

E-bike Riding 101

a way that is safe for you and all other people using the transportation network. You'll learn safety, legal rights, and responsibilities. It's perfect for beginners, and equally valuable for experienced E-bikers that want to brush up on road rules.

At the end of this course, you will:

- Be able to define what is an E-bike and the classification system
- Know the rules of the road that apply to E-bikes
- Understand how to use infrastructure and what not to use while on an E-bike
- Know how to avoid common crashes
- Understand battery charging safety and storage

Section 1: What is an E-Bike

What the Law Says

ORS 801.258

Electric assisted
bicycles



Electric bicycles (or E-Bikes) are classified as "electric assisted bicycles," and are regulated like bicycles. Oregon law (ORS 801.258) defines an "electric assisted bicycle" as a bicycle that is equipped with an electric motor and that is a Class 1, a Class 2, or a Class 3 electric assisted bicycle.

The classifications system for e-bikes has been adopted into law. Here are the details:

1. "Class 1 electric assisted bicycle" means an electric assisted bicycle that:
 - a. Provides assistance only when the rider is pedaling (i.e. there is no throttle); and
 - b. Ceases to provide assistance when the bicycle reaches the speed of 20 miles per hour.*
2. "Class 2 electric assisted bicycle" means an electric assisted bicycle that:
 - a. May be propelled by its motor without a rider pedaling (there can be a throttle); and
 - b. Ceases to provide assistance once the bicycle reaches a speed of 20 miles per hour.*
3. "Class 3 electric assisted bicycle" means an electric assisted bicycle that:
 - a. Provides assistance only when the rider is pedaling (which means there is no throttle);
 - b. Ceases to provide assistance when the bicycle reaches the speed of 28 miles per hour.*

**The max speeds of these classifications are controlled by a speed governor/speed limiter.*

E-bikes are not subject to the registration, licensing or insurance requirements that apply to motor vehicles.

Section 2: Rules of the Road

Application of Bicycle Laws to E-Bikes

ORS 814.405

Application of
bicycle laws
to E-bikes →

An electric assisted bicycle shall be considered a bicycle, rather than a motor vehicle, for purposes of the Oregon Vehicle Code, except when otherwise specifically provided by statute.



Application of Vehicle Laws to Bicycles

ORS 814.400(1)

Application of
Vehicle Laws
to Bicycles →

Bicycles are Vehicles

Which means they are subject to the same rights and responsibilities as vehicles.

What does this mean?

The basics of this says that when using the roadway you are to follow the same rules as people driving, with a selection of exceptions including using bike facilities that are appropriate for an E-Bike (ie a bike lane) and the application of Stop as Yield law (that will be explained later on in this course). The flip side of this is that people driving are required to interact with people on E-bikes just like they would with other people driving.



But... Not all Bike Rights Apply to E-Bikes

ORS 814.410(1)e

ORS 814.410 regulates unsafe operation of bicycles on sidewalks. Section (1)e of this statute states that a person commits the offense of unsafe operation of a bicycle on a sidewalk if the person operates an electric assisted bicycle on a sidewalk.

What does this mean?

You are not allowed to ride your E-bike on the sidewalk. For now E-Bikes are allowed on Shared-Use Paths as long as those paths are not within the definition of "sidewalk".

Local	↑
State	→
Federal	→



- ♦ **Local** - Consult your local land management agency.
- ♦ **State** - OAR 736-010-0026 – Oregon Parks and Recreation Department does not allow electric bicycles on mountain bike trails. Contact the department for the most up to date information.
- ♦ **Federal** - Electric assist mountain bikes are considered motorized vehicles and have access to motorized trails. Contact the U.S. Forest Service Northern Regional for more information. On Bureau of Land Management (BLM) land you can't take your e- bike wherever you can take

Age Requirements for E-Bike Users

ORS 807.020(15)



A person may operate a Class 1, Class 2, or Class 3 electric assisted bicycle without a driver license or driver permit if the person is 16 years of age or older.



What does this mean? If a person is under the age of 16 years old they are NOT allowed to operate an E- Bike.

Section 2 Pop Quiz:

Please write answer to this quiz on back of the final page. Do not write on this page.

