



TRIATHLON

NORTHERN TERRITORY

NTIS Triathlon Academy Program 2016 - 2017

Program Overview

Program Manager – Tim Ellison

Version 1.3

Northern Territory Institute of Sport (NTIS) Triathlon Academy Program

Introduction

The NTIS Triathlon Academy program is an athletic development program designed to build capability in all areas associated with progressing along a pathway of sporting excellence. The NTIS supports scholarship athletes and sports programs through its NTIS Coach Development Program.

NTIS Coach Development Program (CDP)

The NTIS CDP is designed for coaches who are actively developing their skills and abilities to coach junior and youth athletes and adheres to the philosophy that our first responsibility to these athletes is to create a positive developmental experience that increases the likelihood of 'life-long involvement in sport'. This philosophy aligns with the FTEM model of athlete development (Figure 1) endorsed for the Australian sporting system as a whole by the Australian Sports Commission and the Australian Institute of Sport.

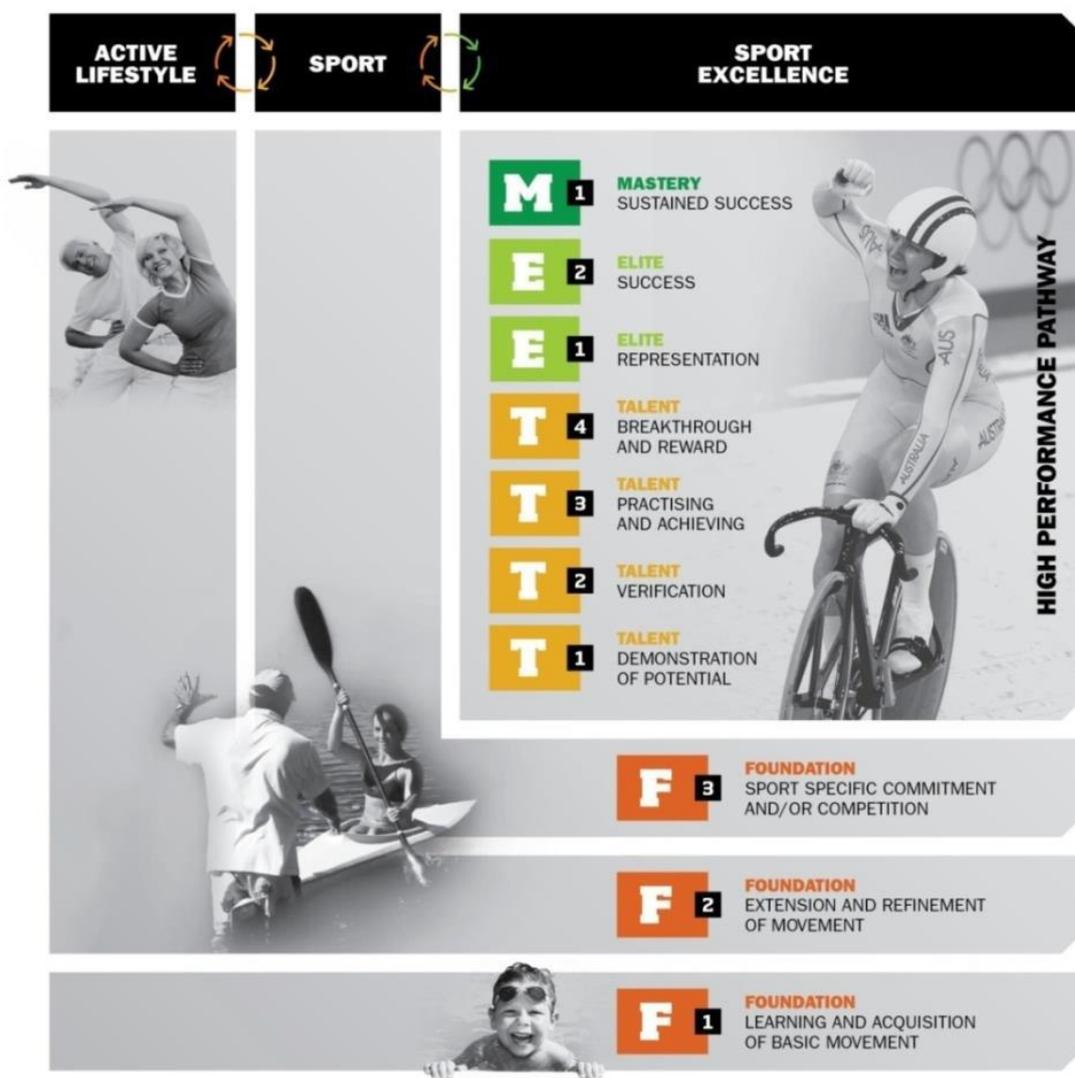


Figure 1. FTEM model of Athlete Development

The CDP consists of 4 athlete development Pillars which are not only considered essential components of training programs to optimise lifelong involvement in sport but also increase the likelihood of junior and youth athletes progressing along the sporting excellence pathway.

1. Physical Competence Development
2. Running Technique and Speed Development
3. Technical Excellence in Sport Skills
4. Confidence and Resilience Development

The CDP is designed to facilitate a thorough understanding of, and the ability to apply and align coaches' programs with theory, philosophies and concepts associated with the 4 pillars and the development of children and teens (6-19yrs – typically F1 to T3-4) holistically through their sporting pathway.

NTIS Sports Programs 2016 and beyond.

The National Institute Network (NIN) support sports programs over a 4 year period, aligned with the Olympic cycle. With the view of selecting sports for the 2017-2020 Olympic cycle, the NTIS is evaluating the willingness of the sports program managers, coaches and academy athletes to embrace the content of the NTIS CDP. Suffice to say, programs embracing the CDP content and concepts will be offered support going forward.

NTIS Triathlon Academy program – Joint Management Committee (JMC)

The NTIS Triathlon Academy program is managed as a partnership between three organisations: The NTIS, Triathlon NT and Triathlon Australia. Triathlon NT is responsible for the program design and management. Triathlon Australia's representative confirms that the program is consistent with the National pathway model and offers support from a NSO perspective. The NTIS provides development support to the program coaches as and when required by the program manager/head coach. The performance of the program and development progress of the coaches and athletes is reviewed by the JMC every 6 months.

Program Alignment with the NTIS CDP

