



HOW TO DEVELOP A 400M HURDLER

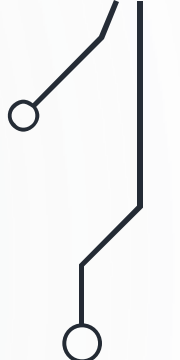
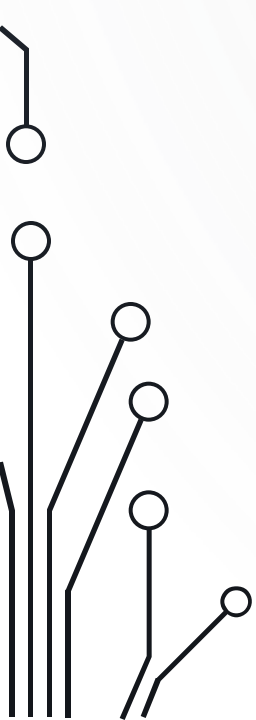
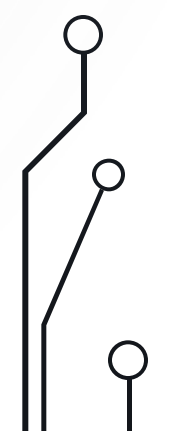
ANDREA BLACKETT

AZUSA PACIFIC UNIVERSITY – SPRINTS & HURDLES COACH

ABLACKETT@APU.EDU



RACE LOGISTICS

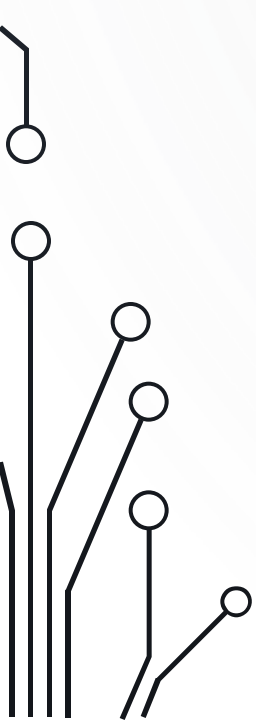
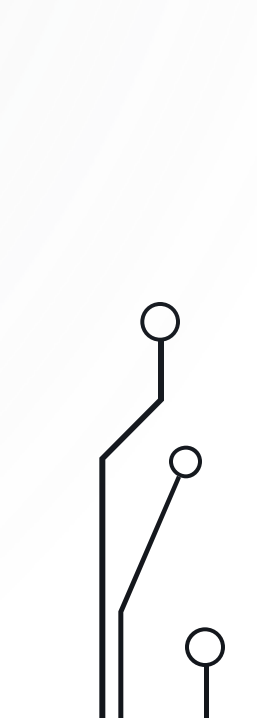
- 400m with 10 hurdles – 30inches for women, 36inches for men
 - 45m to first hurdle; women 22-25 strides, men 20-23 strides
 - 35m between each hurdle
 - Women take 15-17 strides between each , men 13-15 strides
 - 40m between hurdle 10 and the finish line
 - Even number of steps require alternating, odd number of steps same lead leg
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MY JOURNEY AS A 400M HURDLER





MY PERSONAL 400M HURDLE JOURNEY

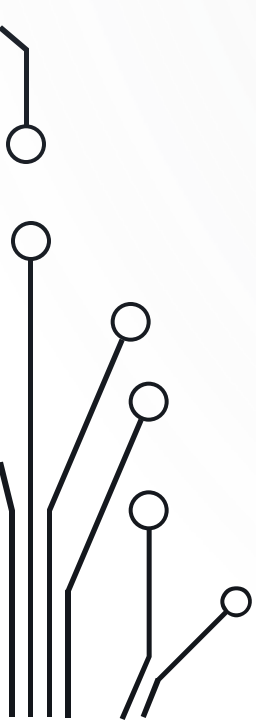
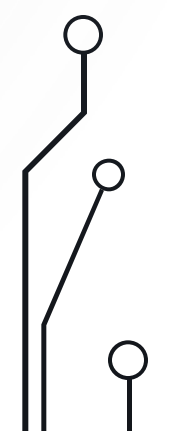
- 56 sec 400m runner in high school
 - 15.2 in 100m hurdles
 - Trained 3 days a week
 - No weights
 - These stats would probably not get a coach very excited
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SKILLS NEEDED TO DEVELOP AS A 400M HURDLER





