

Physical Education and Sport Syllabus

Grade 13 – Unit Two

Note: This is a guide; teacher may start any topic within this Curriculum.

(Theory)

MODULE 1: BIOMECHANICS

Students should be able to:

1. Explain the utility and roles of Biomechanics in the context of sport;

(a) Definitions of: biomechanics, clinical biomechanics, occupational biomechanics, sports biomechanics.

(b) Sub-branches of biomechanics:

(i) statics;

(ii) dynamics.

(c) Biomechanical models: particle, stick figure, rigid segment body models:

(i) role of the sports bio-mechanist - teaching, researching, consulting;

(ii) role of biomechanics in the study of human movement.

2. describe the statics in biomechanics;

(a) Equilibrium, stability and balance in sport.

(b) Anatomical reference axes and planes: sagittal, transverse, longitudinal, frontal.

(c) Centre of mass, establishing center of mass in different planes.

(d) Directional terminology

(e) Fluid biomechanics – buoyancy

3. discuss the relationship among forces acting on the moving body;

(a) Forces: internal and externally generated.

(b) Force:

(i) gravity;

- (ii) friction;
- (iii) ground reaction;
- (iv) resultant force;
- (v) centrifugal;
- (vi) centripetal;
- (vii) resistive forces – drag, air resistance/aerodynamics, aquadynamic.

(c) Newton's Laws:

- (i) first law – Inertia;
 - (ii) second Law – Acceleration;
 - (iii) third – Action / Reaction.
- (d) Levers: functions, 3 types, turning effects.

4. discuss the concept of energy (a) Definition of energy, work and power and the units in which they are expressed.

(b) Forms of energy: chemical, kinetic and potential.

5. describe the principles of motion relevant to sports;

(a) Principles of motion: Linear motion; rotary; translator; momentum; continuity; transfer of momentum; maximum acceleration and efficiency of motion; counterforce; leverage; follow-through; force application; angular motion.

(b) Gravity and the body in motion

(c) Velocity, acceleration, maximum velocity,

6. apply the principles of force and motion to specific movements in sport.

(a) Biomechanical principles related to specific sport skills (related to Options A and B).

(b) Parabolic curves for specific sport skills.

(c) Graphical representations of motion – interpreting research results.

(d) Measurement of force, stride length and frequency.

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives in this Module, teachers are advised to engage

students in the following teaching and learning activities.

1. Conduct debates and have group discussions on technique and style issues.
2. Use specific technologies, for example, Dartfish, HyTech meet manager for the analysis of movement.
3. Use advanced technology and stick figure diagrams to analyse movement.
4. Arrange sessions to do video analysis of sport movement, for example, on the biomechanics of running and projectiles.
5. Use of audio-visual presentations.
6. Examine case studies on biomechanical analyses from international research sources.
7. Conduct research projects on movement in exercise and sport scenarios.
8. Discuss fault-reason-correction exercises on specific sports movements.
9. Observe video recording and photography for analysis in the local sport environment.

RESOURCES

Davis, B., J. Roscoe, D. Roscoe, and R. Bull - Physical Education and the Study of Sport. London: Mosby, 2005.

Honeybourne, J. H., M. Hill, and H. Moors - Advanced P.E. and Sport, 3rd Edition. London: Nelson Thornes, 2004.

Sewell, D., P. Watkins, and M. Griffin - Sport and Exercise Science: An Introduction. London: Hodder Arnold, 2009.

Wesson, K., N. Wiggins-James, G. Thompson, and S. Hartigan - Sport and P.E.: A Complete Guide to Advanced Level Study. London: Hodder Arnold, 2005.