- If there is a lot of vehicle traffic I can ride my E-Bike on the sidewalk.
 - ☐ True
 - ☐ False
- I can ride my E-bike on a Shared Use Path alongside people walking and biking.
 - ☐ True
 - ☐ False
- People **MUST** be at least ____ years of age in order to legally operate an E- Bike.

Right Lane - Bike Lane - Take the Lane

There may be times when it is NOT practical to stay close to the right, including:

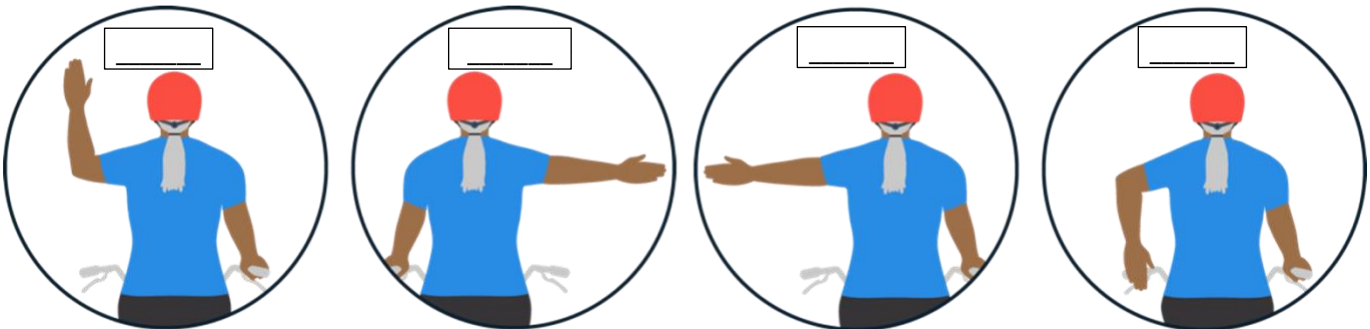
- When proceeding at the speed of traffic
- When the lane is not wide enough for safe passage
- To avoid hazards in the bike lane
- Left turning or traveling straight through an intersection
- Overtaking a slower moving vehicle



Know Your Hand Signals

Hand signals are what people riding E-bikes use to communicate to other roadway users. It makes the E- bike user predictable and safe.

Can you identify what each of the hand signals below mean:



See and Be Seen

Bike Light Requirements

You must have proper lights and reflectors on your E-bike during limited visibility, which is typically sunset to sunrise or when weather conditions obscures visibility from a distance of 1000 feet away.



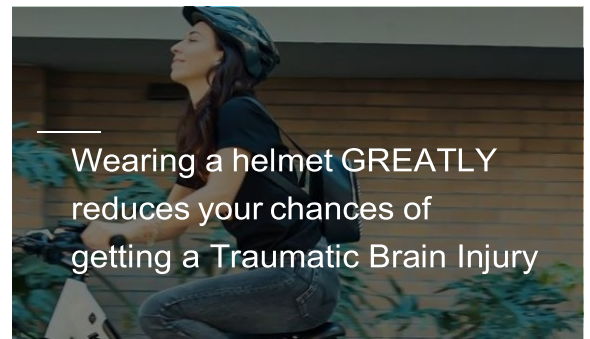
Front White Light: white light visible from a distance of at least 500 feet to the front of the bicycle.

Back Red Reflector: red reflector or lighting device or material of similar size or characteristic, mounted so it is visible from all distances up to 600 feet to the rear - a RED LIGHT is not required.



Common Sense

- ◆ Observe traffic signals
- ◆ Ride PREDICTABLE and under control
 - check speed and break early
- ◆ Ride on the proper side of the road
- ◆ Be a defensive rider
- ◆ Communicate with other road users and make EYE CONTACT with people driving - especially in intersections
- ◆ Start in eco mode (not turbo)
- ◆ Wear a helmet*



Etiquette

As a reminder, E-bikes are allowed on Shared Use Paths, but they are NOT allowed on sidewalks. When riding on a shared use path it is essential that you use your voice (on your right/left) or a bike bell to let other path users know you are passing them. When riding your E-Bike on a shared use path you are required by law to slow to walking speed when encountering other users.... do you know what "walking speed is"?