SKILLS NEEDED TO DEVELOP A 400M HURDLER

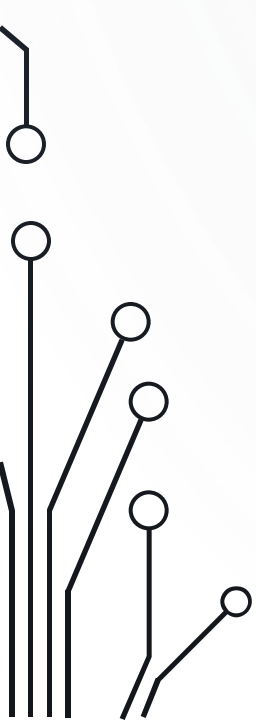
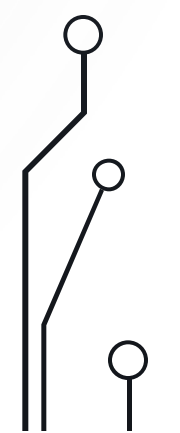
- 400m – 800m endurance abilities
 - Adequate levels of speed should be able to run the 100mh/110mh or the indoor 60mh
 - Good mobility and flexibility
 - Good core strength
 - Visual steering ability
 - Be prepared to confidently use both legs
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The image features a central white rectangular box with rounded corners and a thin grey border. The box is set against a light grey background with a subtle radial gradient. In each of the four corners of the image, there are decorative black line-art elements resembling circuit traces or branching paths, each ending in a small open circle. The text inside the box is centered and reads:

**IF YOU'RE NOT READY TO FALL,
YOU'RE NOT READY TO
HURDLE.**

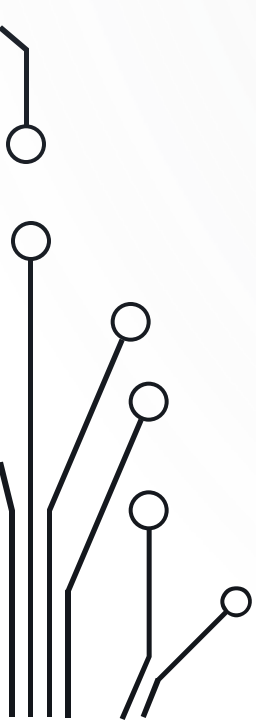


1ST YEAR GOALS AND EXPECTATIONS

- Build strength and endurance capabilities
 - Maximum volume 2400m per session
 - Emphasize use of “dummy leg”- Victor Lopez
 - Improve flexibility especially on “dummy leg”
 - Evaluate the individual’s tool shed and focus on the weak areas as much as you can
 - Race often
 - Allow for mistakes, small errors can be very costly when initially starting this event
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2ND YEAR

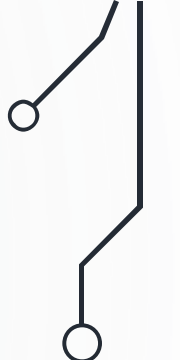
- Must be confident in attacking hurdles with either leg
 - Visual steering is very important
 - Focus on the first half of the race and cement the race pattern
 - Should be able to go over hurdle 1 in the exact same manner consistently
 - Max volume 2400-2600m
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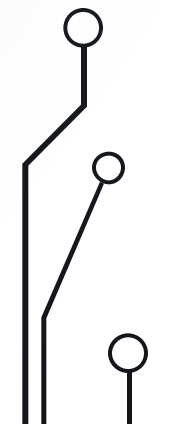
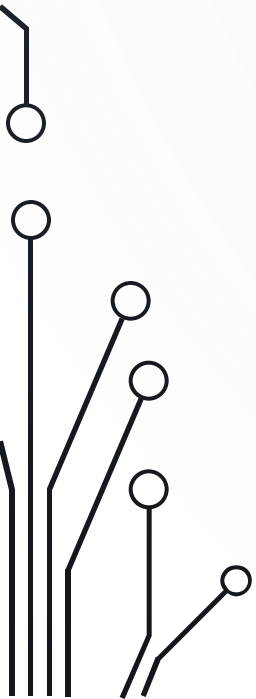