The NTIS Triathlon program is 100% aligned with the NTIS CDP.

Decision to align the triathlon junior development program with the NTIS CDP and leverage NTIS support is based on the collective experiences of Triathlon NT's junior development coaching staff. There is regular interstate travel and interaction with High Performance staff at the AIS, other state institutes of sport and numerous National Sporting Organization High Performance Units. They read and see what is being promoted as world's best practice in junior athlete development, talent identification, and talent enrichment in Australia and overseas. Collectively there is considerable coaching experience associated with preparing state level athletes for National competition, travelling and supporting National level athletes in international competitions such as World Cups, World Championships and the London Olympic Test Event. There is also experience within the coaching group in working for National Sporting Organisations (NSO) selecting, developing, and managing elite level junior athletes. The sum of this has given them a thorough understanding of what elite level sport looks like, the athletes and their skills, their athletic and physical capabilities and the lifestyle that needs to be in place. They also know how many of the high performing junior athletes in endurance sports like triathlon make it to the open elite category, how many don't, and why.

These observations and experiences are real life examples of what the hundreds of scientific papers written on the identification and development of junior athletes in sport will say. For example, it is well documented that triathlon is a late specialisation sport, necessitating a focus, during the developmental years (6-19yrs), on high quality all round athletic/physical development, and excellence in sports skills, **prior to specialisation**. Furthermore, it is well documented that there is very little or no correlation between junior competition results at any level and progression to higher levels in sport, especially for those sports where performance is measured in grams, metres, or seconds i.e. Triathlon and all of its sub disciplines. Nevertheless and not unlike a lot of other sports, the National pathway system for triathlon bases selection decisions for progression down the sporting excellence pathway almost exclusively on junior competition results. Every sport is essentially the same: the winners, the junior champions, the higher performers are identified as the future sports stars, and then trained as such. Shortcuts in the development process occur, driven by the anxiety of coaches, parents and athletes chasing immediate results. The by-product of this system is that almost 100% of young athletes do not progress past the late stages of junior development. They carry major physical, technical, and psychological limitations along their journey's resulting in being over fatigued, burnt out, or injured and lack the motivation to continue within the sport. The result of what is ultimately early

