training was relevant to their patrol functions
- B. Instructor Critique
 - 1. Students will complete a evaluation of the instructors in the course