3RD YEAR

- Athlete should be seeking to become a hurdle perfectionist
 - Should become competent in the sprint hurdles-may be difficult for some male hurdlers but they should be able to 3 step over 39 inches at a high speed
 - athlete should be able to 3 step discounted hurdles with both legs confidently at full speed at 30inches for women, 36 inches for men
 - At this stage race pattern should be dictated by strength and speed capabilities not solely by one leg
 - Focus on the last five hurdles of the race and emphasize the critical rhythm change that takes place between hurdles 5-8
 - Max volume 2600-2800m
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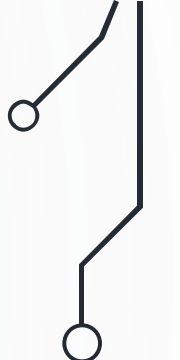


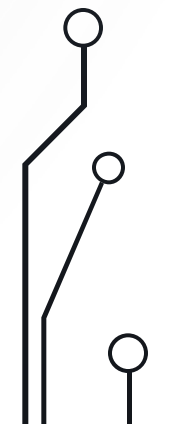
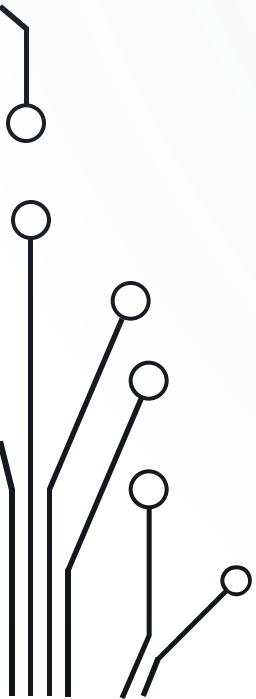
4TH YEAR





4TH YEAR

- Work on perfecting the optimal race plan based on speed and endurance capabilities
 - Start looking at touchdown charts and comparing the athletes race plan and pinpointing the areas they need to improve
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Men's 400m Hurdle Touchdown Times

H1	H2	H3	H4	H5	200m	H6	H7	H8	H9	H10	Projected
5.6	9.5	13.3	17.0	20.8	22.5	24.7	28.7	32.9	37.3	41.8	47.0
5.7	9.7	13.5	17.4	21.3	23.0	25.3	29.5	33.8	38.2	42.7	48.0
6.0	9.9	13.5	17.7	21.7	23.5	25.8	30.1	34.5	39.1	43.6	49.0
6.0	10.0	14.0	18.1	22.2	24.0	26.4	30.8	35.3	39.9	44.5	50.0
6.1	10.2	14.3	18.5	22.7	24.5	27.0	31.4	35.9	40.6	45.9	51.0
6.1	10.4	14.7	19.0	23.3	25.0	27.7	32.2	36.8	41.6	46.5	52.0
6.3	10.7	15.1	19.5	23.9	25.5	28.4	32.9	37.6	42.5	47.5	53.0
6.4	10.9	15.4	19.9	24.4	26.0	29.0	33.7	38.5	43.4	48.4	54.0

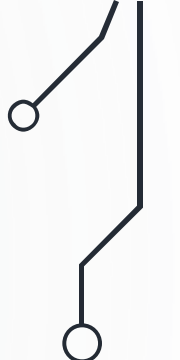
Women's 400m Hurdle Touchdown Times

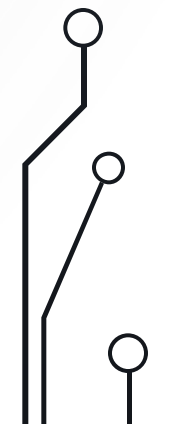
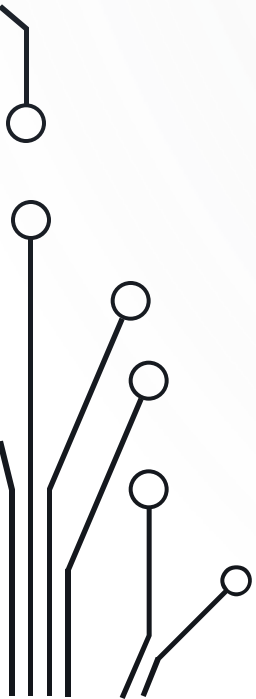
H1	H2	H3	H4	H5	200m	H6	H7	H8	H9	H10	Projected
6.1	10.3	14.5	18.8	23.1	25.0	27.5	32.0	36.7	41.4	46.3	52.0
6.3	10.7	15.1	19.6	24.1	26.5	28.7	33.4	38.2	43.2	48.2	54.0
6.5	11.1	15.7	20.3	25.0	27.0	29.8	34.7	39.7	44.9	50.1	56.0
6.7	11.5	16.3	21.1	25.9	28.0	30.8	35.9	41.1	46.3	51.8	58.0
6.9	11.9	16.9	21.9	26.9	29.5	32.0	37.2	42.5	47.9	53.4	60.0
7.1	12.3	17.5	22.6	27.8	30.0	33.1	38.4	43.9	49.5	55.2	62.0
7.3	12.6	17.9	23.3	28.7	31.0	34.2	39.8	45.4	51.1	57.0	64.0