specialisation and fast tracking where they are pushed towards the next competition with capacity building training. Not to mention the late bloomers and the athletes born in the latter half of the year who are usually the first to lose interest and drop out.

For very good reasons the NTIS Triathlon Academy program is aligned with the NTIS CDP and focuses on developing an athlete's '**capability**' in the physical qualities, motor patterns and skills associated with elite level sports performance not building '**capacity**' in performance. The principles of progressive overload are applied to build '**capacity**' when capability is mastered. This means there is mastery in: strength and stability of posture; fundamental and sport specific movement patterns and skills and; a lifestyle that supports progression in life, and down the sporting excellence pathway. This may take some athletes 4 years and some 12 years, everyone is different. Triathlon NT is not in a hurry and does not feel any pressure to get a competition placing or result with any junior athlete. The program manager selects competitions that are appropriate to the developmental level of each child/athlete (See below competition readiness formula). If a parent or child cannot comply with this system of development including, seeking competition opportunities that Triathlon NT thinks are inappropriate for the athlete, then the NTIS Triathlon Academy program is not for them.

NTIS Triathlon Program

This is a pre-elite development program with goals associated with developing Olympic gold medal athletes. The first essential component is creating an environment that inspires a long term involvement in sport.

Life-long Involvement

The quality of a sporting experience and the likelihood of a participant being motivated and staying in sport is often determined by the motivational climate created by the coach. This relies on satisfying three key psychological needs: autonomy, competence and relatedness.

- **Autonomy** is feeling that you have control over your own actions.
- **Competence** is having a perception that you possess adequate ability.
- **Relatedness** is having a sense that you belong (to the group, coach or sport).

The satisfaction of all three psychological needs (autonomy, competence and relatedness) is required to engender a positive motivational climate that encourages effort, persistence, enjoyment, satisfaction, prolonged engagement with sport and, critically, enhanced self-confidence within and outside of the sporting domain.

Seven things every coach and parent should know

1. Enjoyment, mastery and socialising should remain the focus when working with all young athletes. Although winning becomes a more important motive with age (especially with adolescent males), it should not become a priority for the coach or parent.
2. Coaches and parents should concentrate on the satisfaction of relatedness, as it is the key determinant of motivation for young athletes, and is associated with increased self-confidence. Such confidence can result in positive behaviours across domains (eg at school). Relatedness can be achieved through building friendships, group identity and cohesion.
3. As young athletes require perceptions of competence to maintain motivation, coaches should create a motivational climate in which the athletes experience mastery and are rewarded for effort and self-development, rather than for winning.
4. Coaches should remain mindful of the differential need for autonomy across age groups. The desire for ownership, input and choice increases with developmental maturity.
5. It is advantageous for coaches and parents to demonstrate competence, benevolence and integrity in order to develop athlete-coach, child-parent trust.

6. The use of educational material for parents should be considered, to ensure they are aware of the influence they have on their child's motivation for sport participation.
7. As technology is valued by young athletes, it should be integrated into coaching where possible. This is particularly the case when offering feedback on performances (using an iPad/video replays), and for developing and sustaining relatedness (using social media).

This is an extract from Self Determination Theory - A guide to developing young athletes (13 - 18 years). Delivery of the program content is based on these principles.

Skills Development

Swimming, cycling and running skills development is the core of the sports specific content in this program. It is delivered in a periodised format that is consistent with the table below.

