Introduction to Cycling

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**Class Time**

6pm-7pm on Wednesdays

**Course Objectives**

In this class students will be taught basic maintenance skills and the students should feel comfortable with fixing a bike on their own by the end of the class. The class will also give students a better understanding of cycling in general but with a more in depth focus on road bikes. Different styles of racing will be covered and the types of bikes, muscles, techniques used for those races and why. Since most Rice students own a bike to get around class and some of them do watch cycling races, the class should give a better understanding of how to maintain their own bikes and an understanding of why specific strategy and equipment is important to different styles of cycling (such as Beer Bike).

**Course Description**

This is an introduction to cycling which covers both recreational and racing bikes, equipment, maintenance and techniques.

**General Syllabus**

Class 1: Introduction to the class

The syllabus and grading rubric will be covered along with the reason why this class is being taught and its application.

Class 2: Introduction to Bicycles

This covers the different types of bikes with a short history over the progression of a bicycles design. It will cover the basic parts of both mountain and road bikes and their differences.

Class 3: In-depth analysis of bike parts and how to fix them aka Maintenance

This class will lead up into the 4th class so that on the 4th class the students already know basically how to do maintenance and what to look for on the maintenance practical.

Class 4/5: Maintenance Practical

The students should use some of the basic maintenance techniques taught in the 3rd class. This class will most likely take place outside of the classroom and the students will fix old bikes that Brown will be using for the bike lending program.

Class 6: Muscle Types, heart rate, training

This class covers the different muscle types associated with cycling and how they are used. It will also cover basic training techniques/time that apply to all forms of cycling including how to watch heart rate, cadence, and distance.

Class 7: Styles of Riding and bikes used for those

Different styles of competing will be covered such as sprinters, time trial, climbers and why the different types of muscle type define what category a cyclist competes in and why they sometimes cannot do multiple styles. Also the bikes associated with each type will be discussed a little but will be further covered in class 8.

Class 8: Tactics in various races

General tactics used in races will be covered based on the type of race style.

Class 9: Gearing, Wheel sizes, aerodynamics

This covers the differences in bikes and what those differences do to make that style of racing easier/more competitive.

Class 10: Parts of bike and positions

This class emphasizes the different parts of the bike that allow for different positions on the bike and exactly what this requires the cyclist to do.

Class 11: Pedal efficiency/ Rules of thumbs

How exactly to make pedaling efficient and why this is important. The Rules of thumbs will cover general practices of cyclists such as hydrating and food sources while riding of course this is also dependent on the style of riding.

Class 12: Different social networks based on bikes and why

What type of social networks go with different styles of cycling. The main ones are competitive and recreational and they will be subdivided by races/intensity.

Class 13: Legends of cycling, lores and myths

Some of the most famous cyclists and how they got to where their positions. Lores and myths that are seen in cycling. This class is a little bit more relaxed than the others since it is around finals.

Class 14: Take home problem set no class

**Assignments**

There will be 1 written assignment due after March 12 and 1 problem set given the last week and due the next day.

There will be a choice in topic for the written assignment.

First Topic: The written assignment will be an essay no less than 2 pages on one style of cycling over the specific differences of the bike, the techniques the cyclist must use and how the style developed. A higher emphasis will be placed on how the style developed since it is a topic that is not discussed in much depth. Example of what question of how the style developed will answer: Why crit racing is generally only in the United States and an explanation of why.

Second Topic: The written assignment will be an essay no less than 2 pages on what equipment: bikes, clips, etc and strategy was used during Beer Bike and why. The assignment should address both good and bad strategy/equipment used by different teams and how that would affect the outcome of the race.

The problem set will be 10 pledge questions that will cover all of the material covered in class. It will take the place of a final. The questions will mostly be scenarios. A general example is: a cyclist is at some point in the race (this will be more descriptive) when a small group sprints off to the front. What should the cyclist do, why and if the cyclist is in the peloton what may happen. (once again the question will be more specific)

**Grading**

30% class participation

30% written assignment

40% problem set

**Required Reading**

Some sections of Serious Cycling by R Burke which will be available via Owlspace

**Budget**

The class may need supplies and tools for the maintenance class but it should not go over $50.