Courtesy of SpeedEndurance.com

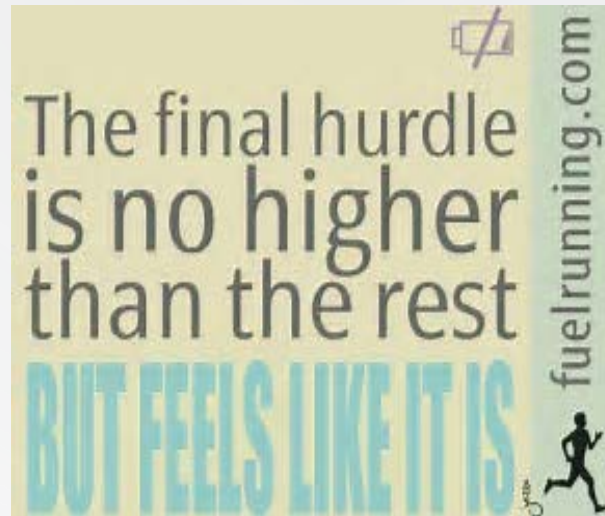


4TH YEAR

- Continue to emphasize enhancing endurance base- should be racing over 600m and 800m indoors
 - These races are for developing not just endurance but the mental toughness needed for the second half of the race
 - Speed power development is important; should be able to power clean body weight at least 4 times
 - Be strategic in racing. Select races that offer the best opportunities for success this is an event that outside factors make a difference
 - Max volume 2800-3200m depending on how they handle work load
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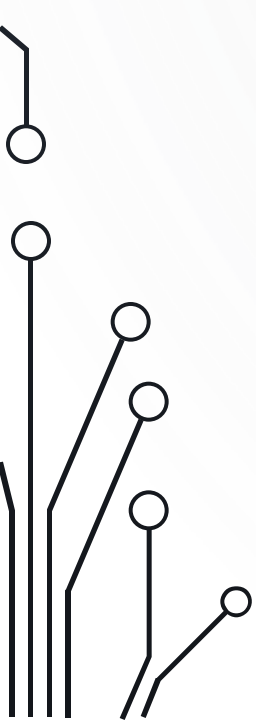
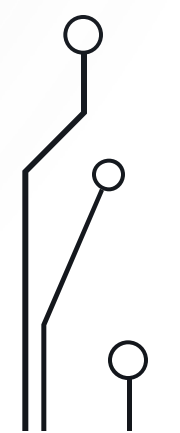
HOW TO GET THERE





GENERAL PREPARATION I

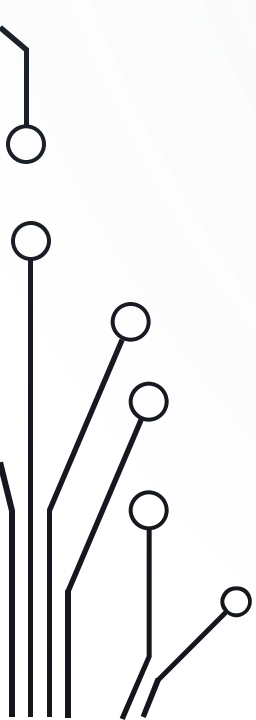


- AKA Fall Training is the 1st macro cycle- usually limited 8 hour week
 - 400m hurdlers train with the 400m runners
 - Training includes long runs max 3miles twice per week
 - Weight room 3 times a week basic lifts bench, squat, power cleans with supplemental exercises that focus on strengthening key areas for hurdlers- lower back, gluts, hip flexors
 - “Put money in the bank”- Victor Lopez
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GENERAL PREPARATION I