Age	Preparation Phase			Pre Comp			Comp		
	G	S	C	G	S	C	G	S	C
10 - 14	80	15	5	70	20	10	60	25	15
15 - 17	70	20	10	60	25	15	50	30	20

Table: % Distribution of: General Sports Skills Development (G), Specific Sports Skills Development (S), and Competition Skills (C) training for Junior Athletes – (adapted and modified from Dick, 1980)

This approach is in contrast to typical watered down elite adult capacity building programs that most junior athletes are exposed to.

The accompanying 2016 annual plan highlights the progression through the different skill phases throughout the year. Coaching of the sports specific skills is against specific technical models in each discipline which evidence suggests are associated with optimal force production, economy of movement, and injury prevention.

Swimming

Freestyle swimming skills are coached against the loping/front quadrant freestyle technical model. This is what it looks like with individual variations:

Hayden Wooley: Triathlete and one of the fastest triathlon swimmers of all time over all distances.
<https://www.youtube.com/watch?v=0Y5OVXuHGys>

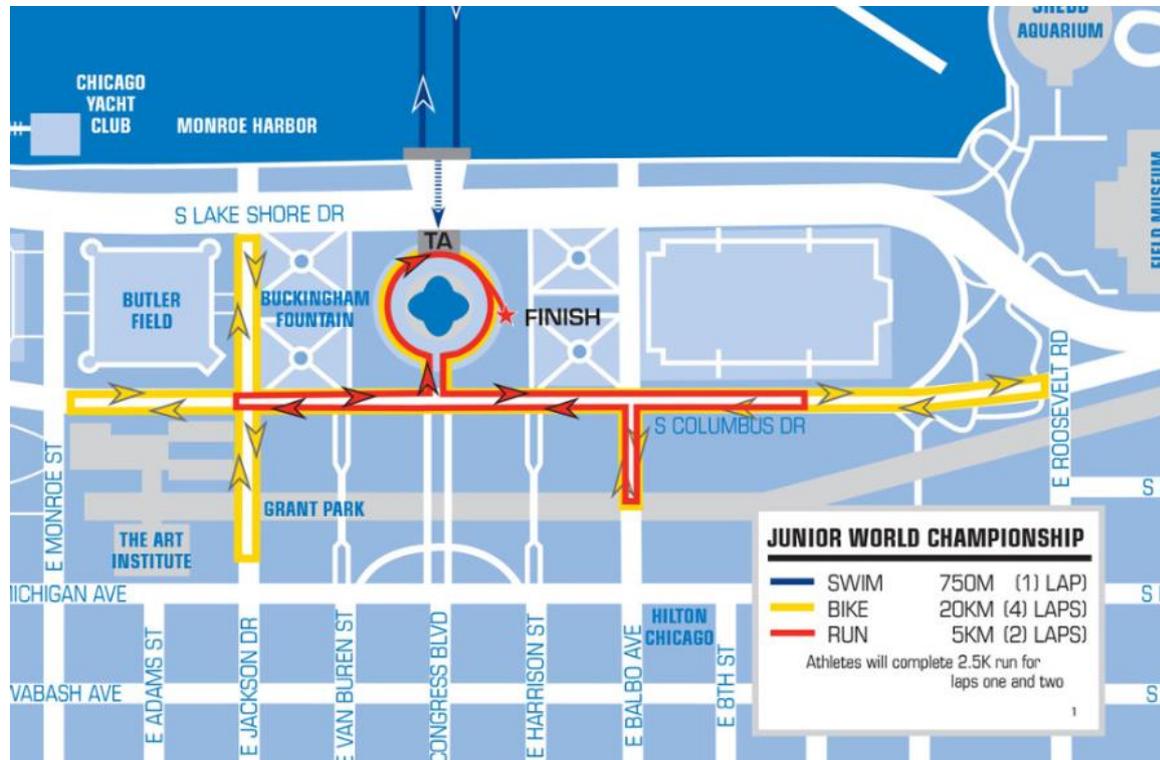
Nathan Adrian: Olympic 50 -100m swimmer.
<http://www.youtube.com/watch?v=SONx52cyltI>

Sun Yang: Olympic 200 – 1500m swimmer
<https://www.youtube.com/watch?v=uncOBURz-6o>

A partnership has been established with Swimming NT for Triathlon NT athletes to compete in swim meets without having to join Swimming NT.