= 3 mph

More Tips on Etiquette:

- ◆ Communicate, Communicate, Communicate - give an audible warning to people when passing
- ◆ Be kind, be aware of your surroundings, and ride with the flow of traffic
- ◆ Install a mirror on your left handle bar to improve visibility your surroundings
- ◆ Stay on designated paths when riding through park areas - the green space of parks is not a shared use path and is not designed for E-bikes to ride on

Stop as Yield Law

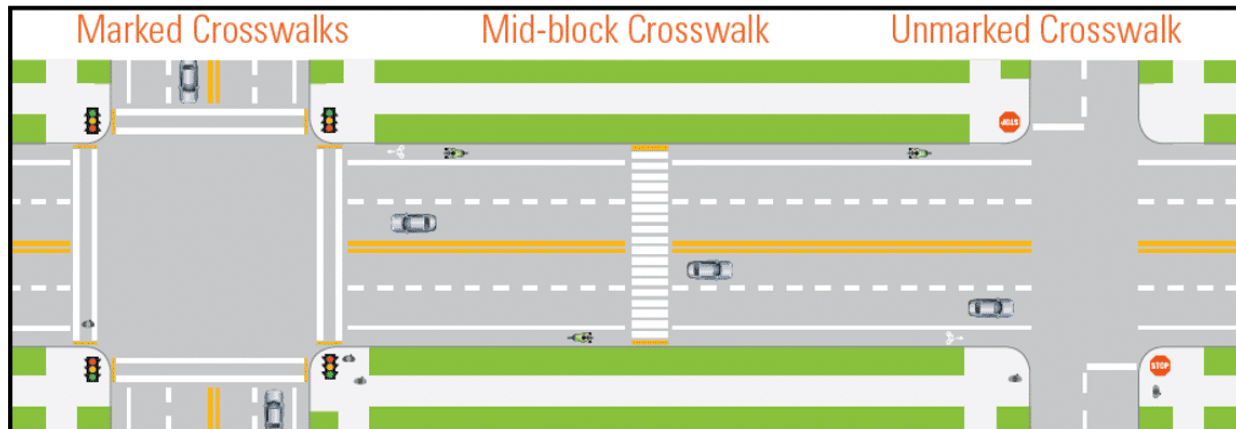
The Stop as Yield Law that applies to E-bikes too. View video here:



Section 3: Infrastructure

Oregonian Crossing

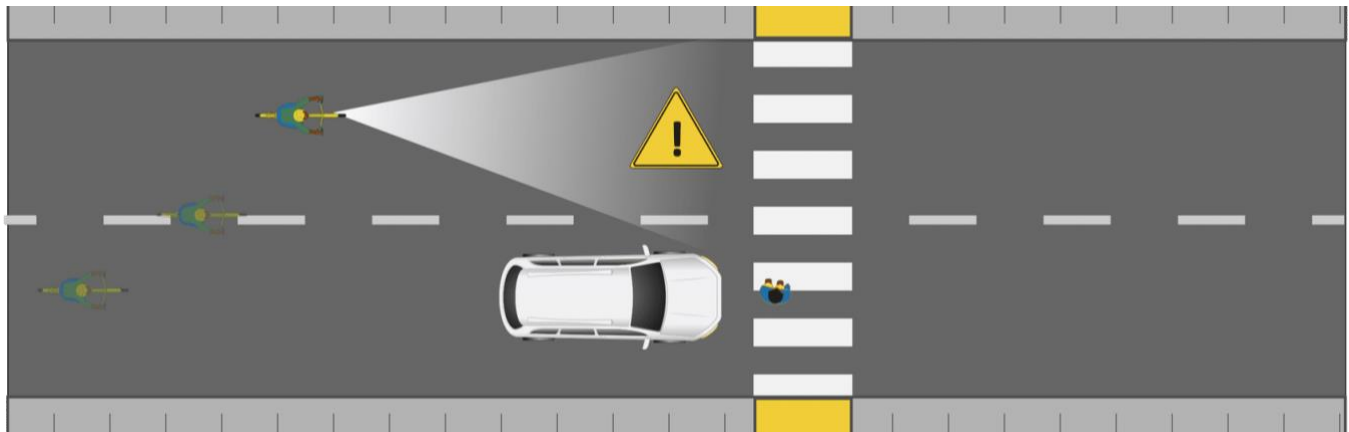
In Oregon every corner is a crosswalk ...There are different types of crosswalks for people walking. When riding your E-bike in the road or bike lane, you must STOP for any person showing intent to cross (i.e. putting a foot, cane, wheel, etc. off of the curb edge).



