

Bike Racing 101

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1 Terminology

Here's a few; fill them in as we go. I'll let you have the joy of discovering the rest yourself over the course of the season...

1. pack
2. draft
3. lapped
4. dropped
5. prime
6. field
7. pit
8. attack
9. break
10. gap
11. hide
12. rotation
13. paceline
14. sprint
15. bridge
16. close a gap
17. chase
18. hold a wheel
19. draft
20. peleton
21. come around
22. pace car
23. wheels-in-wheels-out
24. feed zone
25. pulled
26. pulling
27. neutralise
28. bell lap
29. drop the hammer
30. see elvis
31. have your legs torn off
32. fred mark
33. chamois time
34. squirrel

2 Safety in a Pack

This is the main skill you need to do mass-start bike races. Practice by riding in club rides.

2.1 Hold your line!

This means no sudden movements, especially sideways. Paths can't cross if a pack is going to stay upright, so everyone "rides the same line." This also means following the line of the riders in front of you as the group turns. Everyone follows the same smooth motion. There is mixing and moving forward and back in the pack, but it is slow. Don't do jerky movements to avoid potholes. Call them out to other riders and brace yourself to ride over them if necessary. You will hear riders call "Hold your line, <School>!" to each other if they see bad behaviour. Take this as a learning tool if it is yelled at you. You can yell it yourself when necessary.

2.2 Protect your Front Wheel

A bike is kept upright by *steering*. This means your front wheel is what matters – protect it! Never cross wheels with the bike ahead of you, in case it suddenly moves sideways. Be aware of what is going on around you so you can predict problems. If you are riding over a pothole or another rider, keep some spring in your elbows and just keep the wheel straight. It's great if everyone else holds their line, but they won't. Protect yourself.

2.3 Keep your Eyes Open

This can actually be hard in the weather conditions in the ECCC. But it's important to be aware of what's going on, not just immediately in front of you but also further up the pack. Look "through" the rider ahead of you, so you can estimate his distance and speed as well as the overall behaviour of the pack. Be aware if something is happening up ahead, because it will ripple down the pack to you – a turn, a pothole, a crash. You can avoid disaster by predicting what the rider ahead of you will do before he does it.

3 Types of Races

3.1 Individual Time Trials

1. Starts are individual and you are timed on the course.
2. You are held up on your bike at the start, clipped in, with your chain in a smallish gear.
3. You are told when to start. You are penalised for starting early.
4. You sprint at the beginning to get speed up, switching gears as you go.
5. You settle into a rhythm in the largest gear you can keep pushing at 80-100 rpm for the full distance. Keep your head down and concentrate on rhythm. Steady pace is the key.
6. You may NOT draft other riders – pass wide. (You can be given a time penalty for drafting.)
7. At the finish, you get out of the saddle and sprint your last energy out.

3.2 Team Time Trials

1. These are just like individual time trials, but you ride in groups of 2-4 as a team.
2. You are not held at the start.
3. The strategy is to rotate in a smooth paceline, sharing the work and the draft.
4. Stronger riders pull longer (not harder!), so everyone gives their all.
5. Weaker riders may work hard at the start and get dropped.
6. As in individual time trials, you may not draft or interact with other teams.
7. The time is taken on the 3rd wheel for men, 2nd wheel for women.

3.3 Road Races

1. The race is mass start, with everyone starting in a group. Get there early so you're near the front.
2. You start with one foot clipped in, and when the signal is given you push off and clip the second foot in.
3. The pack generally rides as a whole. Some riders will get off the front and some will get dropped.
4. The pace of the pack can vary a lot. Save energy – rest when the pace is slow and don't pull.
5. Sometimes the pack will split into two or more groups. It's best to be in the front group!
6. The course is long and usually hilly. On hills many riders will get dropped and some will get away. You have a better chance if you're near the front when the hill starts.
7. Many riders will get tired and get dropped, and the pack will grow smaller.
8. During the race some riders will get off the front and may be caught or stay out.
9. At the end, the breakaway (if there is one) will sprint for placings, as will each group that comes in.

3.4 Criteriums

1. The race is mass start. As for a road race. Placing at the start is more important, as this race will usually be faster.
2. The pack rides around a small loop of around 1 mile, with corners and maybe small hills.
3. The race is usually very hard and there is no time to relax.
4. The riders begin to "know the course" as they see it so often, and learn where the pack slows, where it is easy to get away, where the wind is, etc.
5. Points are given for the first few placings on bell-indicated prime laps.
6. There will be breakaway attempts, especially on prime laps.
7. At the end, there will be a sprint finish for each group. Everyone has been around and done prime laps, so everyone has a sprint strategy and knows the layout and the other riders.
8. This race is very tactical in terms of timing, positioning, energy use and predicting other riders.

