

LEARN HOW WATTBIKES CAN BE USED ACROSS ALL TRAINING DISCIPLINES WITH OUR NEW **ELITE SPORTS SCIENCE** **EDUCATION COURSE**

ABOUT THE COURSE

- + Perfect pedal effectiveness and bespoke testing & training protocols with Wattbike.
- + Learn how to transfer sport specific training, testing modalities and protocols onto the Wattbike.
- + Understand key physiological determinants of performance and how to best target them on a Wattbike.
- + Insight into how best to extract and interpret Wattbike data from the bike.

MODULE ONE – (ONE HOUR)

(W in Wattbike - (Watt -What, Where, When and Whys))

(A1.) Credibility Piece	<ul style="list-style-type: none">+ Heritage (elite sport)+ Why Wattbike and Why off feet conditioning?+ (Define terms etc.) Uses and case studies.
(A2.) Wattbike & Measurements:	<ul style="list-style-type: none">+ The Wattbikes - the types and their specific advantages+ How the Wattbike works+ What power is+ Where it's measured on the Wattbike, the advantages of this.
(A3.) The Basics:	<ul style="list-style-type: none">+ Real Ride Setup (include Wattbike website links)+ Performance Touchscreen+ Wattbike HUB APP, Logging in.
(A4.) The Essence:	<ul style="list-style-type: none">+ Resistance and Load Ratio (C: R)+ Polar View, PES & Technique
(A5.) The After:	<ul style="list-style-type: none">+ Maintenance+ PTS Performance+ monitor

MODULE TWO – (ONE HOUR)

FAST + FILTER (Fitness, Assessment, Screening and Testing) + (Fitness Elements, Intervention, Level of Athlete, Tests, Energy Systems, Resistance)

(B.) Performance Profiling:	<ul style="list-style-type: none"> + Performance Benchmarking + Performance Monitoring of Training Response + Performance Contingency Plan Support (Post Operative and or Injury Occurrence: Physical Therapist, Rehabilitation Specialist)
(B1.) Performance - FAST	<ul style="list-style-type: none"> + Fitness prioritization and aligning athlete needs (Athlete Energy System and Fitness Elements SWOT Analyses). + Assessment of specific baseline and Progressive markers (Metrics to Focus on). + Screening of health, fatigue, bio-motor imbalances status (Preventative -supporting SWOT). + Test Selection and Testing (Provide Optimal Data and metrics as start of point for Intervention Programming, Forecasting and Guidance on Holistic Performance Plan)
(B2.) FILTER (Transference process and the design of test/ test utilization):	<ul style="list-style-type: none"> + Fitness Elements (what are the final main fitness elements to be developed-selecting and designing tests to support specificity and individuality of athlete needs) + Intervention (Continuous monitoring of specific metrics to build highly holistic positive transfer interventions) + Level of Athlete (Identifying the correct benchmarks, where is athlete now in terms of peak performance requirements) + Tests (aligning test design and test selection specific to how the athlete phase of programming or needs develop) + Energy Systems (testing and developing test aligned specifically to rate of energy supply, duration of event and work to rest ratio in sport) + Resistance (capturing and recording of cadence and resistance ratio in terms of fitness elements to be developed and energy systems to be taxed)
(B3.) Test Design Process Overview and the Metrics Available and Their Relevancy:	<ul style="list-style-type: none"> + Needs, Physiological requirements, bioenergetics, dominant fitness elements. + Transferrable Metrics: + PES -LL + RL Balance + AoPF LL + RL Balance + Polar view + Functional Threshold Power (FTP) + FTHR (Functional Threshold Heart rate) + MMP (Maximum Minute power) + MHR (Max Heart Rate) + Peak and Average Power (Watts) Power relative to bodyweight Power/kg: W/kg (PEAK, Average, MMP, FTP) + Peak and average RPM(Cadence) + Peak and average Speed: km/h + Distance Covered: Kilometres- m/ km + VO2 max Absolute: ml + VO2 max Relative: ml/kg/min + METS (metabolic equivalents): + CRF % (Cardiorespiratory Fitness Percentile) + Specific Zone (HR and Power specificity) pathway loading in terms of Duration, FTHR%, MHR% and specific power measure. + Aerobic & anaerobic work