FAVORITE WORKOUT- GLOBAL CIRCUIT

- 45min in length
 - 4 exercises 30sec on 15 sec off
 - Follow with 1 lap of track
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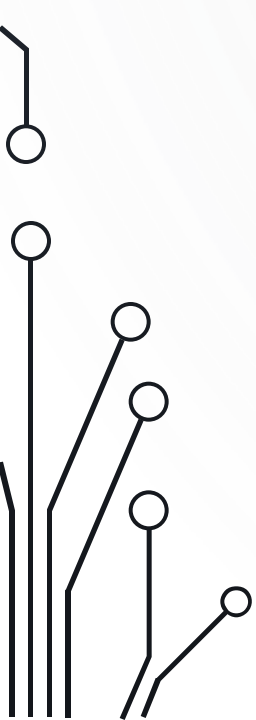
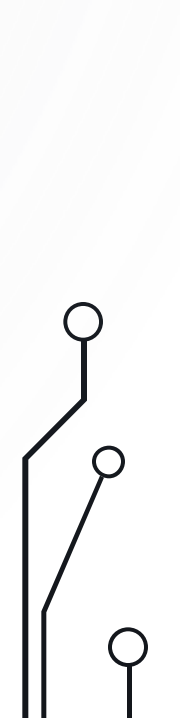
TYPICAL WEEK OF GEN PREP I

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
<p>EZ Warm Up</p> <p>3*30 sec Explosive Harvards on bleachers</p> <p>5 double leg hops up bleachers</p> <p>3 single leg hops up bleachers on each leg</p> <p>8*30m on grass</p>	<p>Long Warm Up</p> <p>Ladies Short sprints 2(6*100m) in 17-18 jog back in 60 secs</p> <p>Ladies long sprints 2(8*100)</p> <p>Men 2(8*100) in 14-15 jog back in 60secs</p> <p>Ab circuit</p>	<p>Meet at track- Jog to Citrus College, stretch</p> <p>5 singles, 5 double</p> <p>Jog back to track</p> <p>Stretch</p> <p>Weights</p>	<p>35/40min Global Circuit</p>	<p>EZ Warm Up</p> <p>Med Ball Throws 2*10</p> <p>-chest -forward -backward -hammer</p> <p>8*40m HKA</p>	<p>Abs on your own</p>	<p>REST</p>



GENERAL PREPARATION II

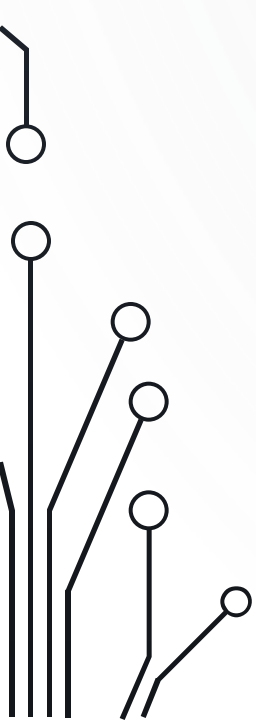
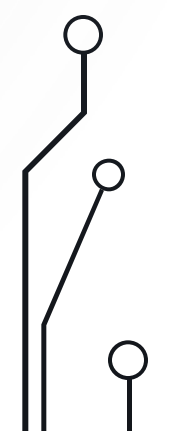


- Start to introduce tempo runs up to 600m max per run
 - Runs are very low intensity with shorter rest periods
 - Volume is 2400 and up depending on athlete
 - Still in the weight room 3 days a week
 - Specific skill instruction begins- walking hurdle drills, hurdle drills against the wall lots of hip mobility drills and exercises
 - Mature hurdlers can start 4 stepping drills
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GENERAL PREPARATION II