3.5 Circuit Races

These races are on small circuits around 5 km long. They can feel more like road races or criteriums depending on the course.

4 Rules

You are representing Brown University. The rules of road races are there for safety, fairness, and also to keep the community happy. Many a wonderful race course has been lost because one neighbour complains. Don't give anyone any reason to.

4.1 Best Ways to Get Yourself Disqualified at the ECCC

1. **PEE IN PUBLIC** Peeing on their bushes gets the neighbours very angry and is a perpetual problem with the ECCC. Just don't do it. I know standing in line for porto-johns is stressful, but that's all there is to it.
2. **LITTER** This also gets neighbours very mad. Put your goo packet, gross as it is, back in your pocket.
3. **PUBLIC NUDITY** Doesn't seem so hard, but apparently college students aren't good at avoiding this. Hang a jersey in the car window and be flexible.
4. **RIDE WITHOUT A HELMET** Even if you're riding to the registration table in your jeans from the car 100 m away, you can be disqualified for this. Sucky way to start the season.
5. **RACE IN THE WRONG CLOTHING** Brown University jersey, black shorts/tights. Number on the outer layer. You can't have a wind vest over top, you can't wear Discovery Team shorts.

4.2 Race rules

You can be punished for breaking these by a warning, fine, relegation, disqualification, or suspension. The referee need not warn you; you have to know the rules yourself! They are online at www.eccc-info.com or usacycling.org.

1. USAC Road Racing Rules 105. Abuse.

- (a) No rider or licensee may be disrespectful toward organizers, officials, riders or spectators [warning for minor offense; possible relegation of rider; and/or up to a \$50 fine].
- (b) No rider or licensee may use foul or abusive language or conduct during a race event [disqualification and 15 days suspension].
- (c) No licensee may assault (an unlawful attempt, coupled with the present ability, to commit a violent injury on the person of another) or do battery (any willful and unlawful use of force or violence upon the person of another) to anyone connected with any event (including but not limited to riders, officials, spectators, public officials, etc...) held under a USA Cycling permit. [disqualified from the event, prohibited from participating in another event for 72 hours and suspended for up to one (1) year after due process]

2. USAC Road Racing Rules 106. No rider may make an **abrupt motion** so as to interfere with the forward progress of another rider, either intentionally or by accident [relegation or disqualification; possible 20 days suspension if a crash results]

3. USAC Road Racing Rules 1011. **Non-Competitor on Course.** A rider may not be on the track or course during a race for which he or she has not entered and registered, or from which he or she has withdrawn or been directed to withdraw [relegation or disqualification if entered in another race in the event for which the results are not yet final; 10 days suspension if flagrant].

4. USAC Road Racing Rules 3B1. **Center Line.** If a course is not closed to traffic, all competitors must keep to the right of the center line or enforcement line, but may pass on either side of another rider [warning for accidental crossing of the center line with no advance in position; relegation or disqualification for advancing position; 10 day suspension for a flagrantly dangerous attack].

5. USAC Road Racing Rules 1010. A licensee may be penalized for causing a crash or spill through **inadequate tightening or adjustment** of a bicycle component, including gluing of tires [any or all of the following: disqualification, \$75 fine, 10 days suspension].

6. USAC Road Racing Rules 104. **Withdrawal.** Riders must immediately follow a referee's order to withdraw from the race [10 days suspension].

7. USAC Road Racing Rules 3B2. **Rules of the Road.** Riders shall, of their own responsibility, conform to all traffic regulations in force in the area where the race is held [relegation or disqualification and possible 10 day suspension]. (see Race Enclosure below)

Other things you should not do include cutting the course, getting help besides legal feeding and mechanical support, or making progress on the course without your bicycle.

4.3 Being Lapped

1. In a road race, riders on different laps **may not work together**. If you are lapped, you must finish the distance to place, unless directed to withdraw by a referee.
2. In a criterium, riders on different laps **may work together**. The exception is dropping back from a pack to help someone catch up. If you are lapped, you may either be pulled (directed to withdraw) and placed, or else allowed to stay in. If you stay in, you do not do the full distance; you finish on the same lap as the winners.
3. The officials try hard to keep track of everyone and let you finish even if you fall behind and get lapped. But if they blow the whistle at you and indicate with their arm motion (front to side both arms) that you are done, then you have to get off the course. They do this for safety reasons.