- ◆ Marked Crosswalks. Paint is used on the roadway to indicate location of crossing. There can be elevation change as well to highlight the presence of the crosswalk (i.e. raised crosswalk).
- ◆ Mid-block Crosswalks. These will be located in the middle of blocks (i.e. not at an intersection). These are often paired with Rapid Flashing Beacons that have flashing lights when activated. The flashing pattern can be activated with pushbuttons or passive (e.g., video or infrared), and unlit when not activated.
- ◆ Unmarked Crosswalk. Every corner in Oregon is a crosswalk. Unmarked crosswalks do not have paint or other features indicating a crosswalk. However, if you see a person walking showing intent to cross at a corner (paint or no paint) you will stop to allow them to safely cross the street.

Passing Vehicles Stopped at Crosswalk

It is against the law to pass a stopped vehicle at a crosswalk. Slow down and be prepared to stop when another vehicle is stopped.



Passing a person driving stopped at a crosswalk is dangerous and violation of ORS 811.020. When a person driving is stopped at a crosswalk, the person walking feels like they are secure to go. If an E-Bike or other vehicle attempts to drive around the stopped vehicle they will not have visibility of the person walking and a crash can result. This happens more often in a multilane situation like shown in this graphic.

To be a responsible e-bike user, stop when other vehicles are stopped at the crosswalk. Slow down and be prepared to stop if there is a person crossing in front of them. Know that you may not see the person crossing due to the blind spot caused by the vehicle that has stopped to allow the person to cross. That is why it is essential that you do not attempt to pass the stopped vehicle.

Rapid Flashing Beacon

Rapid Flashing Beacon Crosswalk: Engineers have put these where there are often conflicts between people walking and driving. Often mid-block crossings. Things to know about Rapid Flashing Beacons:

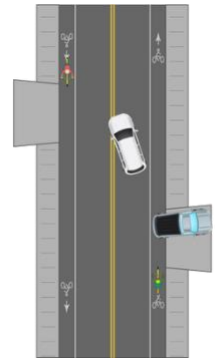
- ◆ When you see the flashing lights stop.
- ◆ Be sure the person has safely crossed before you continue driving. Once people walking have made it to the safety island, you may proceed.
- ◆ Remember to stop whether or not someone triggers the light! Sometimes people will walk out without pressing the button.
- ◆ Be aware of lights and establish eye contact with people looking to cross.



Bike Lanes

You must be aware of people driving pulling out of or turning into driveways or side streets. People driving often do not realize the speed at which you are traveling, assuming they have enough time to back out. Always assume the person driving does not see you or is not aware of the speed that you are traveling.

When riding your E-bike in the bike lane you are required to stay either in the bike lane or as far to the right as practicable. However, you may need to leave the bike lane for various reasons and **take the lane** (which is the action of leaving the bike lane or for shoulder and moving into the roadway).

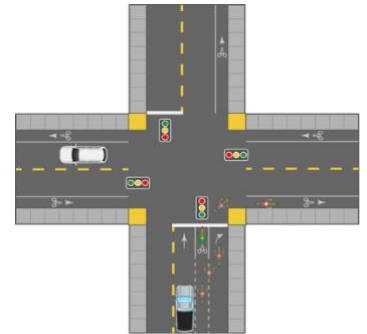


Taking the Lane

Reasons why you may leave the bike lane and take the lane:

- ◆ Hazard Avoidance (trash, drainage ditch, large puddles, snow, ice)
- ◆ Overtaking a slower moving person on a bike
- ◆ Left turn, right turn, going straight (i.e. appropriate lane positioning)
- ◆ Be aware of lights and establish eye contact with people looking to cross.

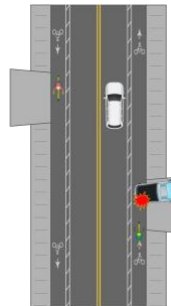
People driving are not allowed to use the bike lane as a turning lane. While riding your E-bike in the bike lane, be aware of people driving crossing over a bike lane to move into a turning lane or to take a turn.



