

## PRINCIPLES OF TRAINING AND PERIODIZATION

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- I. Training a runner is both science and art
  - A. Science
    1. Overload - when a level of stress is applied to the body that is greater than the stress the body is accustomed to, the body will adapt to that stress.
    2. Progression and Variability-- Training is most effective when it is varied over time.
    3. Specificity - The human body adapts to exercise and physical stress in direct response to the nature of the demands imposed. This is called the "SAID" principle.
    4. Recovery - All gains in training are realized during periods of recovery when the body rebuilds itself to adapt to the stresses introduced to it.
    5. Individuality - Everybody responds differently to training.
  - B. Art (The talent of coaching)
- II. Principles Specific to Training for Track and Field
  - A. Speed/Power development
  - B. Specific strength
  - C. Mental Toughening
  - D. Competition
- III. Planned Performance Training for Track and Field
  - A. Systematic application of principles of training
  - B. Periodization of training
  - C. The language of periodization
    1. Training year
    2. Cycle - a time period in which specific workouts with specific purposes are planned
      - a. macrocycle
        1. Period
          - a. Preparation Period (Pre-season)
          - b. Competition Period (Meets and races)
          - c. Transition Period (Recovery time connecting macrocycles)
        - b. Phase (Sometimes called a mesocycle)
        - c. Microcycle
          1. Session
          2. Unit

- IV. How to Construct a Periodized Training Plan Step-by-Step
  - A. Set up your track schedule.(macrocycle)
  - B. Determine target meets
  - C. Divide your season (macrocycle)
  - D. Divide preparation periods (mesocycles)
    - 1. General Prep
      - a. goal is to improve fitness
      - b. ideally the longer of the two phases
    - 2. Specific Prep
  - E. Divide Competition periods into 3 training phases
    - 1. Early Competition
    - 2. General Competition
    - 3. Peak Competition
      - a. This will be at different times for different level athletes
      - b. Your athletes best performances of the season
  - F. Divide each Training Phase into 1 week Units (microcycles)
  - G. Divide into Daily Workouts
    - 1. List the primary components of each day's workout
    - 2. Code other major portions of microcycles
  - H. Script Each Day's Workout
    - 1. Be as specific as possible
    - 2. Be as flexible as possible
- V. Factors in setting up a Periodized Training Plan
  - A. Goals
  - B. Types of Athletes
  - C. Prom, SAT and AP dates
  - D. Weather
  - E. Training Facilities
  - F. Keep it simple
  - G. Keep records
  - H. Sell athletes your plan
  - I. It is better to be undertrained than overtrained
  - J. Have faith in your coaching staff
- VI. Field Event Periodization
  - A. The weight events
  - B. The long and triple jumps
  - C. The high jump
  - D. The pole vault

# TYPES OF ATHLETES

## PERIODIZATION

**PARTICIPANT:** Comes out because a friend came out or enjoys the people. May be first year out. Usually 11 to 14 week period.

**COMPETITOR ROOKIE:** Is serious about doing well. Season is usually 11 to 14 week period. A little more intense than participant.

**RETURNING COMPETITOR:** Usually goal is to at least reach CIF Prelims. Therefore, season is a little longer. Season between 12 to 16 weeks.

**CHAMPIONSHIP CALIBER ATHLETE:** Length of season is determined by goals of athlete. Most of these athletes usually plan on placing in CIF finals. Season runs anywhere from 14 to 18 weeks.

**SCHOOL STUD/STUDETTE:** 2 or 3 sport athlete you will not see until after the winter sport playoffs are over. Usually a somewhat shorter, but more intense season. Make sure to allow for general track and field conditioning for these athletes. Season is anywhere from 10 to 16 weeks.

**THE PERFECT COMPETITIVE ATHLETE:** 4.0 student who trains all year long. Understands training completely so they set up their own training cycles and allow you to carry their bags to the state meet.

**THE SURPRISE:** An athlete who comes out of nowhere to become one of the top athletes in the state. Undertrain them for 11 to 14 weeks and then enjoy the ride.