4.4 Race Enclosure

There are two types of race enclosure:

1. **Rolling Enclosure** In ECCC races, there is usually a pace vehicle and a follow vehicle. These will have flashers on. Between these two, the right hand lane is the racing area. You must respect the yellow line rule (centerline rule). But you may use the full lane, and you do not need to stop at stop signs or traffic lights, as these will be controlled for you. **If you fall behind the follow vehicle, you must obey all traffic laws**, stopping at stop signs and traffic lights and staying to the right. Sometimes the full road may be used for a finishing sprint; the referee will explain this to you if it is the case. At some times, the full road will be closed and oncoming traffic will be pulled over as the race passes. You still must observe the yellow line rule. The yellow line rule is often relaxed for tight corners, where the peleton will swing wide.
2. **Closed Course** In criteriums the whole course will be closed and the full road may be used. There will be a pace car in front of the race.

4.5 Mishaps

You may suffer a crash or a mechanical problem. Don't give up! There are special rules to help you get back in contention.

1. A **legitimate mishap** is
 - (a) A crash
 - (b) A broken (i.e. cracked) part
 - (c) A flat tire
2. A **legitimate mishap is not**
 - (a) Being held up by a crash you weren't involved in
 - (b) A dropped chain
 - (c) A mis-adjustment or loose part
3. There are two types of support
 - (a) **Wheels-in-wheels-out** Bring a spare set of wheels and give them to the support vehicle or put them in the pit. Lodge pieces of paper between the spokes with your race number on them, and have them pumped up.
 - (b) **Neutral support** There will be wheels available for everyone.

4.6 Support in Road Races

1. If you suffer a mishap and there is a support vehicle following, stop at the side of the road and wait for the vehicle. Put your arm up (left for front wheel, right for rear; like your shifters and brakes). They will replace your wheel with a working, pressured one (provided there is one). They will then push you to get you going again.
2. You may want to bring your own tube and pump in a road race, because if you get dropped *behind* the support vehicle, you'll have to fix your own flats. The support vehicle will also sometimes go with the break, leaving the field without support.

4.7 Free Laps in Criteriums

1. A mishap must be **reported to the pit**. You must **explain what happened to the referee** and get it repaired there.
2. To get to the pit, you can **ride** forward or **run** backward (or cut the course if the referee announces this rule).
3. Return to the group you were in, one lap later, at the rear of the group. This means starting **BEFORE** they get there so you get your momentum up. The nice lads in the pit may push you.
4. There are no free laps in the last 8 km of the race. The referee will explain how many laps that is for your race.

4.8 Laps and Bells

1. When there is one lap to go, a bell is rung as you cross the start/finish line.
2. When there is a prime sprint in the next lap, a bell is rung as you cross the start/finish line.
3. Lap cards are showing at the start/finish line and tell you how many laps you have still to go. In road races or circuit races with laps, the number is determined ahead-of-time. In criteriums, the lap cards may not be shown for the first few laps, as the referees calculate your speed and determine how many laps to give you so that the race finishes in a given time.

4.9 Neutralisation

Sometimes there are several races on a road course, or there are problems during a race. The referees may **neutralize** the field. They will tell you this is happening by yelling at you from vehicles and motorcycles. This means you stop racing and pull to the right until you are told to go again. This is **not** a good time to try to make a break!

5 Race Weekends

5.1 What To Bring

What to pack for a race weekend:

1. Your Race Flyer, that you have already **read**.
2. Toiletries (toothbrush, toothpaste, etc.)
3. **Warm clothing** to wear outdoors (jeans, rain jacket, warm sweater, turtleneck undershirt, warm hat, mittens, warm socks...)
4. Street clothes for the hotel (a t-shirt, lots of clean undies, extra socks, pajamas, an extra set of dry clothes...)
5. Cycling clothing (everything you have: jersey, shorts, tights, long sleeve jersey, rain jacket, wind vest, booties, long-fingered gloves, ear covers, woolen socks (a few pair), rain booties, undershirt, your grandma's knickers if they look warm)
6. **Cycling essentials** (contact lenses or glasses, uniform, sunglasses, cycling shoes, helmet)
7. Ass helpers (vaseline or shammy cream)
8. Your race numbers if you already own them
9. Your **school ID and racing license** and some cash, a credit card
10. Energy bars and goos or drink mixes, gatorade
11. Your bicycle and any extra parts (aerobars, streamers)
12. Bicycle accessories (pump, spare tube, hex wrench, a rag – no you can't use hotel towels to clean your bike!!)
13. A book or your homework for downtime
14. Music to get you pumped or calm you down and keep the car ride bearable

5.2 Before the Race

Here's the usual race morning routine.