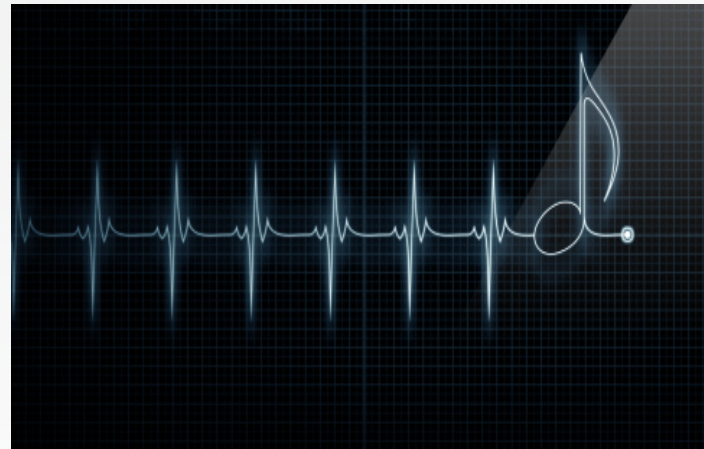
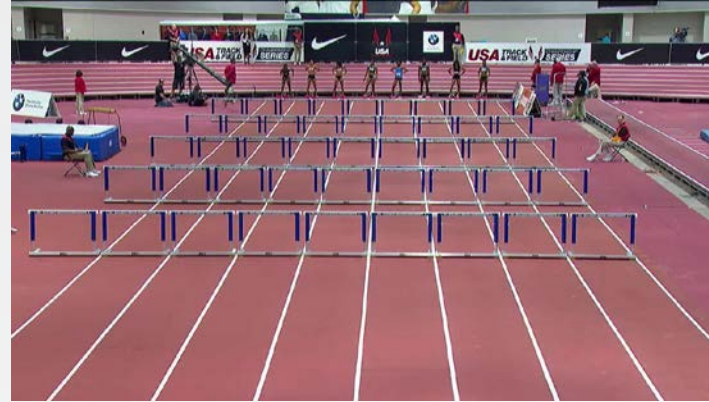


- Favorite workout –"20-20s"
 - Women start with 100m in 20sec rest
20sec Men can start at 16 sec
 - This workout can be manipulated throughout the entire year making runs faster and keeping rest at 20sec
 - Can do anywhere from 2-4 sets with 5-7 min between sets
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TYPICAL WEEK IN GENERAL PREP II

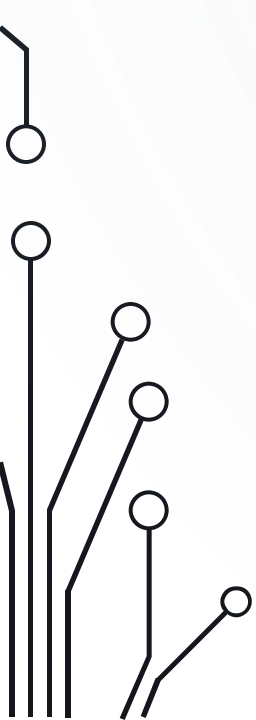
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
EZ Warm Up	Long Warm Up	EZ Warm Up	Long Warm Up	EZ Warm Up		
5* froggies	A. 2(6*150)(2) (6) tempo: 26	Med Ball Throws	On grass A. 2(8*100)20+20,19 +20	5* froggies	REST	REST
2 sets Med ball overhead quick step-alternate 6 times	B. 8*300(3) Tempo:60		B. 3(8*100)20,19,18 C. (10*100)(8*100)(6*100)19,18,17	2 sets Med ball overhead quick step-alternate 6 times		
Single leg jumps with hip extension	A. 8*300(3) Tempo:57	Weights	D. (10*100)(8*100)(6*100)17,16,15 E. (10*100)(8*100)(6*100)17,16,15	Single leg jumps with hip extension		
6*bounding @50m	A. 8*300(3) Tempo:53		F. (10*100)(8*100)(6*100)16,15,14	6*bounding @50m		
10 wickets	E- 8*300(3) Tempo:52		Rest 6min between sets	3*40m,2*60m,1*80m		
5*40m HKA	F- 8*300(3) Tempo:51			5*40m HKA		
Weights	Josh 10*300(3)			Weights		
	Cool Down walk 1 lap Abs					

SPECIAL PHASE





SPECIAL PHASE

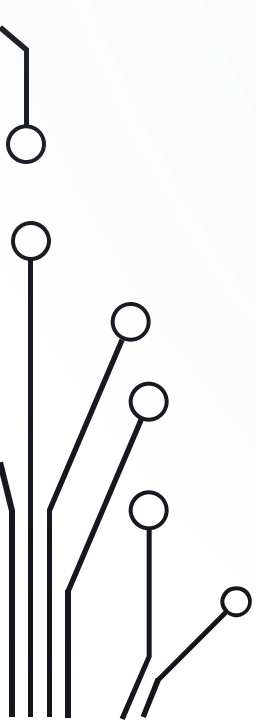
- Heading into Xmas break –you never know how much training is getting done
 - Assume the worst
 - Indoor season preparation for 60mh,400m, &600m distances
 - Lots of dummy leg work
 - Goal is to improve hurdle technique and begin to establish 400m hurdle rhythm
 - Work on race pace and visual steering trying to eliminate stutter stepping on the hurdle approach
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SPECIAL PHASE