Websites

http://www.utwente.nl/cw/theorieenoverzicht/Theory%20Clusters/Health%20Communication/Health_Belief_Model.doc/www.doi

MODULE 2: SPORT MANAGEMENT

GENERAL OBJECTIVES

On completion of this Module students should:

1. understand the key concepts and major theoretical frameworks of Sport Management and Human Resource Management;
2. understand the key elements of financial management of sport referencing specific models
3. be aware of the role of marketing as a tool that is used to link a sporting organisation's mission to achievement of its goals;
4. be aware of the legal ramifications of sport management and its impact on the institution of sport;
5. appreciate the value of ethics to sport management.

SPECIFIC OBJECTIVES CONTENT

Students should be able to:

1. discuss the key elements of management and leadership as they relate to sport management;
 - (a) Theories of Human Resource Management: Management and Leadership – Behavioural, Multidimensional, Chaos, Kaizen, attributing and identifying leadership styles used.
 - (b) Key functions and factors of management within a sporting organisation: using structures, goal setting, mission and vision statements; strategic planning, implementation, monitoring and evaluation. Example IOC, ICC, IFNA, FIFA.
 - (c) Management processes to include planning, organising, staffing – roles of executives, coordinating, directing.
 - (d) Role of Government and Non-Government organisations, policy on sport, funding opportunities, bidding process for major
2. create budgets and financials for sporting events and organisations;
 - (a) Relevance/importance of financial management to sporting organisations.
 - (b) Revenue streams for sport organisations, for example, sponsorship, grants, merchandising, ticketing, television, broadcast rights.

(c) Accounting principles applied to events.

3. evaluate the contribution of sport to the economy;

(a) Measurement of financial value of the sporting event to a community or its stakeholders.

(b) The value of sport to an economy: contribution to GDP, number of employees (technical, management and marketing) in the sector, average salaries, linkage sectors to sport (For rental example, hotels, concessionaires, car agencies and security agencies).

4. devise strategic marketing plans related to sporting events;

(a) Identification of the most suitable markets for sport: domestic, local, regional and international.

(b) Behaviour of consumers in sport.

(c) Assessment and evaluation of marketing and sponsorship plans.

(d) Role of Media in marketing.

(e) Promotional activities.

5. evaluate the legal issues in sport;

(a) Definition of sport law.

(b) Examination of legal principles and how they can be used in sport.

(c) Existing policies and contracts for sport in the region: Revised Treaty of Chaguaramas; CARICOM Sport Development Policy, UNESCO Sport for Peace; UN Millennium Goals.

(d) The Memoranda of Understanding (MOU), Contracts: acknowledgement of procedures for an MOU and/or contract for athletes and sporting organisations.

(e) Intellectual property and rights – use of image, sponsorship, branding, concession, licensing.

6. discuss ethical issues in Sport Management;

(a) Concepts in ethics – fair play, morals and values (doping; discrimination based on religion, gender, sexual orientation, race, ethnicity, disability); sexual harassment; transparency; democracy.

(b) Rules and regulations – Code of ethics.

7. discuss the principles of facilities management.

(a) Guidelines in managing a facility – types, care, use, maintenance, safety.

(b) Choosing the most suitable event, selection of location for a specific event including site visits and set up required.

(c) Ticketing, seating, security, parking, solid waste disposal, toilet accessories, noise levels, environmental impact.

(d) Awareness of design and construction.

(e) Risk Management.

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives of this Module, teachers are advised to engage students in the teaching and learning activities listed below.

1. Visit the National Olympic Association's office and interview the chief administrator on how the organisation functions.
2. Use of group discussions to compare models in different international sporting federations.
3. Invite a treasurer of a major sporting federation to speak to the class and analyse and assess budgets which were used for hosting of events.
4. Create a sponsor package for a sporting event.
5. Attend seminars, workshops, event launches by major sponsors of sport.
6. Participate in online sessions put on by international firms with specific focus on sport.
7. Discuss specimen contracts for athletes (endorsement, employment, scholarship).
8. Discuss case studies of sport arbitration, players' rights, and competition rules.
9. Debate the topical issues in sport arbitration.
10. Invite a sport lawyer to speak to the class on issues in sport
11. Examine case studies on ethics cases related to sport management.
12. Use of the World Anti-Doping Agency (WADA) website to gather information on the substances in sport.
13. Field trips to a school, community and/or national sporting facility.

