The Training Matrix

TRAINING ZONE		TYPICAL TRAINING SESSION GUIDANCE	PHYSIOLOGICAL MEASUREMENTS					
CODE	NAME	SAMPLE SESSION		% HEART RATE RESERVE + RESTING HEART RATE	BLOOD LACTATE (mmol/I)	RPE (Foster 0-10 Scale)	STROKE Rate	% 2KM ERGO TIME
UT3	Fuel Utilisation	Continuous low intensity training 18K-24K Ergo / Water Sessions or Road Cycling	60-360 min	<59%	<1.0	0 - 1	<18	<80
UT2	Basic Oxygen Utilisation	Continuous low intensity training 12K-20K Ergo or Water Sessions or Static Bikes	60-180 min	59-67%	<2.0	2 - 3	18-19	81-85
UTI	Oxygen Utilisation	Continuous or intermittent moderate intensity training Ergo/Water: I x 8-10K UTI, 2 x 4K UTI off 3' rec, 4 x 2K UTI off 2' rec Bike: I x 25-30' UTI, 2 x 20' UTI off 3' rec, 4 x 10' UTI off 2' rec	60-120 min	67-75%	2.0 - 4.0	4	19-23	86-90
АТ	Anaerobic Threshold	Continuous or intermittent hard intensity training Ergo/Water: 1 x 30' AT, 3 x 2K AT off 6-8' rec, 4 x 1500m AT off 6-8' rec Bike: 1 x 30-60' AT, 2-3 x 15-25' AT off 3' rec, 3-5 x 8-10' AT off 2' rec	50-90 min	75-85%	~4.0	5 - 6	24-28	91-95
TR	Oxygen Transport	Intermittent hard to very hard intensity training Ergo/Water: 4-6 x 1K TR off 2-3' rec, 6-9 x 500m TR off 2' rec, 3-6 x 3-5' TR off 2-3' rec Bike: 10 x 6' TR off 2-3' rec, 8 x 5' TR off 3' rec, 15 x 3' TR off 1' rec	30-60 min	85-100%	~4.0 - 8.0	7 - 8	28-36	96-100
AC	Anaerobic Capacity	Intermittent very hard intensity training Ergo/Water: 4-8 x 250m AC off 2' rec, 2-4 x 500m AC off 2-3' rec, 2 x 1K AC off 3-4' rec Bike: 6 x 5' AC off 3-4' rec, 6 x 4' AC of 4' rec, 8 x 3' AC off 2' rec	25-40 min		~8.0+	9 - 10	>36	100+
AP	Anaerobic Power	Short, intermittent very hard intensity training Ergo/Water: 10-20 × 10-15 power str., 8 × 100m power str., 6 × 125m power str. Bike: 10-20 × 20-30s sprints., 8 × 20s sprints., 6 × 30s sprints	25-30 min				>26	100+

The Training Matrix

TRAINING ZONE		AEROBIC ADAPTATIONS							ANAEROBIC ADAPTATIONS			
CODE	NAME	Increased blood volume	Increased aerobic enzyme activity	Increased use of fatty acids as a fuel source	Improved muscle capilliarisation	Increased maximum cardiac output	Increased maximum ventilatory capacity	Improved ability to use lactate as a fuel	Increased maximal rate of glycogen use	Improved muscle and blood buffering capacity	neuro-muscular	
UT3	Fuel Utilisation	••••	••••	••••	••••	••	•	••			•	
UT2	Basic Oxygen Utilisation	••••	••••	•••	••••	••	••	••	•	•	•	
UTI	Oxygen Utilisation	•••	••••	••	•••	•••	••	•••	••	••	••	
АТ	Anaerobic Threshold	••	•••	•	•••	•••	•••	••••	•••	•••	••	
TR	Oxygen Transport	•	••		•••	••••	••••	••••	••••	••••	•••	
AC	Anaerobic Capacity		•		••	••	••••	••	••••	••••	••••	
AP	Anaerobic Power										••••	