Agility
The ability to accelerate and decelerate to change directions quickly while maintaining balance and control.

Anabolic-androgenic steroids (AAS)
Drugs that mimic the effects of the male sex hormone testosterone, used most often to increase muscle size and strength.

Balance
Maintaining the body's center of gravity within the base of support with minimal postural sway.

Biomechanics
The study of how the components of the musculoskeletal system mechanisms interact to create movement.

Body composition
The makeup of one's body mass which is constituted of fat mass and fat-free mass (lean body mass).

Concentric muscle action
A muscle action that consists of the muscle tissue shortening.

Core foundation exercises
Upright dynamic exercises such as squats, deadlifts, and power cleans.

Core musculature
Consists of the muscles of the trunk and pelvis.

CSCS (Certified Strength and Conditioning Specialist)
A certified individual who possesses the knowledge and skills to design and implement safe and effective strength and conditioning programs for athletes.

CSCS (Credential or Certification)
The credentialing program that encourages a higher level of competence among practitioners, and raises the quality of strength training and conditioning programs provided by those who are CSCS certified. (https://www.nsca-cc.org/cscs/about.html)

Diminishing returns
Further improvements are more difficult to attain as training adaptation progresses.

Eccentric muscle action
A muscle action that consists of the muscle tissue lengthening.

Endurance
The ability to sustain a prolonged and stressful effort or activity.

Ergogenic aids
Nutritional, physical, mechanical, psychological, or pharmacologic procedures or devices intended to improve exercise or sport performance.

FITT
Four key training variables of a strength and conditioning program:
Frequency – number of sessions within a given time.
Intensity – amount of effort within each repetition or session.
Type – type of training.
Time – length or duration of an exercise session

General Adaptation Syndrome (GAS)
The three adaptive stages of the body in response to stress. The GAS can be divided into:

1. **Alarm** – Acute shock and soreness resulting in decreased performance.
2. **Adaptation** – Body adapts to demands resulting in increased performance.
3. **Exhaustion** – Body unable to adapt further and can lead to chronic fatigue and overtraining.

General warm-up
Consists of easy, slow modes of activity to increase core temperature, heart rate, and neuromuscular activation (brain and muscle communication) in preparation for movement.

Hypertrophy (muscle)
Increase in muscle cell size; skeletal muscle growth.

Individualization
Developing a training program to meet the demands of specific athletes.

NSCA (National Strength and Conditioning Association)
A nonprofit, educational organization that provides resources and opportunities for professionals in strength and conditioning related fields. (https://www.nsca-cc.org/about/nsca.html)

Overload
A training adaptation when stimulus is greater than accustomed.

Overtraining
Excessive frequency, volume, or intensity of training, combined with insufficient rest and recovery, ultimately resulting in prolonged fatigue.

Periodization
The organized planning of specificity, intensity, and volume of training.

Plyometrics
A quick, powerful movement using a pre-stretch or countermovement, with a rapid stretch and then shortening of the muscle.

Power
The amount of work done in a certain period of time.

Powerlifting
The classification of resistance exercises that include the bench press, squat, and deadlift.

Progression
The gradual increase of exercise stimulus in order to achieve long-term adaptations.

Repetition (rep)
One specific movement of an exercise.

Repetition Maximum (RM)
The maximum amount of weight lifted for a specified number of repetitions of a specific resistance training exercise.

Resistance training (Strength training)
Physical training that requires muscular force to resist an external force.

Reversibility (detraining)
Training adaptations that are lost if training program ceases.

SAID (Specific Adaptation to Imposed Demands) principle
Sometimes used interchangeably with specificity; explains that the type of demands placed on the body dictate the type of adaptation that will occur.

Set
A group of repetitions sequentially performed before resting.

Specificity
Specific adaptation to imposed stressors (see SAID Principle).

Speed
The amount of time it takes to cover a certain distance from point A to point B. Expressed in terms of distance/time.

Strength
The maximum amount of force that a muscle, or group of muscles, can generate in a specified movement pattern and at a specified velocity.

Stretch Shortening Cycle (SSC)
The stretching of a muscle immediately before concentric muscle action used to increase force production. The SSC can be divided into three phases:

1. **Eccentric phase** -tissue lengthening.
2. **Amortization phase** -transition between lengthening and shortening of the muscle tissue.
3. **Concentric phase** -muscle tissue shortens.

Volume
Amount of weight lifted in a session; can be divided into two types:
1) Repetition-volume: Total number of repetitions in a session (reps x sets).
2) Load-volume: Total amount of weight lifted in a session (weight x reps x sets).

Weightlifting (Olympic)
The classification of weightlifting exercises that include the clean, jerk, and snatch.

Work to rest ratio
The ratio of time an athlete exerts themselves to the amount of time spent resting.