1. **Eat right.** Eat enough food the night before so you aren't super hungry the morning of. Have something digestible for breakfast (like bagels or cereal if you tolerate milk), don't eat anything except maybe a cliffbar within two hours before your race.
2. **Arrive.** Leave time to spare, there are always unexpected things happening at the course. I like to have two hours before my race start time.

3. **Race Numbers. (Your first race weekend.)** At the ECCC, you have one set of numbers for the whole season. Don't lose them! You can pick them up at Rutgers. It helps to print and fill out the paperwork before you get there (www.eccc-info.com). They come with a little paper explaining how to pin them on. Read it! The officials can't see your number if you don't do it properly, because races are *fast* (we hope).
4. **Registration.** Bring your license and school ID to registration. Do this *after* number pickup if you are picking up numbers.
5. **Get dressed.** Try to dress a little colder than you expect, because you create heat when you exercise. Use layers. Make sure your Brown University jersey and race number are on the outside. Figure out which side your race number has to be on (left or right) and put it on the correct side.
6. **Fill your pockets.** If you're doing a road race, it might make sense to bring a pump and tube in your pocket. If the races are a little long, bring a goo or cliff bar, but make sure you drop back to the back of the pack to eat these, as it can make you unsteady. Also fill your bottles.
7. **Check your bike.** You're not supposed to have frame pumps in a race. You're not supposed to have aero bars unless it's a time trial. You're supposed to have the little bar-end plugs in your handlebars (if you don't, ask the mechanic). Check that your quick releases are tight, check that your brakes are not released, check that your wheels are seated correctly, and that the parts that spin do so like they should. Your bike is your responsibility and you can be disqualified for not having it in working order.
8. **Pee.** Do it now, while there's time and it's not stressful.
9. **Warmup.** Ride the trainer or ride around the block nearby. Just get the blood flowing, but don't wear yourself out. Anywhere from 15-45 minutes might be good (warmup longer for shorter races). At the end of the warmup, do a few short hard intervals to make sure you get your higher-end systems going. If you're lucky, you can ride the course between (but not during) earlier races. It's a good idea to look over the race flyer now and make sure you know the course, what kind of race it is and any special rules.
10. **Pee Again.** I hate having to pee during a race.
11. **Be at the start on time.** Show up in time to get a good position at the start line, but not so early that you get cold.

5.3 After the Race

1. **Cooldown.** Spin the legs easy for another 15 minutes to drain the lactic acid out.
2. **End the Chamois Time.** Change into healthy warm clothes.
3. **Eat.** The joy of bike racing. It's good to get some carbs and protein within 30 minutes after a race to help your legs recover. If you are racing again that day, take some easy carbs like sports drinks, and remember not to eat protein or anything at all heavy the two hours before a race.
4. **Clean your bike.** Check it over, and use that rag you brought to wipe off the mud and grime that the ECCC lives in.

6 Goals in a First Race

6.1 Jump In!

Beginners often think they need to train a lot before their first race. But there's more than fitness to learning to race: there's also skill. And you only pick up race-specific skills in races. So consider your races training, and never give up an opportunity (do both your category race *and* the training race). Then, when you *do* have the fitness, you'll *also* have the skills and you can destroy the field. Bike racing is tactical; real winners are *smart and experienced*. (Plus racing is the fastest way to get in shape.) If you ride your trainer for six months and have some incredible watts and oxygen capacity, your first race is *still* going to be a disaster (see item 2).

6.2 Your First Race Sucks.

Yes, it does. There are few of us who win our first race, and most of us drop out, fall off, or take a wrong turn. It's just god's little hobby, teaching you your most important race lessons the hard way, right away. There are lots of surprises and disappointments, so have reasonable goals. Make it your goal to stay with the pack as long as you can, and finish the race according to the race rules so your name is listed on the results. Racing is fifty percent experience, and it's a long (but rewarding) road. (I've seen (normal!) people start at Rutgers dropped in the first 300 m, and end the season placing on the podium.)