Cycling

Triathlon NT has a comprehensive cycling skills development program for development level athletes. It aligns with School terms 1, 2, 3, and 4, but has a different skills focus in each term. The cycle leg in ITU triathlon events is no longer a time trial, it is a cycle race on short multi loop technical circuits. The 2015 Chicago Junior World Championship course is a good example.



In one 5km circuit there are five 180° U-turns and ten 90° turns. This was a half hour, high speed, bunch cycling race with 60 turns and accelerations. Developing young triathletes to excel (eventually as an elite athlete) in this type of racing requires more than competing in Darwin or Alice Spring Cycling Club criterium racing. Systematic development of the bike handling and competition skills associated with track cycling sprint events, scratch races, elimination races, and points score racing are all indicated, as too MTB and BMX racing and skills development. The NTIS Triathlon Academy program is the only triathlon development program in Australia that has such a system and skills progression will be monitored.

In 2016 there will be two interstate development trips associated with the testing of skills at higher level competitions:

1. 5 - 12th Dec 2016 - MTB National Series Round at MT Stromlo, Canberra. (Downhill and Cross Country)

This is a MTB skills development camp that will involve flying to Canberra on either Monday the 5th or Tuesday the 6th of December. We do two riding sessions per day. The morning session involves XC climbing and obstacle clearing skills. The afternoon session involves downhill riding with car/bus/truck transport back to the top. Accommodation is at Greenhills Conference Centre, 5km South of Mt Stromlo. The cost this year (including event entry but excluding airfares) was a little over \$600.

2. 26th Dec – 1st January 2017 - Victorian Christmas Carnivals. (Track Cycling)

Victoria

27th Dec - Ballarat

28th Dec - Bendigo

29th Dec - Shepparton

30th Dec - Wangaratta

In the past most athletes travel from this event to South Australia for the SA Junior Track Championships on the weekend after the Christmas Carnivals. These events are not club level participation events so considerable skill preparation is necessary. Each trip costs about \$1200 - 1500. This includes airfares accommodation, land transport, event entry and food. While I think that this is expensive, these are very affordable interstate sports trips and costs can be covered easily with early planning and fund raising. These days the opportunity exists for teenagers to earn up to three times this amount throughout the year.

Please note that this is the Triathlon development program. The triathlon program development philosophies and activities may be different to what the Cycling, MTB and BMX Clubs and coaches have planned for the year ahead.

Running

The development level running program is an all year program of two or three sessions per week. Again, this is a skills development program and the coaching of running technique is against a model of running that optimises the coordinated use of the muscle and tendon properties in the feet, calves, hamstrings, lateral hip muscles, back and abdominals. This is the best athletic development and injury prevention exercise for every junior athlete, regardless of sport and/or athletic ability.

A partnership has been developed with NT Athletics that enables Triathlon NT athletes to compete in the NT Athletics Championships without having to join Athletics NT. Triathlon NT will have a team at the NT Athletics Championships on the 1 - 4th September 2016.

Physical Development

For athletes to be technically competent (skilled), they have to be physically competent. The qualities that should be developed in all junior athletes relate to mobility and relative strength, power and control in the fundamental movements that underpin skill development in any sport.

NTIS Triathlon Academy athletes are required to embrace the NTIS physical development program. This does not mean 100% attendance at the NTIS morning sessions but there are now accountabilities associated with being in the NTIS Triathlon development program. Physical development is a mandatory part of the development program because it is the physical 'Magic Pill' that underpins sports performance at all levels.

It was agreed by all NTIS Triathlon Academy program coaches at the September 2015 camp that the minimum physical competency standard to enter the development camps for the front plank was 3 minutes, push ups was 20 (females on their knees). Every athlete will be assessed at each camp and progression monitored. This progression is a reportable item at the JMC review meetings.