On an E-bike you would use the bike lane shown here, unless you are making a right turn. If making a right turn, you would "Take the Lane" on the right.

Buffered Bike Lanes

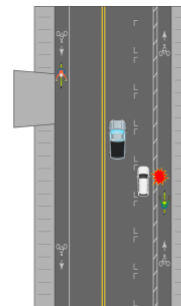
Buffered bike lanes are another type of bike lane you will encounter while riding your E-Bike on the roadway. These provide more separation between users and creates a more comfortable riding experience. People driving can cross buffered bike lanes to pull out of parking spaces and to pull into or out of driveways. They may not be aware of the speed you are going on your E- bike. Be aware and always bike defensively to avoid putting yourself in danger.



Protected Bike Lanes

Yet another type of bike lane is the protected bike lane. The parked cars act as a barrier between people driving and you riding your bike.

Be cautious, avoid being **doored**. Ideally the passenger opens the car door with their far (left) hand and therefore the Far Hand reach – this ensures they can see you and not open the door on you. This can happen on the driver's side as well. You go faster than a typical (non-electric) bike, people opening car doors may not see you in time – use caution and slow speeds when biking adjacent to parked cars to avoid being doored.



Green paint is often used in a protected bike lane to highlight the presence of people on BIKES.

Sharrow

A Sharrow is a SHARED (bike & car) NARROW road without a bike lane.
Sharrows:

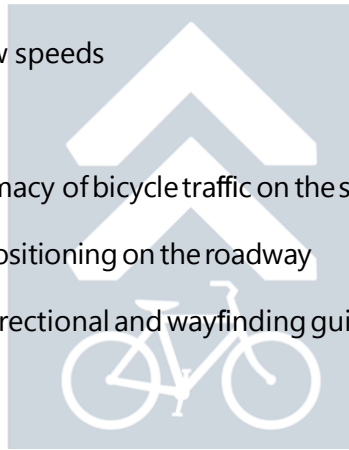
- ◆ Are used on roadways with slow speeds
- ◆ Make everyone more visible
- ◆ Inform and reinforce the legitimacy of bicycle traffic on the street
- ◆ Recommend proper riding positioning on the roadway
- ◆ May be configured to offer directional and wayfinding guidance

How to Use a Sharrow

- ◆ When you see a sharrow – expect to slow down, merge into main lane of traffic (**Take the Lane**) and follow arrows to guide your placement on roadway.
- ◆ Once the bike lane reappears (and as long as there are no hazards in the bike lane) return back into the bike lane.



Sharrows are indicated with road markings to indicate a shared lane environment. When riding in a sharrow you want to follow the arrows as they are painted on the roadway

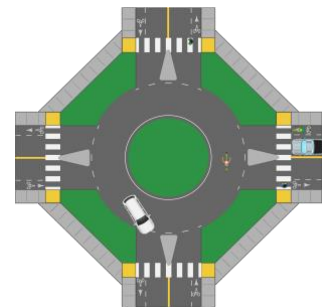


Roundabout

What's all this Roundabout about?

Roundabouts are a replacement to a standard intersection that greatly reduces ways to crash, reduces speed, improves the flow of traffic, and increases safety for you on your E-bike.

When riding your E- bike through a roundabout, you may use the roundabout the same way people driving do and you stop for people in the crosswalk. However, the safest way to navigate the roundabout is dismounting a crossing at the crosswalk like a person walking



How to Use a Roundabout

View how to navigate a roundabout by bike:



- ◆ To enter the roundabout on your E-bike you will yield to the people driving or biking inside the roundabout before entering, then enter the roundabout when it is safe to do so. Proceed in the center of the lane - Take the Lane. Not the shoulder.
- ◆ People driving cannot pass another person driving in a roundabout, therefore people driving are not allowed to pass a person on a bicycle using the roundabout as a vehicle would. This is why you want to ride in the center of the lane (Take the Lane), like a person driving.
- ◆ Look for people crossing at crosswalks when entering and exiting. You are required to stop for any people using the crosswalks.
- ◆ SIGNAL WHEN YOU ARE EXITING – extend your RIGHT arm (alternative right signal).