FAVORITE WORKOUT

- 2 sets of 5 – 60mh discounted first set with dominant leg second set with dummy leg
 - Finish session with 150-300m rest
1 minute attack hurdles 6-10
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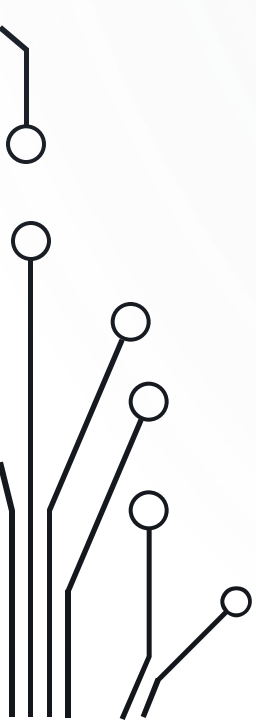
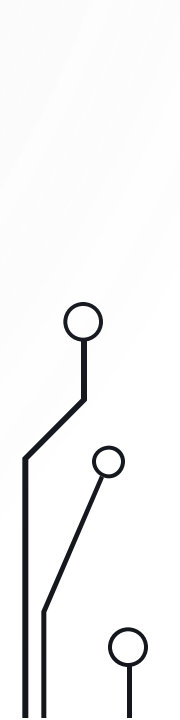
TYPICAL WEEK OF SPECIAL PHASE

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
laps- 2 jog 2 laps run the straight walk the sides 15 Leg Swings 2*25 Jane Fondas Hurdle Drills 5 stepping on regular hurdle mark 10*100(1) 1,3,5,7,9 w/ hurdles on every other mark 8 step alternating Tempo:16 (8) 1*500(7) 1*400(6) 1*300(5) Tempo:1:35, 1:12,52	Weights Drills 7HH 7*50m bounding 5*40m,3*60m,2 *80m w/ wickets Blocks	Warm Up 4 laps- 2 jog 2 laps run the straight walk the sides Hurdle Drills 3 stepping measure hurdles 21 steps apart 2 sets 5*60m @ 8.2m from 3 point start 3 stepping thru middle Measure the 1 st hurdle at the normal mark,2 nd hurdle 2step short,3 rd - 4 steps,4 th -6 steps,5 th - 8 steps,6 th 10 steps -1 set left lead 1 set right lead (7) 6*300(3) Tempo:52 Cool Down: jog 5-7 mins, 100 abs stretch	Weights Med Ball Circuit 1*15 Chest Pass Kneeling overhead Throw Seated Side Throw V Sit ups Hamstring flicks Crab walk 5*20m 300abs 100 push ups	Warm Up 4 laps- 2 jog 2 laps run the straight walk the sides 15T's 15 leg swings 2*25 J.Fondas H.Ex 5*60m as Wednesday 4 times- 300 jog 100m run 100m Tempo:16,50	Weights Drills 7HH 7*50m bounding 5*60m w/ wickets 10*20m HKA	REST



COMPETITION PHASE



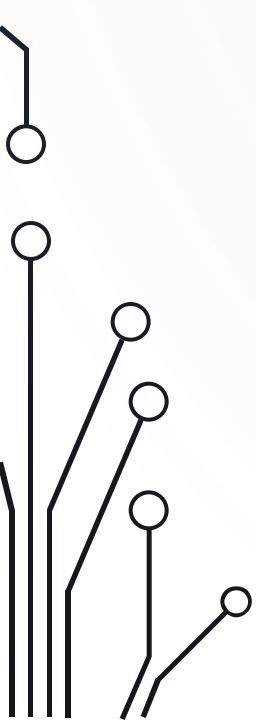
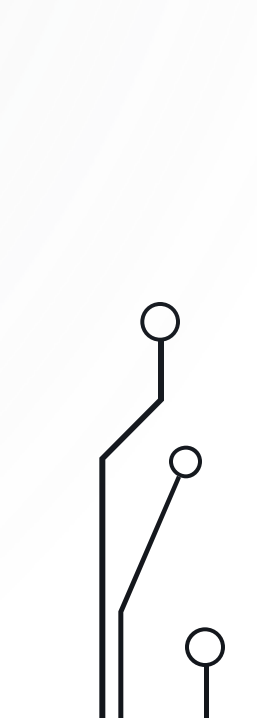
- New 400m hurdler - start racing as soon as possible and often
 - Mature athletes- strategically plan races to get qualifying marks, should be competing in relays and sprint hurdles
 - Work on race pace starts frequently
 - Alternating at high speeds is essential
 - Emphasize transition on curve- everyone knows hurdle 8 is higher than the others
 - Before a major competition do 8H,6H,4H rehearsal at race pace
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COMPETITION PHASE



