



SPORTS NUTRITION, FITNESS PERFORMANCE SPECIALIZATION COURSE

6 Month Comprehensive Virtual Course

A comprehensive development pathway for nutrition students, nutrition graduates, aspiring sports nutrition professionals and fitness trainers who want to understand how nutrition, training, recovery, body composition and performance work together. The course develops shared scientific knowledge while also teaching each professional how to apply that knowledge responsibly within their own scope.

Who This Course Is For

Nutrition students, nutrition graduates, aspiring sports nutrition professionals and fitness trainers who want to develop practical knowledge in exercise nutrition, performance, body composition, recovery, hydration, supplements and professional sports or fitness practice.

Shared Learning Approach

Both groups study exercise physiology, energy systems, performance nutrition, hydration, recovery, body composition, supplementation, special athlete situations and progress monitoring. The practical application is then adapted according to professional role.

Sports Nutrition Professional Focus

Participants develop deeper skills in athlete assessment, nutrition planning, fueling, hydration, recovery, body composition support, sport specific strategies, competition nutrition and professional sports nutrition service development.

Fitness Trainer Focus

Participants learn how nutrition interacts with training, muscle gain, fat loss, recovery and performance. They also learn how to communicate responsible general nutrition guidance, recognize concerns outside their competence and refer appropriately.

Overall Aim

To develop professionals who understand the relationship between training and nutrition, use evidence rather than fitness myths, support health and performance responsibly, recognize professional boundaries and build an organized sports nutrition or fitness performance service.



COURSE ROADMAP

Month	Primary Development Area	What the Participant Should Gain
Month 1	Exercise Physiology and Foundations of Performance Nutrition	Understand how different forms of exercise influence energy systems, fuel utilization, recovery and nutrition
Month 2	Athlete and Fitness Client Assessment	Learn how to understand training demands, energy needs, lifestyle, recovery, body composition and performance before giving nutrition guidance.
Month 3	Performance Nutrition, Hydration and Recovery	Learn how nutrition should support training before, during and after exercise, including individualized hydration and recovery strategies.
Month 4	Body Composition and Sport Specific Nutrition	Apply nutrition principles to muscle gain, fat loss, endurance, strength, power, team sports, weight category and aesthetic sports.
Month 5	Advanced Sports Nutrition, Supplements and Special Situations	Evaluate supplements, low energy availability, RED S, injury recovery, female athletes, adolescent athletes, athletes, fasting and challenging competition environments.
Month 6	Programming, Monitoring and Professional Practice	Learn how to periodize nutrition, monitor progress, work within professional scope, collaborate with other professionals and build a sports nutrition or fitness performance service.



MONTH 1: EXERCISE PHYSIOLOGY AND FOUNDATIONS OF PERFORMANCE NUTRITION

Theme: Understand what training does to the body before deciding what the body needs.

Purpose: To establish the physiological and nutritional foundation required for responsible sports nutrition and fitness performance work.

Week	Focus	Learning Content	Practical Application
1	Understanding Sports Nutrition and Fitness Nutrition	Role of nutrition in health, exercise, performance and recovery. Difference between general healthy eating, performance nutrition and clinical nutrition. Roles of sports nutrition professionals, fitness trainers, coaches and healthcare professionals. Professional scope, ethics, referral and collaboration.	Participants compare the responsibilities of a sports nutrition professional, fitness trainer, coach and healthcare professional while reviewing the same athlete or fitness client scenario.
2	Exercise Physiology for Nutrition and Fitness Professionals	Muscle function, exercise intensity, aerobic exercise, anaerobic exercise, resistance training, endurance training, fatigue, recovery and training adaptation. Understanding how physiology creates different nutritional demands.	Participants examine several training sessions and explain how exercise type, duration and intensity influence the nutrition priorities that follow.
3	Energy Systems and Fuel Utilization	ATP production, phosphagen system, glycolytic metabolism, oxidative metabolism, glycogen, carbohydrate utilization, fat oxidation and changes in fuel use according to exercise intensity and duration.	Participants compare sprint training, resistance training, steady state cardio and endurance exercise from an energy system and fuel utilization perspective.
4	Macronutrients for Training and Performance	Role of carbohydrate, protein and dietary fat in exercise. Muscle protein synthesis, glycogen, protein quality, carbohydrate availability, dietary fat, daily nutrient distribution and the importance of overall dietary adequacy.	Participants review a fictional athlete or gym client intake and identify nutrition patterns that may limit performance, recovery or adaptation.

Development Outcome: Participants should understand that performance nutrition is based on training demands and physiology rather than simple rules about protein, carbohydrates or supplements.



