



AFLCA GROUP EXERCISE SPECIALTY LEADER
CYCLE DESIGNATION
LEARNING OBJECTIVES

Section 1- The History and Evolution of Cycle-based Group Exercise

Objective I: History and evolution

Sub-objectives:

- Describe the origins of cycle-based group exercise and its evolution over time
- State benefits of cycle-based group exercise

Objective II: Research and safety guidelines

Sub-objectives:

- Define and demonstrate the steps involved in safe bike set-up including: seat post height, handlebar height, seat and handlebar fore and aft adjustments, and foot position
- Identify methods for modifying set-up position for those with special needs or injuries
- Demonstrate and distinguish between proper and improper bike set-ups; describe the injuries that could result
- Identify and correct improper biomechanics including: body positioning, torso, hands, and lower body
- Identify and demonstrate how to safely move a bike
- Describe different bike layouts and how they impact class design
- Explain use of consoles
- Identify and avoid contraindicated movements
- Apply evidence-based research to employ safe technique, posture and alignment
- Describe potential legal risks

Objective III: Pedaling

Sub-objectives:

- Describe the biomechanical breakdown of the pedal stroke
- Identify and define the muscular coordination involved in an effective pedal stroke, including muscle recruitment
- Identify “dead spots” in the typical pedal stroke
- Discuss use of visualizations and other cueing strategies to describe pedaling technique

Objective IV: Cadence

Sub-objectives:

- Describe the North American standard for RPMs (60-110 RPM)
- Define the rationale for the minimum and maximum pedal cadences
- Identify and demonstrate methods for calculating cadence, including use of console
- Identify the appropriate cadence for different body positions and resistances, including hills and sprints
- Describe the relationship between cadence, resistance and intensity

- Demonstrate and distinguish between proper and improper pedal cadence; describe the injuries that could result
- Identify and demonstrate cadence modifications as appropriate to participants' needs and levels
- Describe the relationship between music speed and cadence

Objective V: Posture

Sub-objectives:

- Demonstrate in & out of saddle
- Demonstrate the different safe body positions possible on the bike
- Identify typical compensations in body positions
- Demonstrate and distinguish between proper and improper cycle postures; describe the injuries that could result
- Discuss correctional feedback and cueing for improper body positions

Section 2- Class Structure and Content

Objective I: Planning

Sub-objectives:

- Identify components of an indoor cycling group exercise class and what to include in each component
- Describe safety guidelines to consider when designing each class component
- Demonstrate appropriate class design based on current research, principles of conditioning, anatomy, biomechanics, and exercise selection
- Define and distinguish between different types of cardiovascular conditioning: max aerobic power, threshold training, aerobic efficiency, specific strength, peak power and how each can be implemented into a cycle class
- Describe the importance of the interval/rest ratio, and how to effectively incorporate into a cycle class
- Describe methods for evaluating and monitoring participant intensity
- Demonstrate an effective flexibility component applicable to indoor cycling group classes and equipment
- Describe the benefits of using music in an indoor cycling class, including motivation and assisting with cadence
- Identify the legalities of sourcing, purchasing, and using music in cycle-based group exercise classes
- Discuss the methods by which class components can be altered for varied populations
- Create safe and effective exercises, variations and modifications
- Describe safety considerations when designing each class component

Objective II: Outdoor cycling elements

Sub-objectives:

- Describe the effects of outdoor cycling (e.g. drafting, wind resistance, road tension, center of gravity over bike)

- Discuss the elements of racing (i.e. team elements, competition, time trialing, sprints)
- Describe typical cycling terms

Objective III: Clothing and Footwear

Sub-objectives:

- Identify the potential benefits for wearing cycle shorts
- Identify the potential benefits of a cycling-specific shoe

Section 3- Leadership and Teaching

Objective I: Leadership

Sub-objectives:

- Describe and implement ways to interact and connect with participants to create a positive learning environment specific to a cycle class
- Describe and implement methods for helping participants execute appropriate intensity
- Evaluate participant technique and performance, provide feedback toward optimizing these elements, and adapt the class in response to participant needs

Objective II: Teaching

Sub-objectives:

- Describe, demonstrate and implement various instructional techniques including: progression from simple to complex, pattern development techniques, variety of class formations, use of verbal and non-verbal cueing, mirror imaging, and intensity progression (less to more)
- Describe how to observe, respond and adapt to participant needs
- Demonstrate good verbal and visual cueing skills, with emphasis on proper technique
- Demonstrate how to create an enthusiastic, motivational environment
- Demonstrate safe use of equipment
- Use common exercise terms
- Identify instructional challenges specific to cycle-based group exercise classes, and strategies for managing and minimizing these challenges