# WEEKLY WORKOUT PLAN

## Early Season

Long run  
Repeat/Interval Workout  
Tempo/Race day  
2 Steady state days  
Prerace day (AM Workout)  
Recovery Day-active or full rest

## Mid Season

Long run  
Repeat Day  
Interval Day  
Race Day  
Pre Race Day  
3 Steady State days

## LATE SEASON

Long Run  
Interval Day/Repeat Day  
Race Day  
Pre Race Day  
Recovery-Pool running  
Possible tempo day (depends on individual needs)

## Daily Practice

Warm up  
Stretching  
Form running/strides (2 to 3 times a week)  
Main portion of workout  
Strides-some form of fast running daily  
Warm down  
Stretching and strenghting

# ***DIFFERENT CYCLES FOR DIFFERENT ATHLETES***

**CHAMPIONSHIP CALIBER ATHLETE YOU HAVE FROM SEMESTER-AH THE IDEAL WORLD!**

**Season (macrocycle) is 15 to 18 weeks long**

- a. if goal is specifically to place at state meet-plan through June 2-peak later
- b. if goal is to reach CIF Finals-peak performance should be planned to CIF prelims (May 12 or 13)-This is the plan I will show for this athlete.
  1. Preseason-4 weeks-general conditioning
  2. Early Season-4 weeks-specific training
  3. Mid Season-4 weeks-specific training
  4. Late (peak season)-3 weeks-specific training
    - a. covers league finals, prelims and finals.

**BASKETBALL PLAYER, WRESTLER OR SOCCER PLAYER WHO GOES TO CIF FINALS OR STATE CHAMPIONSHIPS.**

**Basketball State Finals-March 18**

**Wrestling State Finals-March 4**

**Soccer CIF Finals-March 4**

A general assumption usually made is that these athletes are already in some sort of shape if they are playing on this level. Hopefully this assumption is correct. However, they will also usually be a little physically and emotionally drained from a long, competitive season. Please take this into consideration when training them!

**Season is 11 weeks-**

- a. From March 6 to probably at least May 19
  1. Preseason--they missed it!
  2. Early season-missed some of this-4 weeks-general training-gradually increase intensity
  3. Mid season-4 weeks-specific training
  4. Late (peak) season-3 weeks

# **DIFFERENT CYCLES FOR DIFFERENT ATHLETES A SAMPLE MODEL**

## **FIRST YEAR ATHLETE ENTERING CLASS AT SEMESTER**

Season (macrocycle) is most likely 14 weeks long.

- a. From January 30 to May 5 (league finals)
  1. Preseason-4 weeks-General conditioning
  2. Early Season-4 weeks-Specific Training
  3. Mid Season-4 weeks-Specific Training
  4. Late Season (Peak)-2 Weeks-Specific Training

**REMINDER-MOST FIRST YEAR ATHLETES WILL PROBABLY NOT UNDERSTAND THE IMPORTANCE OF SPRING BREAK PRACTICE.**

## **FIRST YEAR ATHLETE AT SCHOOL WITH NO 6TH/7TH PERIOD ATHLETICS**

Season (macrocycle) is usually 11 weeks long

- a. From February 18 (21) to May 5
  1. Preseason-3 weeks-general conditioning
  2. Early Season-3 weeks-Specific training
  3. Mid Season-3 weeks-Specific training
  4. Late (Peak Season)-2 weeks-Specific training

**LIKE MOST ATHLETES, SPRING BREAK WORKOUTS MAKE BE A LITTLE LAX. REMEMBER THIS IN YOUR TRAINING CYCLES**

# PERIODIZATION MADE SIMPLE

THE 10 STEP PLAN TO COMPLETELY UNDERSTANDING THE "P" WORD

1. SET UP YOUR TRACK SCHEDULE
  - a. This is called a macrocycle
2. DETERMINE TARGET MEETS
3. COUNT BACKWARDS FROM END OF THE SEASON TO BEGINNING
  - a. Realize that you will have different length seasons for different caliber athletes
  - b. Most athletes will be done by league finals
4. LIST ALL YOUR WORKOUTS
5. DIVIDE YOUR SEASON (macrocycle) INTO 2 PERIODS
  - a. Prep period (preseason)
  - b. Competition period
6. DIVIDE PREP PERIOD INTO 2 TRAINING PHASES (mesocycles)
  - a. General prep
    1. goal is to improve fitness
    2. ideally the longer of the two phases
  - b. Specific prep
7. DIVIDE COMPETITION PERIOD INTO 3 TRAINING PHASES
  - a. Early competition
  - b. General competition
  - c. Peak competition
    1. this will be at different times for different level athletes
8. DIVIDE EACH TRAINING PHASE INTO 1 WEEK UNITS
  - a. These are microcycles
9. DIVIDE 1 WEEK UNITS (microcycles) INTO DAILY WORKOUTS
  - a. List the primary components of each day's workout
  - b. Code other major portions of microcycles
10. SCRIPT EACH DAY'S WORKOUT
  - a. Be as specific as possible
  - b. Be as flexible as possible
  - c. Realize that it "never rains in Southern California"

Month

Phase

Mesocycle

Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
H M E							
H M E							
H M E							
H M E							
H M E							