(B4.) Testing & Stress load Monitoring for intervention/ programming and Periodization:

- + Meso cycle (Testing for baseline and benchmarking)
- + Micro cycle (Monitoring progression and regression of performance markers)
- + Macro cycle (complete baseline testing schedules, progression monitoring forecasts and peak anticipation progressive marker test post analysis)
- + Contingency testing and monitoring plan (post injury and or sickness)

(B5.) Finding the balance between on and off feet conditioning through thorough testing:

- + Possible injury risk and performance assessment
- + Gravitational load bearing and stress continuum.
- + Ground based Training off Loading parameters and calculation

MODULE THREE – (ONE HOUR)

The Playbook: Perform & Recover (Programming for energy system development- bioenergetics) + (Programming for Fitness elements development)

(C.) Recover:

- + Movement Energy Leaks (Polar view, PES, Technique)
- + Rehab & Prehab Support (discrepancies in lower body kinetic chain, how to interpret the data into programming and guidelines on neuromuscular uni-lateral symmetry development.
- + Energy system post training bioenergetics (restoration and flushing)
- + Warm-up, Cool down programming (specific to session requirements).
- + Return to Fitness and or Play (plan and programming).
- + Fatigue & overtraining (guidelines and aiding plans to improve recovery).

(C1.) Perform (Plan and Programming of Energy Zone Training To Promote Optimal Support Within Energy Supply And Removal Requirements During Sport Performance).

- + Specific Optimal Movement (Polar view, PES, Technique)
- + Energy system conditioning programming (Bioenergetics: specific energy pathways in sport)
- + Programming guidelines on WB to achieve higher sport performance and economical energy production and utilization.
- + Rate of Energy Supply specific to sport to be programmed on WB.
- + Duration of specific energy systems to be taxed in sport activity to be programmed.
- + Work to Rest Ratio specific to sport to be programmed.

(C2.) Perform (Planning and programming fitness elements in a sequential, individualized approach to transfer positive neuromuscular adaptations with

- + Specific Optimal Movement (Polar view, PES, Technique)
- + Defining fitness elements to be developed on the Wattbike.
- + Programming guidelines on a variety of fitness elements specific to sport needs:
 - + Focused Metrics
 - + Relative Emphasis
 - + Load Ratio (C:R)
 - + Sets
 - + Interval length
 - + Work: Rest
 - + Rate of Perceived Exertion

practical hands-on Wattbike sessions to improve sport performance).

(C2.) Perform (Planning and programming fitness elements in a sequential, individualized approach to transfer positive neuromuscular adaptations with practical hands-on Wattbike sessions to improve sport performance).

- + Power to Weight Ratio
- + (Sport Event Specific):
- + Funnel for every sport activity in terms of body weight power capacity over specific time in sport - lower body focused (locomotive movements)
- + Motor Units and Control
- + Seated vs Standing Wattbike off feet Conditioning.
- + Accelerative to Max Speed training guidelines on Wattbike
- + Majority of Muscular coordination improvements
- + Fatigue Monitoring Factor
- + Sport Examples

(C3.) Making sense of it all (recap

- + What and when to select targeted WB off-feet Conditioning into a weekly schedule.
- + How to Reduce the risk of overuse injuries by alternating on feet conditioning with general off feet WB conditioning.
- + When and how to measure the effectiveness of WB off-feet Conditioning Program.
- + How to manipulate of Energy Zone training and Fitness elements (WB training stimuli and stress) to better achieve desired outcomes.

MODULE FOUR – (ONE HOUR)

Cheat Sheets - (Hybrid Application of: Cross training, rehab, prehab, strength, and conditioning modalities, return to play and or fitness, stress load monitoring, locomotive force -velocity profiling, Mental Strength-Grit)

(D.) The Code

- + (Suggested Integration and Alternation of Energy System and Fitness elements (Wattbike off-feet conditioning) within Strength Training and other modalities).
- + Amalgamation of Methods and Plans with WB off feet conditioning with a variety of performance goals in mind:
- + Aerobic and anaerobic adaptations -Foundation.
- + Rehab and Prehab
- + Muscular Strength Endurance
- + Speed Endurance
- + Sub Max to Max Speed
- + General Cyclic Lower Body Strength
- + Power Endurance
- + Power
- + Mental Strength -Grit