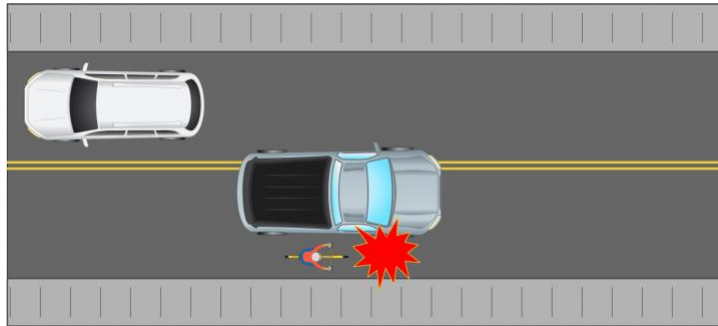
Section 3: How to Avoid Common Crashes

Common Crashes

Squeeze By

A person driving does not give the person on the bike adequate space when passing.

How to Avoid: Be aware of people driving behind you. If you feel unsafe on the shoulder, check that there is not vehicles approaching, and take the lane.

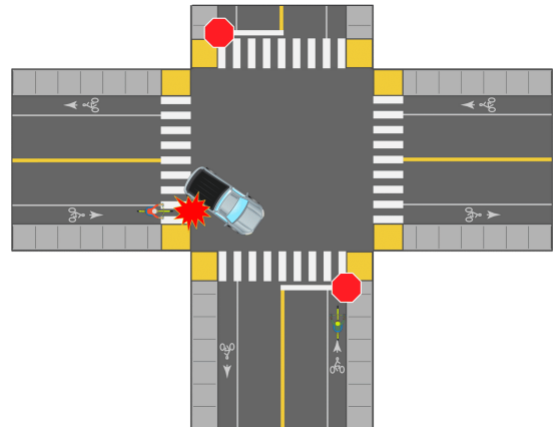


People driving are required to provide adequate space when passing people on bikes.

Right Hook

A person driving takes a right turn without checking the bike lane.

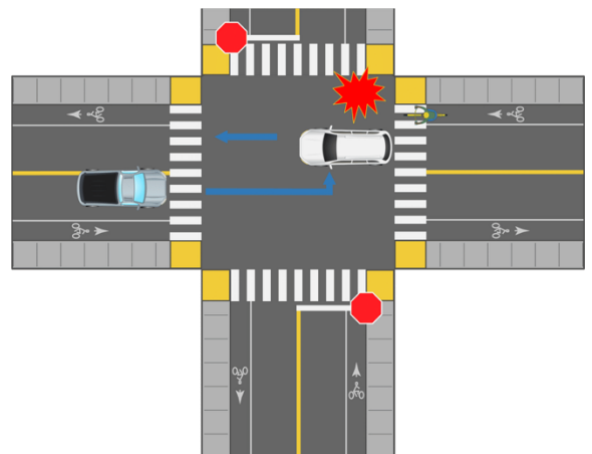
How to Avoid: Assume people driving may not see you, make eye contact if possible, and always proceed with caution through an intersection



Left Cross

A person driving takes a Left turn and does not adequately check the opposite bike lane. The person driving from the opposite direction could be blocking the visibility of a person riding in the bike lane.

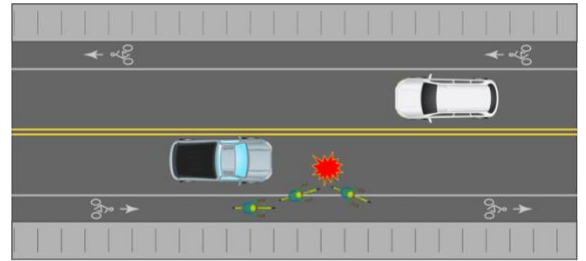
How to Avoid: Assume people driving may not see you, make eye contact if possible, and always proceed with caution through an intersection.



Impaired Biking

A person on bike is under the influence and is unable to safely control their bike. They are then unpredictable and can enter the main lane of traffic unexpectedly in front of a person driving.

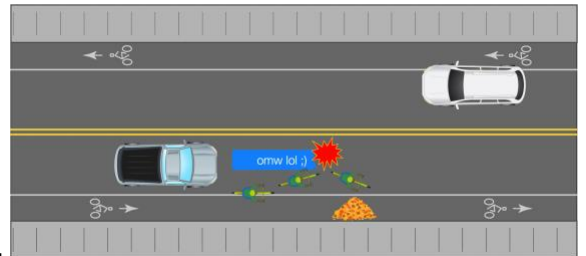
How to Avoid: Do not bike while under the influence.