Weekly Workout Intensity

H=Hard M=Medium E=Easy

Types of Workout Sessions this Phase

Fartlek  
 Steady-Pace Run  
 Continuous Slow Distance  
 Interval  
 Surging  
 Hills  
 Drills  
 Strides  
 Pool Train  
 Weights  
 Drills

# # Routine Meet

+ Challenge Meet

\*\* Target Meet

Comments



PERIODIZATION WORKSHEET

WEEK	DATE	MEET(S)	KEY WORKOUTS	COMMENTS
14		STATE MEET		
13				
12				
11				
10				
9				
8				
7				
6				
5				
4				
3				
2				
1				

## HIGH HURDLE PERIODIZATION

BY SCOTT KING  
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LAKE BALBOA, CALIFORNIA

### Pre-Season

Our pre-season schedule at Birmingham takes place in the months of January and February. The athlete begins to hurdle at least twice a week and runs on the track twice weekly. Workouts are done with the Sprint Coach. Emphasis is on endurance.

### "Monday" Strength Workout

The workout is 400 meter based. An interval means that the rest is equal to or less than your run.

1. Jog at least 15 minutes on the grass
2. 5 x 400's every 3 minutes or a breakdown 500-400-300-200-100 (intervals)
3. Jog at least 15 minutes on the grass
4. Upper body weight workout "Tuesday" High Hurdles

### "Tuesday" High Hurdles

The workout is "Form Work". This is not about racing. It is about working on problems.

1. Jog 15 minutes on grass
2. Over 1 hurdle 5 times
3. Over 2 hurdles 4 times
4. Over 3 hurdles three times
5. End the workout with a 400 for time
6. Jog on grass for 15 minutes
7. Core workout (300 reps)

### "Wednesday" speed

1. Jog on grass for 15 minutes
2. 10 100's on the straightaway and jog the curves (Fartlek)
3. Jog on grass for 15 minutes

### "Thursday" Intermediate Hurdles

1. Jog on grass for 15 minutes
2. 5 200 I.H. and jog back to the start
3. Emphasis on first two hurdles, because they are the most important
4. Jog on grass for 15 minutes.

### "Friday" endurance

1. 30 to 40 minute run on grass

### "Saturday and Sunday"

1. Rest

## **Competition Phase**

Our competitive season takes place in the months of March and April. Our athletes have developed good strength, and much of the endurance work is behind them. The emphasis is now on technique and the application of speed work. The workout schedule is based on competitions on Friday or Saturday. The heavy workouts are from Monday to Wednesday and then taper on Thursday.

### **“Monday” intense speed day**

1. Jog 10 minutes
2. Workout is without hurdles
3. 100-200-300-400 build-up at top speed
4. Long recovery periods
5. Jog 10 minutes

### **“Tuesday” High Hurdles**

1. Jog 10 minutes
2. Over 1 hurdle 5 times
3. Over 2 hurdles 4 times
4. Over 3 hurdles 3 times
5. A Timed 300
6. Jog 10 minutes

### **“Wednesday” speed and intermediates**

1. Jog 10 minutes
2. 2 x 200's at race pace
3. 6 x 100's over hurdles

### **“Thursday” Pre-meet**

1. Less intensity
2. 15 minute jog
3. 10 100 m. striders
4. 15 minute jog

### **“Friday” Competition**

1. If running on Saturday athletes should do some hurdling and straight-aways

## **“Championship Phase”**

Our championship phase takes place in the month of May and the first week in June. Strength and Endurance is not included in this phase.

### **“Monday” starts**

1. Block starts over first two hurdles for both the highs and intermediates
2. 3 times to 1<sup>st</sup> hurdle
3. 3 times to 2<sup>nd</sup> hurdle
4. 3 times to 3<sup>rd</sup> hurdle
5. 1 time to 4<sup>th</sup> hurdle
6. 1 time to 5<sup>th</sup> hurdle

**“Wednesday” Intermediates**

1. Run over 8 hurdles concentrating on the 3-step rhythm
2. Five-stride Rhythm over 5 hurdles

**“Thursday” pre-meet**

1. Less intensity
2. 10 minute jog
3. 10 100 m. striders
4. 10 minute jog

**“Friday” competition**

Things that can be done throughout the season:

1. Walk-through drills
2. Static hurdle stretches
3. Plyometric sprint drills
4. Dynamic hurdle drills
5. Running hurdle drills

## HIGH JUMP PERIODIZATION

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Our pre-season schedule at Birmingham takes place in the months of January and February. During the pre-season, high jumpers need to devote much of their training to running and plyometric. The jumping drills should become more demanding, as the athletes devote increasing emphasis to technique.

