The main objectives of the UNE NOR’EASTERS Strength & Conditioning Program are to improve competition performance, reduce the risk of injury, and to promote a productive, competitive and smart training atmosphere. The success of the strength and conditioning program will take a mutual commitment between the Strength & Conditioning Coach and the Student-Athletes. Success will be defined as each athlete reaching his/her full personal and athletic potential. Being successful will require smart, organized and efficient work during all training sessions as well as a commitment to giving effort year-round, not just during the competitive season.

All Training for Student-Athletes will incorporate the following principles of performance:

#1 Ground Based Movements
Ensuring that the athlete’s feet are in contact with the ground is of utmost importance during training. In order to produce force, and thus create power, an athlete needs to do several things simultaneously while their feet are in contact with the ground. They must stabilize various joints, correct for poor positioning and reorient themselves in a matter of microseconds. This can only be accomplished through learning to move efficiently on the ground and will lead to enhanced performance as well as reduction of injury due to increase proprioception.

#2 Multi-Plane/Joint Movements
An athlete’s body is three dimensional and should be trained as such. Ignoring a plane of motion while training, is a great disservice to the athlete. Simply put, an athlete will need to move through all three planes of motion, often in combination, during competition. Sagittal, frontal and transverse motions will be trained and a focus will be placed on multiple joint lifts versus isolationary exercises. The body does nothing in isolation during an athletic movement, thus it is imperative that the ability to move the body as one, explosive unit is stressed in the programming.

#3 Sport-Specific Training
While it is important for all athletes to master basic movement patterns, it is also important to train within the requirements of the decided sport. Each sport has a unique set of physiological and biomechanically skills that the athlete’s work in the weight room needs to support. Lifting and conditioning will be specifically targeted at skills that support the athlete during competition and will include sport-specific implements whenever possible, especially during pre-season or in-season.

#4 Psychological Preparedness
An athlete can excel in the weight room and on the practice field/court, however, if they are not “psychologically fit” for competition, they may struggle to demonstrate their value to the team. It is vital for all athletes to spend time mastering the mental side of their given pursuit. The weight room is a great place to be challenged individually and collectively as a team. It is a place when bonds are forged through iron, sweat and smiles. Shared struggle almost always results in stronger team chemistry and higher levels of resilience. It is important to visualize success, whether it’s while attempting a 1RM or winning a conference championship. Athletes will be given the tools necessary to learn these vital skills during training sessions.
#5 Mastery of Basic Movement Patterns

All athletes must draw from the same foundational tool box, meaning that to be competitive and healthy at any college level sport, an athlete must be able to execute a basic set of movement patterns. Athletes who demonstrate deficiency in these basics will be pulled aside and given extra coaching. This is NOT a punishment, but rather a necessity to ensure the athlete’s safety and continued growth. Poor form and technique will not be tolerated at any time. It is detrimental to the athlete’s health and could result in practices/games missed. Proper strength and conditioning should result in the opposite! All athletes should be able to show proficiency in the following movement patterns:

- **Lower Body Dominant**: Squat, Lunge, Hip Hinge, Single Leg
- **Upper Body Dominant**: Push, Pull
- **Core Dominant**: Rotation, Anti-Rotation, Lateral Stability, Neutral Spine Control
- **Speed Mechanics**: Change of Direction, Linear, and Jumping/Landing

#6 Periodization

Periodization refers to training variation throughout the competitive athlete’s year. These variations are necessary for the body to continue to make improvements in athleticism and to stay injury free. There are differing goals throughout the training cycle, with each phase focusing on a new aspect of athleticism and strength/speed gains. Each subsequent phase is dependent on the one that came before:

- **Pre-Season** – The emphasis should be placed on achieving the proper conditioning levels for the competitive season as well as gaining power and explosiveness. This can only occur if the athlete has done their work in the off-season work. This is a time to increase sport-specificity in the weight room.

- **In-Season** – The emphasis is placed on maintaining strength and power levels built in the off and pre seasons. There is an art to training an in-season athlete...it is essential to facilitate pain-free competition on a daily basis through continued soft tissue mobility work. This is NOT the time to make gains, but that is not to say it is impossible. However, the athletes are taxed enough with the rigors of the season and the delay or halting of strength and conditioning in this phase can lead to a quicker decline in strength and power output, as well as opening the door for injury. The body spends so much energy daily in practices and games that muscle can often be lost over the duration of a season (especially when combined with poor nutrition/recovery habits) and instead of peaking for post season play, injuries and overtraining may start to occur.

