



# Tommy Moore

VCE Physical Education Unit Offerings

## **UNIT 1: The Human Body in Motion**

Functioning and interaction of musculoskeletal, cardiovascular, and respiratory systems, the understanding of physical activity, sport, and exercise concepts, as well as ethical, social, and cultural aspects of legal and illegal practices. Collecting and analyzing information to explain the functions of the musculoskeletal system along with its limitations, and to illuminate how the cardiovascular and respiratory systems function.

## **UNIT 2: Physical Activity, Sport, and Society**

The role of physical activity in promoting health and wellbeing across different populations, investigating the consequences of physical inactivity and sedentary behavior, creating activity plans that meet physical activity guidelines, recognizing the role of physical activity in promoting healthy lifestyles, understanding sociocultural factors influencing physical activity, and identifying health risks associated with physical inactivity, including hypokinetic diseases. Collecting and analyzing data on physical activity levels and creating, undertaking, and evaluating an activity plan.

## **UNIT 3: Movement Skills and Energy for Physical Activity**

Investigate the interaction of three energy systems during physical activity, explore the causes of fatigue and strategies for its delay and recovery, understand the application of biomechanical and skill acquisition principles to enhance movement skills, and delve into the systems and mechanisms involved in human movement energy production. Develop an exercise test that is specifically designed to explore the mechanisms of fatigue.

## **UNIT 4: Physical Activity, Sport, and Society**

Activity analysis, fitness components assessment, fitness testing, implementation and evaluation of training principles and methods, monitoring strategies, training program principles, training methods, psychological strategies for performance enhancement and recovery, nutritional and rehydration recovery strategies, and chronic adaptations to various types of training. Design and evaluate training programs to enhance specific fitness components.



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## UNIT 1: The Human Body in Motion

### Education Support

- How musculoskeletal and cardiorespiratory systems produce movement.
- Investigation of system adaptations to physical activity, sport, and exercise.
- Potential causes of illness and injury to the musculoskeletal system.
- Concepts of physical activity, sport and exercise.
- Structure and function of the skeletal system.
- Major muscles of the human body.
- Types of muscular actions.
- Interactions of muscles and bones to produce movement.
- Structure and function of the cardiovascular and respiratory systems.
- Role of the cardiovascular system in thermoregulation.
- Relationship between stroke volume, heart rate and cardiac output.
- Interrelationship of the cardiovascular and respiratory systems.
- Using and applying correct anatomical terminology to the cardiovascular and respiratory systems.
- Describing the process of gaseous exchange.
- Assessing enablers and barriers to cardiorespiratory health.
- Discussing ethical, social and cultural considerations associated with the use of legal and illegal practices.

### Practical Support

- Collection and analysis of information from practical activities to explain musculoskeletal system functions and its limiting condition
- Collection and analysis of information from practical activities to explain how the cardiovascular and respiratory systems function.



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## UNIT 2: Physical Activity, Sport and Society

### Education Support

- Understanding the role of physical activity in health and wellbeing across different population groups.
- Investigating individual and population-based consequences of physical inactivity and sedentary behaviour.
- Creating and participating in an activity plan that meets physical activity guidelines.
- Role of physical activity in developing and promoting healthy lifestyles
- Sociocultural factors influencing physical activity
- Health risks associated with physical inactivity, including hypokinetic diseases

### Practical Support

- Collecting and analyzing data related to physical activity levels
- Creating, undertaking and evaluating an activity plan



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## UNIT 3: Movement Skills and Energy for Physical Activity

### Education Support

- Investigate the contribution and interplay of three energy systems during physical activity.
- Explore causes of fatigue and strategies for postponing fatigue and promoting recovery.
- Understand how biomechanical and skill acquisition principles can be applied to improve movement skills.
- Explore the systems and mechanisms associated with energy production for human movement.

### Practical Support

- Develop an exercise test that is specifically designed to explore the mechanisms of fatigue.



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## UNIT 4: Training to Improve Performance

### Education Support

- Activity analysis: skill frequencies, movement patterns, heart rates, work to rest ratios.
- Fitness components: aerobic power, agility, anaerobic capacity, balance, body composition, coordination, flexibility, muscular endurance, power and strength, reaction time and speed.
- Assessment of fitness: purpose of fitness testing, pre-participation health screening (PAR-Q), informed consent, test aims and protocols, test reliability and validity.
- Implement and evaluate training principles and methods.
- Strategies to monitor and record physiological, psychological and sociological training data.
- Training program principles: frequency, intensity, time, type, progression, specificity, individuality, diminishing returns, variety, maintenance, overtraining, detraining
- Training methods: continuous, interval, fartlek, circuit, weight/resistance, flexibility, plyometrics.
- Psychological strategies to enhance performance and aid recovery.
- Nutritional and rehydration recovery strategies.
- Chronic adaptations of the cardiovascular, respiratory and muscular systems to aerobic, anaerobic and resistance training.

### Practical Support

- Design and evaluate training programs to enhance specific fitness components.