MONTH 2: ATHLETE AND FITNESS CLIENT ASSESSMENT

Theme: Do not prescribe according to appearance. Understand the person, training and goal first.

Purpose: To teach participants how to assess training demands, lifestyle, dietary patterns, energy needs, body composition goals and recovery before deciding what support is appropriate.

Week	Focus	Learning Content	Practical Application
5	Training and Performance Assessment	Sport or exercise type, training frequency, intensity, duration, weekly training load, training age, competition schedule, occupation, daily routine, performance goals, recovery demands and current challenges.	Participants develop a structured training demand profile for a simulated athlete or fitness client.
6	Nutrition and Lifestyle Assessment	Meal patterns, training day intake, food preferences, food access, supplement use, hydration, sleep, stress, recovery, work routine, budget and practical barriers that influence nutrition adherence.	Participants compare the current dietary pattern with training demands and identify the most important areas that require attention.
7	Energy Requirements and Energy Availability	Resting energy needs, exercise expenditure, total daily energy requirements, energy balance, underfueling, overfueling and introduction to energy availability in sport and exercise.	Participants estimate energy requirements across individuals with different training volumes and identify situations where chronic underfueling may be a concern.
8	Body Composition and Goal Assessment	Body weight, muscle mass, fat mass, limitations of BMI in trained individuals, body composition methods, realistic goal setting, physique expectations and responsible interpretation of progress.	Participants compare a muscle gain client, a fat loss client and a competitive athlete and determine why the assessment priorities differ.

Development Outcome: Participants should understand that athlete and fitness nutrition planning begins with assessment rather than appearance, assumptions or generic calorie targets.



MONTH 3: PERFORMANCE NUTRITION, HYDRATION AND RECOVERY

Theme: Fuel the training, recover from the training and support adaptation.

Purpose: To teach participants how meal timing, carbohydrate availability, protein, hydration and recovery strategies change according to the training session and performance demands.

Week	Focus	Learning Content	Practical Application
9	Pre Training Nutrition	Meal timing, carbohydrate availability, protein, fiber, fat, gastrointestinal tolerance, early morning training, training intensity and practical food choices before exercise.	Participants develop pre training strategies for resistance training, endurance exercise and recreational fitness sessions.
10	Nutrition During Exercise	Situations where intra exercise fueling may be useful, carbohydrate during prolonged exercise, fluids, electrolytes, practical sports foods, gastrointestinal tolerance and situations where additional fueling is unnecessary.	Participants compare training sessions of different durations and decide when intra exercise nutrition is or is not justified.
11	Recovery Nutrition	Glycogen restoration, muscle protein synthesis, protein distribution, carbohydrate replacement, recovery meals, repeated training sessions and the importance of total daily intake.	Participants design different recovery strategies for once daily training and multiple training sessions within the same day.
12	Hydration and Electrolyte Management	Fluid balance, dehydration, overhydration, sweat loss, sodium, individual sweat rate, hydration before exercise, during training and after exercise. Understanding environmental and individual variation.	Participants estimate sweat loss using practice data and develop an individualized hydration approach for a selected training environment.

Development Outcome: Participants should be able to match nutrition and hydration strategies to actual training demands rather than applying the same pre workout and post workout advice to everyone.



MONTH 4: BODY COMPOSITION, MUSCLE GAIN, FAT LOSS AND SPORT SPECIFIC NUTRITION

Theme: Training goal and nutrition goal must support each other.

Purpose: To teach participants how nutrition strategy changes according to body composition goals and the demands of different sports.

Week	Focus	Learning Content	Practical Application
13	Nutrition for Muscle Gain	Energy surplus, protein adequacy, protein distribution, carbohydrate support for training, rate of weight gain, recovery, resistance training context and realistic expectations for muscle development.	Participants develop a muscle gain nutrition strategy and identify how it should align with an appropriate resistance training scenario.
14	Nutrition for Fat Loss While Preserving Performance	Energy deficit, protein, resistance training, hunger management, nutrient density, performance preservation, adherence, rate of loss and risks of excessive restriction.	Participants compare an aggressive fat loss strategy with a sustainable performance conscious approach and explain the likely tradeoffs.
15	Endurance, Strength, Power and Team Sports	Nutrition demands of endurance sports, strength sports, power athletes and intermittent team sports. Training load, glycogen, competition demands, recovery and hydration.	Participants develop different fueling strategies for an endurance athlete, a strength athlete and a team sport athlete.
16	Weight Category and Aesthetic Sports	Combat sports, weight category events, physique sports and aesthetic sports. Responsible body composition management, rapid weight loss concerns, restrictive practices, body image and disordered eating risk.	Participants critique unsafe weight cutting and extreme physique preparation practices and identify safer long term approaches.