Gymnastics.

There are 4 gymnastics blocks in the year. They are aligned with the school terms 1, 2, 3, and 4. Each block starts on week two of the term. There is a nominal cost associated with paying for the hall hire and (because of the numbers) an extra gymnastics coach.

This is a fundamental movement and athletic development program not a competitive gymnastics development program. Tuition in basic shapes, rolls, jumps, landings, balance, and body weight strength development is delivered in an age appropriate manner that is engaging and good fun. These sessions are on Sunday mornings. 7:00 - 8:30 am for development athletes and 7:30 - 8:30 for junior athletes.

Athlete Loading

All programs for the NTIS Triathlon Academy athletes will be monitored by the Academy program coaches. In the year ahead there is no provision for any athlete in the NTIS Triathlon Academy program to be coached in capacity building running or cycling programs by external coaches. This is a NTIS JMC meeting outcome and

the actions are for me to communicate this to all parties and for Triathlon Australia to support as per the paragraph below.

If there are any parents that have question or concerns with this approach please contact Triathlon Australia’s National Performance Centre Head Coach, Dan Atkins. His email address is: dan.atkins@triathlon.org.au Triathlon Australia’s High Performance unit has a massive problem with the number of junior athletes that lack the skills to progress in the sport because coaches and parents believe that a capacity building fitness program is the best way forward. If you feel that this is the best approach for your child, Dan is happy to provide a perspective from a coach who receives athletes who have been prepared well for elite level sport and those that have not.

Competition

Exposure to appropriate levels of competition at each stage of a young athlete’s development is essential for building social skills, confidence and resilience, and testing the quality of movement/skills in a competitive environment. There are different levels of competition within the program.

State Level Competitions

The three levels of competition within the Northern Territory are:

Club Competition → Development Camp Competition → NT Junior Triathlon Championships and Kids Tri

It is important that all young athletes have a sense of belonging in the competition they are exposed to. Exposing young athletes to competition that is beyond their level of competence and or competitiveness does not promote that sense of belonging and it does not build confidence and self-esteem. There is no amount of ‘well done’, ‘you did a fantastic job’, ‘great effort’ that will rescue that situation and make it ok.

This situation arises when parents/coaches want their children/athlete to be successful and making an NT Team and or going to interstate competition is what sport is all about. For some it probably is, for most it is not. There is a mathematical formula that can be used to determine if a competition is appropriate for an athlete. Below is a competition readiness table with the swim, cycle and run times that would indicate if a youth category athlete is of an appropriate standard to progress into National Junior Triathlon events. Achieving these times is not at the expense of movement quality. As previously mentioned, high quality movement/skill execution promotes optimal force production, economy in movement and injury prevention.

Division	Category	Event	Time
Swim			
Men	Youth P	200 m	2:20.5
	Youth D	200 m	2:30.1
Woman	Youth P	200 m	2:29.1
	Youth D	200 m	2:39.3
Cycle			
Men	Youth P	500 m *	37.5
	Youth P	2000 m *	2:3.0

	Youth D	500 m *	39.0
	Youth D	2000 m *	2:38.0
Woman	Youth P	500 m *	41:00
	Youth P	2000 m *	2:47.0
	Youth D	500 m *	42.0
	Youth D	2000 m *	2:52.0
	Run		
Men	Youth P	800 m	2:11.8
	Youth D	800 m	2:20.8
Woman	Youth P	800 m	2:27.7
	Youth D	800 m	2:37.7

Table - Qualifying Times for TA Youth Category ITU Events

Cycle * - Hand held standing start.

P = Potential to Progress to the TA National Development Camp.

D = Suitable to participate at the TA National Junior events as a development opportunity.

NT Junior Triathlon Championships and Kids Triathlon

09th of April 2016.

This event is for anyone aged 5-19 years of age.

Open to Triathlon NT members and non-members.

Events and Categories:

Kids Tri - U7, U9, U11 and 12-15 participation.

There are three races for each category and the distances are age and competency level appropriate. Races two and three are handicapped.