RESOURCES

Beech, J. and S. Chadwick The Business of Sport Management. Essex: Pearson Education Limited, 2004.

Coakley, J. and E. Pike Sport In Society: Issues and Controversies. New York:McGraw-Hill, 2009.

Parkhouse, B. L. The Management of Sport: Its Foundation and Application. New York: McGraw-Hill, 2005.

Parks, J., J. Quarterman, and L. Thibault Contemporary Sport Management. Champaign: Human Kinetics, 2010.

Masteralexis, L. P., C. Barr, and M. Hums. Principles and Practice of Sport Management. Burlington, Massachusetts: Jones and Bartlett Learning, LLC 2012.

Websites

<http://www.wada-ama.org/>

<http://nassm.com>

<http://www.youtube.com>

MODULE 3: TECHNOLOGY AND INNOVATION

GENERAL OBJECTIVES

On completion of this Module students should:

1. be aware of the development of technology and how it has been used to advance sport as a consumer driven activity;
2. examine the tools associated with technology and how they can be used to improve performance and provide feedback in sport;
3. explore the role of traditional, non-traditional and Social Media as means by which sport is being promoted and delivered to the general audience;
4. demonstrate how technology can be used to encourage innovation in sport.

SPECIFIC OBJECTIVES CONTENT

Students should be able to:

1. discuss the historical development of the use of technology in sport;
 - (a) Hand timing to electronic to FAT.
 - (b) Analogue timing devise to digital.
 - (c) Sport apparel (shoe, suits, balls).
 - (d) Recording of results.

(e) Seeding and ranking of teams.

2. state the methods used to disseminate sport information to target markets;

(a) Information gathering.

(b) Distribution of information.

(c) Awareness: e-mail, telegram, telex, fax.

(d) Event branding.

(e) Advertising.

(f) Video exposure.

(g) Online streaming of events.

(h) Promotional games-FIFA, NBA, BOLT, NFL.

3. discuss the use of the technological

tools available for training and

performance in sport;

(a) Training:

(i) Bowling machine, ball machine, cradle;

(ii) Computer programmes for post-game analysis;

(iii) Projections.

(b) Performance/Diagnosis/Treatment:

(i) Stimulation, TENS;

(ii) Reaction equipment;

(iii) Biofeedback;

(iv) Wired/wireless monitor.

4. describe how technology is used to enhance the various aspects of sport event management;

(a) Database management.

(b) Game communication.

- (c) Strategy.
 - (d) Results and distribution.
 - (e) Scheduling.
 - (f) Rosters.
 - (g) Creation of website.
 - (h) Entries/registration.
 - (i) Rankings/seeding.
 - (j) Teleconferencing - Skype, Lync.
5. discuss the use of social media in sport.
- (a) Social media applications.
 - (b) Types of audience.
 - (c) Advantages and disadvantages.

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives of this Module, teachers are advised to engage students in the teaching and learning activities listed below.

1. Research technological tools available for use in sport.
2. Employ the use of the available technological tools in class presentations and training sessions.
3. Post-game analysis using technological tools.
4. Present a marketing plan or advertisement using a technological tool.
5. Research and display the historical development of technology used in sport.
6. Use technology to simulate the enhancement of apparel and equipment.
7. Use technology to promote a sporting event.

RESOURCES

Parks, J., and J. Quarterman Quarterman, J. Contemporary Sport Management, 7th Edition. Champagne: Human Kinetics, 2012.

Journals

The Sport Journal.

Websites

<http://www.wada-ama.org/>www.forbes.com

Theory and Practical

Each student must be a part of the class project

The project must be chosen from a survey within communities based on a sport related activity .