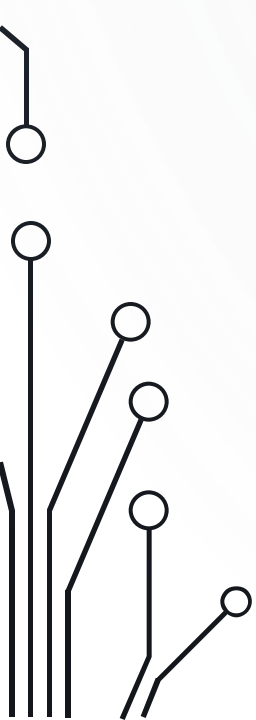
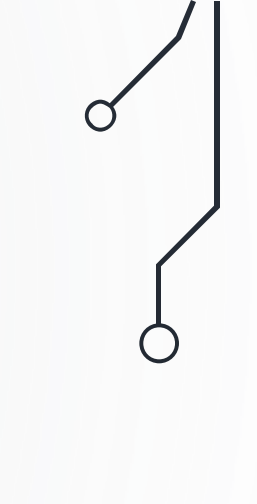
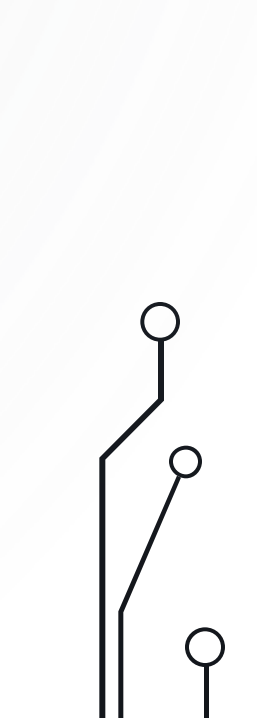
FAVORITE WORKOUT

- 10*100 w/ 1 min rest, #1,3,5,7,9
with hurdles with every other hurdle
in place on the straight (8 stepping
 - End workout with a high tempo
500m
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Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<p>laps- 2 jog 2 laps run the straight walk the sides</p> <p>15 Leg Swings 2*25 Jane Fondas Drills Hurdle Drills</p> <p>10*100(1) 1,3,5,7,9 w/ hurdles 8 stepping Tempo:13</p> <p>1*500(8)</p> <p>Tempo: 1:15-1:18</p> <p>Cool Down: jog 5-7 mins, 200 abs stretch</p>	<p>Weights</p> <p>Drills</p> <p>6HH 5*bounding up baseball hill 5*50m pulling sled 5*50m w/ wickets- Relay exchanges</p> <p>Cool Down</p>	<p>Warm Up</p> <p>4 laps- 2 jog 2 laps run the straight walk the sides</p> <p>15 Leg Swings 2*25 Jane Fondas Drills Hurdle Exercises</p> <p>-6*60m w/ hurdles @8.2m 3left-3right</p> <p>3 times 150(1)200H Rest 8-10 Tempo: 20-21</p> <p>Cool Down: jog 5-7 mins, 200 abs stretch</p>	<p>Weights</p> <p>Drills</p> <p>Starts 1,2,3</p>	<p>Pre-competition Warm Up</p>	<p>Competition</p>



CONCLUSION

- There are many ways to get the job done
 - One of the most unique events with lots of moving parts
 - Be creative and design a variety of workouts
 - This is just my approach based on my personal experiences
 - Make it fun; allow the athletes to grow and challenge themselves
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ACKNOWLEDGEMENTS & THANK YOU'S

- Jim Bevan- Rice University
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 - Mike Maynard
 - Fred Newhouse
 - Dan Pfaff/ Altis.com- follow on twitter
 - Boo Schexnayder
 - Bubba Thornton
 - USTFCCCA
 - Jon Warren- Rice University
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