U7 - 25m swim – 350m cycle - 50m run

U9 - 35m swim – 500m cycle – 80m run

U11 and 12 - 15 Participation - 50m swim -1000m cycle -100m run

NT Junior Triathlon Championship - Youth = 12-15 years
Junior = 16-19 years

There are three races for each category and the distances are the same for both categories.

Youth and Junior - 100m swim – 2000m cycle - 200 m run

NTIS Triathlon Academy Camps Program

The primary purpose of the three (per annum) NTIS Triathlon Academy camps is coach education and development. Coaches learn by coaching so the camps provide a perfect platform for coaches to learn about and be mentored on the delivery of high quality holistic athletic development. Holistic development refers to the development of an athlete's physical, technical, tactical, psychological, and cognitive qualities. Below are the camp dates and a colour coded list of the modules of tuition delivered to the athletes throughout the year.

Development Camp Dates

Camp 1 **6 - 10th April** - Intro to physical development and running skills.

This camp incorporates the NT Junior Triathlon Championships. The draft Athlete Workbook with schedule accompanies this document.

Camp 2 **26 - 30th June** - Cycle Skills Camp

Camp 3 **25 - 29th September** - Swim Skills Camp

Tuition Delivered

All Camps Camp 1 Camp 2 Camp3

Technical skill

- General Athletic Proficiency
- Run technique and agility
- Swim Technique. Pool and open water.
- Cycle ABC skills.

Specialist Skills

- Speed Development skill in swimming, running and cycling.
- Swim: M 1:08/100m F 1:16/100m
- Run: M 17.7s/100m (5.7 m/s – Max Target 10 m/s)
F 20.0s/100m (5 m/s – Max Target 7.67 m/s)
- Cycling: Cadence E >150 Max >200

Tactical Skills

- Proficiency in bunch swimming, cycling and running.

Physiological Development

- Sport Specific Programming

Sports Psychology

- Sleep and Relaxation.

- Creativity, Cognitive flexibility
- Excellence
- Mental Resilience,
- Social Team work and Team Cohesion
- Personal Presentation and Speaking
- Performance Profile
- Time Management

ACE

- Education and Career management

Nutrition

- Hydration.
- Basic Nutrition Requirements for general health.
- Energy Expenditure V Energy Intake.
- Training and Racing Nutrition. Planning.

Sports Medicine

- FMS
- Injury Prevention and Management
- Recovery Techniques

Strength and conditioning

- Physical Competency Development

Sports Science

- LAM
- Skills testing and Analysis

Camp Miscellaneous

Each camp costs \$350 – 370

Registration is via an online registration portal.

Minimum age for attending athletes is 12 years.

Athletes are required to sign and abide by a code of conduct.

Photos from previous camps:

https://www.facebook.com/pages/Triathlon-NorthernTerritory/543265842350389?sk=photos_stream

Other Camp Videos:

<https://www.youtube.com/watch?v=zKW7s8RZD2Q>

<https://www.youtube.com/watch?v=6fJ6Vt2BCpM>

<https://www.youtube.com/watch?v=gdW20Zvklb4>

<https://www.youtube.com/watch?v=N9ZpSlz-76A>

Triathlon Australia's High Performance Unit Endorsement

In January 2016 Triathlon Australia's National Performance Centre Head Coach – Dan Atkins was given a presentation on the NTIS Triathlon Academy Program. Following is an extract of his email response;

This is excellent on all levels.

I have had to let certain very talented (well physically anyway) athletes go due to their lack of bike skills. And these athletes have come from a so called elite cycling coach.

The models you present are fantastic and I'm ashamed to admit that for the better part our State development programs DO NOT consider even a third of what you have outlined.

So thanks again I really enjoy looking at all your planning and I would suggest that what you do is world's best practice right now! It is very unique that you are giving the athlete time to develop.

Kind regards,

Dan Atkins.

If you have any questions please contact Triathlon NT Development Manager.

ntjuniordevelopment@gmail.com

Phone: 0437 602 346