Distracted Biking

Distracted biking applies to texting, talking on the phone, or engaging in any other activity than the task at hand, which is operating the E-Bike. Distracted biking makes the person operating the E-Bike unpredictable and not aware of surrounding road users and obstacles.

How to Avoid: Put your cell phone away while riding your E-bike.



The best thing you can do to avoid a crash is to slow down. Give yourself and others time to react, so a crash can be avoided.

Section 4: Battery Charging Care

Battery Maintenances

Bike Charging Tips

You want to be able to ride and enjoy your E-bike whether you're taking a leisurely afternoon cruise in the park or challenging the automobile traffic on your morning commute. To do that, all of your E-bike systems must be working well.



One key component is the E-bike's battery. To keep it in good shape, here are battery charging tips meant to help your e-bike battery live a long life:

- ◆ Review your specific E-bike owner's manual for best practices in charging your battery
- ◆ Only use the charger that was supplied with your bike or provided by an authorized dealer
- ◆ Charge battery pack or E-bike w/battery pack on a non-flammable surface
- ◆ Never tamper or open the battery pack
- ◆ Best practice is to store your battery when it is at 60%
- ◆ If it's easy to do so, remove battery from bike for prolonged storage (three months or more)
- ◆ If a battery is dropped, damaged or immersed in water contact an E- bike shop for it to be inspected

Winter Battery Storage and Maintenance

Since Central Oregon has colder temps during the winter it is important to store your battery inside. Lithium-ion batteries are not happy in below freezing temperatures. Keep in mind the following tips when winter rolls around:

- ◆ Long exposure to below freezing temperatures does diminish the battery range
- ◆ Always store battery indoors during colder temperatures
- ◆ Consider using a battery cover



STORAGE - A battery is best stored when the charge is at 50%. Always store battery in dry location at a temperature of 68 degrees F or greater.

CHARGING - Battery should be charged in area that is at room temperature.

Choose e-bikes with UL-certified batteries. Ask your local retailer for details

Section 5: E-Bike Course Final Quiz

You are almost ready to ride! Take this quiz to test what you have learned. A score of 100% is required in order to receive certification of completion – we will contact you if you need to retake the quiz. Please submit the completed quiz along with signature, date, and contact info to:

Commute Options, 50 SW Bonds Street, Ste #4, Bend, Oregon 97702

Question

01/05 I can ride my E-bike on the sidewalk.

- ☐ True
- ☐ False

Question

02/05 When riding my E-bike on a shared use path and other users are present:

- ☐ I travel at my normal speed as long as I let people walking know I am coming.
- ☐ I go with the flow/speed of other users and communicate if I am passing people.
- ☐ I can use a lawn or park area to pass other users so I can sustain my speed.
- ☐ I ride the same as if I was riding in a bike lane.
- ☐ None of the above, I cannot ride my E-bike on a shared use path.

Question

03/05 I must be 16 years old or older to legally operate an E-bike.

- ☐ True
- ☐ False

Question

04/05 When riding my E-bike through a Roundabout (select all that apply):

- ☐ I enter the same way as a person driving.
- ☐ I ride on the sidewalk and cross at the crosswalk as quickly as I can.
- ☐ I stay in the center of the lane.
- ☐ I signal before I exit the roundabout with the Right-Hand Signal.
- ☐ Just like a person driving, I stop to allow any people walking to safely cross at the crosswalks.

Question

05/05 In the winter your battery should be stored in a place where the temperature is:

- ☐ between 32 and 68 degrees
- ☐ 68 degrees or warmer
- ☐ Any temperatures, long exposure to below freezing temperatures does not impact range.

Course Completion Acknowledgment [completion required]

I hereby certify that I have completed the E-Bike Education Course in full, including reviewing all instructional materials and participating in all required quizzes and activities.

Signature: _____ Date: _____

Contact Information: _____

Section 2 Pop Quiz Answers (See Page 3):

Question 1:

☐ True

☐ False

Question 2:

☐ True

☐ False

Question 3: _____ Years Old