Development Outcome: Participants should understand that nutrition strategy must reflect the sport, training phase, health status and performance goal rather than a single body composition target.



MONTH 5: ADVANCED SPORTS NUTRITION, SUPPLEMENTS AND SPECIAL SITUATIONS

Theme: Performance recommendations should be driven by evidence, safety and context.

Purpose: To build advanced decision making around supplements, low energy availability, athlete safety, injury recovery and special training or competition circumstances.

Week	Focus	Learning Content	Practical Application
17	Sports Supplements and Ergogenic Aids	How to evaluate evidence, efficacy, safety, dosage concepts, supplement quality and common performance supplements. Distinguishing meaningful performance evidence from marketing claims and gym culture.	Participants evaluate selected sports supplements and classify the strength of evidence and the circumstances in which use may or may not be justified.
18	Supplement Safety and Anti Doping Awareness	Contamination risk, product quality, third party testing concepts, athlete responsibility, prohibited substances, anti doping awareness, professional responsibility and the need to check current sport specific regulations.	Participants work through supplement decision scenarios and identify situations requiring caution, referral or specialist input.
19	Low Energy Availability, RED S and Disordered Eating Risk	Low energy availability, Relative Energy Deficiency in Sport, potential health and performance consequences, warning signs, restrictive dieting, body image concerns and appropriate referral pathways.	Participants review athlete and fitness client scenarios and identify warning signs that should not be managed as routine fat loss or performance problems.
20	Special Athlete and Fitness Situations	Female athletes, adolescent athletes, vegetarian and vegan athletes, fasting athletes, injury and rehabilitation, travel, heat, altitude concepts, tournament schedules and gastrointestinal challenges.	Participants adapt a performance nutrition approach for a selected special circumstance while maintaining health, adequacy and practicality.

Development Outcome: Participants should be able to judge recommendations through evidence, athlete or client safety, training context, individual need and professional scope.



MONTH 6: PROGRAMMING, MONITORING AND PROFESSIONAL PRACTICE

Theme: Turn knowledge into a structured professional system.

Purpose: To teach participants how to organize ongoing performance support, monitor progress, work collaboratively and build an appropriate professional service.

Week	Focus	Learning Content	Practical Application
21	Nutrition Periodization	Matching nutrition with changing training loads, lighter days, heavier days, recovery days, competition phases, off season, pre season, peak performance and changing goals across a training cycle.	Participants create a weekly performance nutrition framework that changes according to training demand rather than remaining identical every day.
22	Monitoring Athlete and Fitness Progress	Training performance, dietary intake, hydration, body composition, recovery, fatigue, sleep, gastrointestinal tolerance, adherence, supplement use and athlete or client feedback. Understanding when a strategy should change.	Participants create a progress monitoring framework and determine what findings would justify modifying nutrition or training support.
23	Professional Service Development	Athlete or client onboarding, assessment forms, consultation structure, goal setting, documentation, follow up systems, communication with coaches, referral pathways, multidisciplinary collaboration, professional boundaries and ethical communication.	Participants design the workflow of a professional sports nutrition or fitness performance service that clearly reflects their own role.
24	Practice Development and Final Project	Target population, service packages, fitness and sports workshops, athlete education, team services, online support, pricing concepts, ethical marketing, professional positioning and future development.	Participants present a complete athlete or fitness performance case together with a professional service model appropriate to their qualification and scope.

Development Outcome: Participants should finish with a clear understanding of how to support performance over time and how to organize a responsible sports nutrition or fitness service.



ROLE SPECIFIC APPLICATION

Practice Area	Sports Nutrition Professional	Fitness Trainer
Training Program	Understands training demands so nutrition can be aligned with the program and communicates with the trainer or coach.	Designs and modifies exercise programming within training competence and communicates relevant training demands to the nutrition professional.
General Healthy Eating Education	Provides evidence informed nutrition education within professional qualification and competence.	Can reinforce general evidence informed healthy eating principles within an appropriate fitness coaching role.
Individual Sports Nutrition Strategy	Develops individualized fueling, hydration and recovery strategies within professional qualification and competence.	Supports implementation of agreed strategies and provides relevant training information without presenting fitness coaching as individualized nutrition therapy.
Body Composition Goals	Supports nutrition planning for performance appropriate body composition goals while considering health and adequacy.	Plans exercise progression and monitors training response while avoiding unsafe weight loss or physique practices.
Medical Conditions	Collaborates or refers according to qualification, competence and applicable professional requirements.	Refers to an appropriately qualified nutrition or healthcare professional rather than attempting clinical nutrition treatment.
Clinical Nutrition Therapy	Provided only when the professional has the appropriate clinical qualification and authorization required in the relevant setting.	Does not treat medical conditions through nutrition as part of routine fitness training.
RED S or Eating Disorder Concern	Recognizes concerns and participates in appropriate referral or multidisciplinary care within scope.	Recognizes warning signs and refers rather than attempting to manage the condition independently.
Supplement Guidance	Evaluates evidence, need, safety and sport context within professional competence.	Avoids unsupported claims, understands basic evidence and safety concerns, and refers when individualized or clinical assessment is required.
Progress Monitoring	Monitors nutrition, hydration, recovery, performance related feedback and dietary implementation.	Monitors training performance, attendance, exercise progression, recovery indicators and client feedback.
Professional Collaboration	Works with trainers, coaches, physicians, physiotherapists and other relevant professionals.	Works with nutrition and healthcare professionals when client needs extend beyond fitness training.



