We will cover three basic objectives in pole vaulting.  1) Identifying a potential vaulter, 2) Technical considerations in the pole vault and 3) Training design. These three objectives should direct a coach from the beginning stages of identifying potential through designing a training program to meet each specific vaulter's needs.

**Objective #1: Identifying a Potential Vaulter**

1) **Speed**
   a. Speed is the limiting factor in the pole vault. The faster the speed at takeoff, the higher the athlete's grip on the pole and consequently, the higher the height achieved if proper form is executed.

2) **Athletic ability and body awareness**
   a. The ability of the athlete to manipulate body movements at high speeds and maintain a consciousness of body placement in space and time when performing aggressive coordinated activities is desirable.

3) **Coachability, desire and aggressiveness**
   a. The athlete must be coachable and willing to make or try to make necessary changes when needed.
   b. The athlete must possess a desire to be a vaulter and have confidence to assume the risk of vaulting. A tentative athlete that lacks the mindset to carry out instruction with confidence can make fundamental mistakes at key points in time putting themselves at risk.
   c. A good vaulter is one that will be aggressive in taking well-calculated risks. Some vaulters may be thought of as crazy or risk takers while other may be technicians looking to make the next sensible move. Either way, the coach must be in full-control and the athlete must be willing to press forward to the next challenge when the time is right.

**Objective #2: Technical Considerations in the Pole Vault**

**Checkmark Systems**
A three checkmark system is usually used to provide accuracy through the approach

1) An athlete's checkmark at the start of the run to mark his/her beginning point.
2) A coach's checkmark 6 steps from the plant to check accuracy in the run.
3) The plant checkmark to ensure proper body placement at takeoff.

**Length of Approach**
1) Length is considered to be total number of steps.
2) Ability level
   a. Technical proficiency
   b. Training age
   c. Competition age

**Initiation of the Approach**
The vaulter should lower the hips and torso slightly to set up forward and upward directions of push on the first step. The forward lean of the vaulter in the initial push-off will not be as pronounced as other jumping events due to the pole carry and the pole weight which will already be forward.

**Pole Carry**
1) The vaulters (top hand) right hand should be positioned near the top of the right hip. It should hook the top of the pole, or desired height, with the thumb in a closed, comfortable position.
2) The bottom arm (left arm) should maintain a straight or cocked back left wrist with the elbow slightly below the left hand and with the wrist approximately 4-6 inches from the chest.
3) Distance between hands varies between athletes. An 18-24 inch separation between the hands is common.
4) A slight up and down movement (matching the up and down motion of the vaulter’s center of mass) is permissible but back and forth seesawing movements will likely disrupt the plant and are discouraged.

**Distribution of Phases**
1) **Drive Phase** - First four to six steps in an appropriate pattern of acceleration.
   a. The pole tip should be at an approximate 45 degree angle and parallel to the chest as push-off occurs.
   b. Proper drive phase mechanics should be practiced as in all jumping events.
2) **Continuation Phase** - The strides in the middle of the run utilizing full stride mechanics
   a. After the first six strides, the athlete should be close to full stride mechanics and the pole tip should drop slightly with each step.
b. The athlete should not bend forward at the hips as the run progresses.
c. When on the runway, the athlete’s shoulder and hips should be square with the runway.

3) Transition Phase – Last six steps in which the most steering occurs.
   a. The last four to six strides will set up a successful pole plant and takeoff.
   b. The top hand will control the drop of the pole and the bottom hand is used as the fulcrum.
   c. There is no need to continue acceleration at this point, rather, maintain speed for optimal speed and a controlled plant.

The Plant
   1) The plant should begin at touchdown of the third to last step.
   2) The start of the planting action begins with the flexion of the right elbow and an extension of the left elbow.
   3) The pole passes through the horizontal position as the vaulter begins the planting action on the 3rd to last stride.
   4) As the penultimate right foot strikes the track, the vaulter moves the pole forward and upward in a pressing motion extending both arms completely so the top hand is as high as possible and directly above the last foot strike above the forehead.

The Takeoff
   1) In the correct takeoff position, the pole is directly over the takeoff foot and the right arm is as high as possible.
   2) The top hand is not outside of the shoulder and the bottom hand is slightly across the mid-line of the body in front of the opposite shoulder to ensure proper pole loading and preventing turning of the pole.
   3) The vaulter’s eyes, head and chest should be directed outward and upward similar to a long jumper.
   4) The hips and shoulders remain square with the bar to avoid any turning or improper pole loading.
   5) The shoulders and hips should continue to move forward so that they are significantly past the hands and takeoff foot at liftoff. This is critical to setting up a strong succeeding swing phase.

The Swing
   1) The vaulter should attempt to remain right side up immediately after takeoff by keeping the body in an extended position.
   2) The swing is initiated by the torso moving forward ahead of the limbs at takeoff.
   3) This sets up a powerful, succeeding trailing swing of the legs.
   4) The takeoff leg and top arm should be kept extended during the swing phase.
   5) As the swing slows, the vaulter should bend at the waist so that the shins come near the pole.

