

Exercise & Sports Science (ESS)

Secondary 3 Express (2022)

Introduction

- Exercise and Sports Science (ESS) is an 'O' Level subject offered to selected students in Secondary 3 Express. The course will develop students' interdisciplinary understanding while they analyze and critique on the focal point of movement along with sub-disciplines of sports science.
- The syllabus contents consist of 5 areas of study.
 - ✓ *Exercise Physiology*
 - ✓ *Biomechanics*
 - ✓ *Sports Psychology*
 - ✓ *Sports Sociology*
 - ✓ *Motor Learning and Development*

Exercise Physiology

Helps students understand the physiological factors affecting health, fitness and performance. Students study the relationship between the human body and movement, as well as how energy systems and sports nutrition have an impact on their performance in practical activities.

Biomechanics

Is the study of how natural laws and forces affect the body in sports movement and performances. ESS students would understand the mechanical cause-effect relationships that determine human movement and the biomechanical principles to refine and improve movement. In ESS, students would apply biomechanical principles to improve and refine movement. They use practical activities to demonstrate biomechanical principles and how the correct application of biomechanics can lead to improved performance in sport and physical activity.

Sports Psychology

Involves the study of how psychological factors affect performance. It also explores how participation in sport and exercise affect psychological and physical factors and vice versa. Through this, students are not only able to motivate themselves to participate in physical exercise, but also encourage others to do the same. They will understand how mental preparation for performance can be just as critical as physical preparation.

Sports Sociology

Examines how socio-cultural factors influence why and how people exercise and stay active and participate in sports. Sports participation is also examined from a critical and global perspective, particularly in relation to issues such as commercialisation, ethics and equity.

Motor Learning and Development

Involves the study of how motor learning and development affect the performance of an individual in individual/dual sport or group of individuals in a team sport. ESS students would understand the factors affecting the acquisition of skills. In ESS, students would apply motor learning principles and feedback in the practical activities to improve and refine their motor skills and movement patterns, thus deepening their understanding of movement concepts¹¹ in achieving movement goals.

Assessment

- Assessment for ESS comprised of:
 - ✓ A Computer-based Theory Assessment (Paper 1 - 40%)
 - ✓ Assessment of Practical Performance (Paper 2 - 60%).
- For Paper 2, students will choose One practical activity from Each of the categories:
 - An Individual/ Dual Activity (Example: Cross-Country Running, Swimming, Track and Field, Badminton, Table Tennis and Tennis)
 - A Team Activity (Example: Basketball, Floorball, Football, Hockey, Netball, Softball and Volleyball)
- * **Exact sports to be confirmed only at later date.**