FINAL COURSE PORTFOLIO

Portfolio Component	Sports Nutrition Application	Fitness Trainer Application
Client Assessment	Complete athlete nutrition, lifestyle, training and performance assessment.	Complete training, lifestyle, fitness goal and recovery assessment within trainer scope.
Training Demand Analysis	Interpret training demands so nutrition can be matched to the sporting context.	Analyze exercise demand, progression and workload for fitness programming.
Energy Strategy	Estimate energy needs and consider energy availability in sport.	Understand how energy balance interacts with training goals and recognize concerns requiring nutrition referral.
Macronutrient Strategy	Individualize carbohydrate, protein and fat according to performance needs.	Understand general performance nutrition principles and communicate them responsibly within scope.
Hydration Strategy	Develop an individualized training and competition hydration approach.	Recognize hydration needs associated with exercise duration, intensity and environment.
Nutrient Timing	Develop practical training, competition and recovery fueling strategies.	Understand how meal timing can support training and recovery without turning fitness coaching into clinical nutrition therapy.
Body Composition Strategy	Develop responsible nutrition strategies for performance related body composition goals where appropriate.	Develop responsible training strategies and avoid unsafe physique or weight practices.
Supplement Evaluation	Evaluate need, evidence, safety and sporting context.	Understand evidence quality, avoid unsupported claims and recognize when specialist input is needed.
Monitoring Plan	Monitor nutrition, hydration, recovery, performance and adherence.	Monitor training response, exercise adherence, recovery and client feedback.
Referral Pathway	Identify concerns requiring clinical, medical or multidisciplinary care.	Recognize when nutrition or medical referral is required and communicate appropriately.
Professional Service	Build a structured sports nutrition practice or athlete support model.	Build a structured fitness coaching and performance support service within scope.
Final Case Presentation	Present a complete sports nutrition performance case with professional justification.	Present a complete fitness performance case with clear role boundaries and collaboration points.



EXPECTED COURSE TRANSFORMATION

At Entry	At Completion
Sports nutrition means protein, supplements and meal plans.	I understand the relationship between exercise physiology, fuel utilization, recovery and performance nutrition.
I give similar nutrition or fitness advice to everyone.	I understand why training type, performance goal, athlete characteristics and professional role change the approach.
As a trainer, I am not sure where nutrition fits into my role.	I understand how nutrition supports training and where professional boundaries and referral apply.
I do not know how to assess sports nutrition or fitness needs.	I can systematically examine training demands, lifestyle, recovery, nutrition patterns and goals within my professional role.
I am confused about sports supplements.	I can evaluate supplement claims more critically using evidence, safety and sporting context.
I focus mainly on weight changes.	I understand that performance, recovery, health, energy availability and body composition are interconnected.
I do not know when to refer an athlete or client.	I can recognize red flags, RED S concerns, eating disorder risk and medical issues that require another professional.
I want to work with athletes or fitness clients but do not know how to organize my service.	I have a structured workflow for sports nutrition or fitness performance practice and understand how to collaborate across disciplines.

FINAL LEARNING PATHWAY

Stage	Learning Progression
Stage 1	Understand exercise physiology and energy systems.
Stage 2	Understand how nutrition supports training and performance.
Stage 3	Assess training demands, lifestyle, recovery and goals.
Stage 4	Understand energy needs and energy availability.
Stage 5	Fuel training and support recovery.
Stage 6	Develop responsible muscle gain and fat loss strategies.
Stage 7	Adapt nutrition according to sport and training context.
Stage 8	Evaluate supplements and special athlete situations.
Stage 9	Recognize RED S, disordered eating risk and referral needs.
Stage 10	Periodize support according to changing training demands.
Stage 11	Monitor progress and modify support appropriately.
Stage 12	Understand professional scope and collaborate across disciplines.
Stage 13	Build a structured sports nutrition or fitness performance service.