The Row
   1) When the stretched takeoff leg catches up with the lead leg, and both legs begin a fast upward movement, the vaulter shifts the pole forward with the shoulders and fixed arms, as if in a rowing motion.
   2) As the hips swing forward, the left elbow will flex in and move to the right side of the pole to allow the vaulter to continue the swing as close as possible to the pole.

The Extension
   1) As the pole straightens, the athlete should begin an aggressive vertical straightening of the body, including the torso, hips, knees and feet.
   2) The athlete should be moving parallel to the pole and as close as possible to the pole as it unbends. The vaulter should pull with both arms directly along the axis of the pole. The positioning of the pole diagonally across the body prior to the pull, combined with the pull itself, should initiate a rotating that turns the vaulters stomach to the bar.

The Clearance
   1) When the left arm reaches its full extension and releases the pole; then the right arm is released.
   2) The vaulter should assume a piked position by flexing at the waist to set up a rotation over the bar and a more favorable location of the body’s center of mass.
   3) In the final stages of clearance, after the pole is released, the vaulter should lift and rotate the elbows outward to avoid contact with the bar.
Teaching Progression
Gymnastic activities for coordination, flexibility, body awareness and core strength can and should be done throughout all phases of teaching the vault.

1) **Standing Curl-Press-Takeoff**
2) **Walking Curl-Press-Takeoff**
3) **Running Curl-Press-Takeoff**
4) **Sand Vaulting**
5) **One Handers**
6) **Stiff Pole Rockbacks**
7) **Stiff Pole Vaults**
8) **Stiff Pole Vaults for Height**
9) **Short Run Vaulting**
10) **Full Approach Vaulting**

**Objective #3: Training Design**

**Early to Mid Phases**

The early season is spent improving weaknesses and imbalances in the body. Many athletes come from high school being two to four sport athletes. Most are excellent athletes but are still need to developed proper running mechanics through sprints drills, core exercises and strength training or have simply not focused on these modalities due to shortness of the playing seasons. This is where the battle of inches begins. If the proper sprint mechanics and core balance is initiated early, a favorable outcome will result. An athlete using optimal technique can complete more efficient workouts at higher volumes and velocities with less effort.

Time is spent in specific conditioning and overstressing importance of drills and exercises to improve core strength, stride length, stride frequency, and correct sprint and vault mechanics. This will transition to an adaptation of the nervous system at faster speeds. Approach distances and volumes of attempts in workouts start at a minimum and increase. Overall fitness, specific strength, and speed are the focus at the early season.

**Monday** – Warm-up / Acceleration Complex / Acceleration Development / Multi-Jumps / Multi-Throws / Warm-down / Hurdle Drills / Weights - Olympic Focus / Stretch
**Tuesday** – Warm-up / Gymnastics Session / Weights - Strength Focus / Stretch
**Wednesday** – Warm-up / Short Approach Vault and Technique Session with Film Review / Flexibility
**Thursday** – Recovery Focus / Warm-up / Gymnastics Training / Swimming-Underwater Vaulting / Stretch
**Friday** – Warm-up / Plant Drills (Runway & Acceleration Focus) Progresses to Technical Sessions / Weights - Vault Specific Strength / Stretch
**Saturday** – Warm-up / Strength Endurance – Hills or Tempo Running / General Strength / Stretch
**Sunday** – Rest (Complete Rest or Active Recovery) or BASS (Break A Sweat and Stretch)

**Mid to Late Phases**

Focus moves through core strength, proper technique and mechanics on to developing power and optimal speed in the long approach. Mental preparation is a must through this stage as athletes must engage the workouts with a day to day focus understanding that everyday builds on the one previous to it preparing them for the championship season.

Fitness, specific strength and speed are the strength of a vault program. In discussing the fitness component, we are not talking about aerobic ability, rather the specific fitness the athlete achieves through the early season that enables him/her to complete accurate movements multiple times with the correct technique. Speed is a must with emerging vaulters. If a vaulter can execute proper technique, speed will be the determining factor in reaching the new heights.

**Monday** – Warm-up / Acceleration Complex / Vaulting Session / Multi-Jumps / Multi-Throws / Warm-down / Hurdle Drills / Weights - Olympic Focus / Stretch
**Tuesday** – Warm-up / Gymnastics Session / Weights - Strength Focus / Stretch
**Wednesday** – Warm-up / Vaulting Technique Session / Long Jump Drills / Flexibility
**Thursday** – Warm-up / Gymnastics Training / Interval Training Mid / Recovery Late / Swimming-Underwater Vaulting / Stretch
**Friday** – Warm-up / Plant Drills / Runway Approaches / Weights - Vault Specific Strength / Stretch
**Saturday** – Compete
**Sunday** – Rest (Complete Rest or Active Recovery) or BASS (Break A Sweat and Stretch)

Note: Every vaulter will follow a different regimen of training and a balance must be achieved within the program. Some athletes will be able to handle a more intensive regimen vaulting three times a week, whereas other vaulters will need or can only handle one vault day and one competition day a week. Drills, intervals, speed and acceleration development must be substituted with some athletes throughout the process to achieve the desired outcome.

Additional resources for these clinic notes where comprised from USATF lectures, clinics and schools.