6.3 Reasonable Race Goals.

You'll choose your own as you gain experience, but here are some examples for your first few races.

1. Stay with the pack as long as you can.
2. Finish the race.
3. Know the rules and follow them correctly.
4. Work hard and be nice and tired at the end.
5. Hold a steady line, especially through corners.
6. Use your energy intelligently, so you run out just as you finish, and not before or after.
7. Stay with the accelerations and decelerations of the pack.
8. Draft effectively. Despise the gap.
9. Stay near the front.
10. Watch the people in front of you and know when the main tactical moves are made.

6.4 Watch the other races!

This is a great idea, especially if you can do it with people who know the tactics and can point things out to you. Learn to understand what's going on in the race.

7 First Skills

Just the ones to begin with. I can't write a novel here. The first skill with a bike race is to ride with the pack the whole way through. Only once you know how to do this can you learn how to win: you can only break the rules once you learn to follow them.

1. **Pack Riding, Drafting and Holding a Line.** Learn to ride behind someone and use their wind protection. Learn to ride comfortably in the pack. Learn to hold a straight line and follow the pack's line through a corner. This saves you energy, and energy is the name of the game. It is also the beginning of *positioning*. You must become comfortable riding in the pack and moving about the pack so you can be in the right place at the right time.
2. **Use your Energy Wisely.** You'll find that bike racing is nothing like running racing. It isn't individual: you must constantly react to the pack and adjust your energy output to keep in the pack. You need to be able to put out bouts of energy on demand (attacks, bridging gaps, catching back on, hills, sprints). Learn to use this uneven output to keep yourself in the race. For example, if a gap is forming, bridge it right away. On a hill, put out that extra energy to maintain contact. Even so, you want to minimise these spikes as much as possible: the near-front of the pack is the most energy efficient place.
3. **Watch the Race.** Keep an eye on things! Much of bike racing is knowing how and when to react. The first step is being aware. Make sure you don't just look at the wheel in front but look up the road. Then you'll know when there is a gap opening in the pack – if this happens you want to be in front of it. By watching, you also learn the way packs behave: they accordian in corners, they mix up on hills, they expand when they slow, they go bitch-ass fast on the prime laps. And learn the way the winners behave: they attack in the right places, they don't pull the pack, they hide from the wind but are always near the front. Watch and learn.

How do you win someday when you've learned all this? You get *ahead* of the pack. You learn to get away so no one can follow, or else you learn how to sprint really well. These are advanced skills, and you can only use them by riding well in the pack in the first place (i.e. you can only attack if you have energy saved up and you can only sprint if you can position). Sometimes you may just win by being way stronger than everyone else. This doesn't really count; you're just in the wrong category.

8 First Tactics.

Tactics are complicated. These are the ones I consider the most important to begin with.

1. **Despise the Gap.** Never let a gap open up. Be on a wheel. At all times except when winning. If the guy in front of you, or in front of him, is letting a gap open, you have to bite the bullet and get up there to close it yourself. So keep your eyes open so you don't get dropped by following someone getting dropped.
2. **Stay Near but not At the Front.** Don't pull if you don't need to. Get the wheel of the doofus who is pulling. The second tier is the most energy efficient and safe place to ride. It requires skill and effort and attention to stay there. It's especially good to be at the front when hills (in RRs) or corners (in crits) are coming and before the finish. But the group can split in two at any time, so best to stay there all the time!

9 The Eastern Collegiate Cycling Conference

Find out about it at www.eccc-info.com, where there's a race calendar, rulebook and much more. There are various categories, but for beginners I suggest you sign up for **Men's D** or **Women's B** (the easiest), or if you prefer, the **Introduction to Racing** category (no points). The Intro category is 50% coaching and 50% race, and I suggest you choose this if you need to learn about pack riding, because you will get more pack riding (you are guaranteed not to be dropped for the first half) and you'll get tips while you're doing it. Men may also choose to do **Men's C**. Categories range up to A (the hardest). There are upgrading and downgrading rules which I will not cover here. If you plan to move around, **look up the rules first**.

There are points for individual placings and the team gets the sum of the points of its members. Teams are divided into Division I and Division II – we are Division II. There's a trophy for each. Points schedules are available online. Riders choose their own races to compete in. Mark Abramson is the conference director and Grand Wazoo. You will meet him at the races. Be nice to him.

You must be a full-time student in good standing with a USA Cycling Collegiate License (annual or one-day) to race.