### “Monday”

1. One mile jog
2. Static stretching (20 min)
3. 6 x 100 m. build-ups, emphasizing good running technique, arm action
4. 10 standing jumps
5. 10 three-stride jumps
6. 10 full approaches, concentrating on arm action and jumping straight up on take-off
7. Triple jump bounding
8. 6 x 200 m at easy pace
9. Weights
10. Cool down, jog

### “Tuesday”

1. One mile jog
2. Stretching
3. 6 x 100 m build-ups
4. 10 standing jumps
5. 10 three stride jumps
6. 10 full approaches
7. 4 x 50 m bounding
8. 10 100 m striders
9. Stadium stairs
10. Hills
11. Weight training
12. 12 Cool-down

### “Wednesday”

1. One mile jog
2. Stretching
3. Interval training 3 sets of (150-100-50)
4. Cool down

### “Thursday”

1. One mile jog
2. Stretching
3. 6 x 100 m build-ups
4. 10 standing jumps

5. 10 three stride jumps
6. 10 full approaches
7. 6 x 100 m at easy pace
8. Core work (300 repetitions)
9. Weight training
10. Cool-down

#### “Friday”

1. Warm-up exercises
2. 30 minute run
3. Cool down

#### “Saturday and Sunday”

1. Rest

#### Competition Phase

Our competitive season takes place in the months of March and April. Our athletes have developed good strength, and much of endurance work is behind them. The running tempo will change, and the athlete will run fewer repeats and jump less, but drills and technique remaining important.

#### “Monday”

1. Jumping for height
2. Triple jump bounding
3. Hurdle hopping
4. 4 x 200;s with good stride (timed)
5. Weight training

#### “Tuesday”

1. No jumping
2. 4 x 50 m bounding
3. 6 100's at top speed
4. Hills
5. Core (300 repetitions)
6. Cool down

#### “Wednesday”

1. Jump for form
2. 8 x 100's
3. Weight training

#### “Thursday”

1. Technique Day
2. Easy stretching
3. Concentrate on approach run

#### “Friday and Saturday”

1. Competition

## Championship Phase

Our championship phase takes place in the month of May and the first week in June. Rest and recovery is an important concept in this phase.

### "Monday"

2. Technique day (work on form faults run-up problems, etc.)
3. 6 x 50's on grass

### "Tuesday"

1. Jog one mile
2. Box jumps or springboard jumps

### "Wednesday"

1. Jog one mile
2. 6 x 100 m

### "Thursday"

1. Rest

### "Friday and Saturday"

1. Competition

## THROWS PERIODIZATION

BY SCOTT KING  
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### Pre-Season

Our pre-season schedule at Birmingham takes place in the months of January and February. The bulk of the athletes' conditioning takes place in this phase. Lifting cycles emphasize high volume, low intensity. The running phase is high intensity, low volume one day and high volume, low intensity the next. The plyometric program is done on opposite days from the Olympic lift days.

#### "Monday"

1. Technique
2. A5 to 20 puts, concentrate on right leg
3. 3 x 150's
4. Standing long jumps
5. Hopping
6. Frog jumps
7. Box jumps
8. Jog 1 lap
9. Weights

#### "Tuesday"

1. 10 standing puts, concentrating on right leg
2. 20 puts, concentrating on left leg
3. Throwing light medicine balls
4. Stadium step work
5. Hill work
6. 6 x 100 m striders
7. Weights

#### "Wednesday"

1. Standing puts, thinking about right leg
2. 10 to 15 puts
3. 4 x 100 m,  $\frac{3}{4}$  speed
4. 15 minute jog
5. Weights

#### "Thursday"

1. Technique skills
2. 25 to 30 puts
3. 6 x 100 meters
4. Standing long jumps
5. Hopping
6. Frog jumps



7. Box jumps
8. Jog 1 lap
9. Weights

“Friday”

1. Technique Skills
2. 10 puts
3. 5 measured throws
4. Throwing light medicine balls
5. Stadium step work
6. Hill work
7. 4 x 80 m build-ups
8. Weights

“Saturday and Sunday”

1. Rest

**Competition Phase**

Our Competitive Season takes place in the months of March and April. Our athletes have developed good strength, and much of the endurance work is behind them. The volume of running slowly drops. The emphasis switches to sprinting rather than endurance work is behind them. The volume running slowly drops. The emphasis switches to sprinting rather than endurance. This phase concentrates on basic strength levels. Technique is emphasized in this phase.

**Championship Phase**

Our championship phase takes place in the month of May and the first week in June. Rest and recover is an important concept in this phase. Workouts are of high quality. In lifting, the emphasis is on both high intensity and speed squats. Running includes 20 meter sprints twice a week. Plyometric work is done on the other two days. We try to peak our athletes by concentrating on low intensity and high-speed work.