- **Post-Season** – The emphasis in this phase is recovery from the long season. Athletes need to use muscle groups in ways they normally do not during the season in order to allow over-used movement patterns and joints a chance to recover and in some cases heal.

- **Off-Season** – The emphasis during this phase of training is on gaining as much strength and muscle size (hypertrophy) as possible. The reasoning behind this is that a larger muscle has a greater propensity for strength, a stronger muscle has more potential for power production, and a more powerful muscle has the ability to produce explosive, synchronized, athletic movements. It is also the time to perfect speed and movement mechanics.

#7 Soft Tissue/Mobility and Recovery

Every training session will begin and end with a combination of soft tissue and mobility work. Soft tissue refers, in this case, to muscle and fascia. Soft tissue restrictions (also known as knots, trigger points etc.) can lead to decreased performance and missed time due to pain. They can also lead to dysfunctional movement patterns because the muscle(s) affected are restricted from moving through their normal, full range of motion and the body will steal mobility from another part of the skeleton to accomplish the task at hand. Mobility drills are preformed after soft tissue work to enhance the joints ability to perform at an ideal level. Some muscular stiffness and relaxation is necessary to move efficiently and safely, however, it should be able to be turned off and on when needed...neither should be a state of being.

#8 Posterior Chain Development

Many athletes fail to develop the necessary strength in their posterior chain (glutes, spinal erectors, hamstrings and calves) to decelerate their speed or to sprint at full capacity. Developing strength through the hips and posterior core and legs is vital to the ability to absorb the power an athlete creates during an athletic movement such as stopping from a linear sprint, planting and cutting to change direction or landing/taking off from a jump. These starting/ending phases of movement put the athlete in a compromising position; they either need to absorb their force and translate it into another movement or they will either injure themselves or be inefficient competitively. The hamstrings play an important role in sprinting at full capacity as well as the deceleration of the tibia due to its inherent ability to “pull” the foot along the ground and interplay in the extension of the hip. Poor strength in this muscle group can lead to a slow, injury (especially at the knee) prone athlete.
#9 Speed Development and Mechanics
Proper strength levels are necessary for speed development. An athlete must both create and control the forces they produce. Speed requires power translation from upper to lower body and therefore, it is essential that the core be trained to be stable whilst upper and lower extremities move around it. Otherwise, an athlete will “leak” or waste precious energy. Athletes will be taught the basic tenants of speed and then progressed:

**Proper Arm and Leg Action** – Arm drive directly correlates to leg drive. Faster arms and proper core positioning lead to faster leg interaction with the ground = increased speed.

**Movement Preparation** – In order to be fast and agile, an athlete needs to be ready to move at any time. That begins by learning to keep the ball of their foot exposed and ready to make contact with the ground in order to maximize hip extension and thereby force production. They will also be taught to keep their eyes and chests up while moving.

**Center of Gravity Management** – The low man always wins. A low center of gravity equates to an athlete that is always ready to move, in any direction, in any situation, at any given time during competition. Athletes will be trained to attack, never react. This means that they will be taught how to remain in an advantageous, athletically ready position at all times from which they can sprint, jump, side shuffle, or backpedal. Acceleration is the ability to reach maximum speed in the shortest distance or time possible. All sports require phases of acceleration (rapid speeding up), deceleration (quickly slowing down) and reacceleration (rapid speeding up after a stop) in a new direction. It is imperative that athletes learn build eccentric strength necessary to control their bodyweight while doing any of the three phases of changing direction.

#10 Performance Testing/Evaluation
All athletes will have the opportunity to participate in performance evaluations and testing throughout the academic year. Performance testing is essential because it paints a picture for the strength coach, the athlete and the sport coach of each athlete’s abilities, tendencies, strength and weaknesses. It also gives all involved a benchmark to which they can consistently refer back to throughout an athlete’s training year. All testing sessions will include the following but may also include more sport-specific tests depending on the sport:

**10yd Dash** – Acceleration speed and first step quickness/explosiveness

**40yd Dash** – Top speed and muscular endurance during a longer sprint

**5-10-5 Agility** – Ability to effectively change direction and translate speed in a new direction

**Vertical Jump** – Explosive power in a vertical direction and jumping/landing mechanics

**Multiple Effort Jump** – Continued muscular force production and endurance over multiple efforts

**Standing Broad Jump** – Explosive power in a horizontal direction and ability to absorb forces

**Chin Ups** – Directly correlated to relative body strength as well as arm drive/leg drive

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**Hard Work Beats Talent When Talent Doesn’t Work Hard.**