

MODULE DESCRIPTOR

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| MODULE TITLE | Introduction to Sport Science for Golf | | |
| MODULE CODE | LS1519 | CREDIT VALUE | 20 credits |
| MODULE DELIVERY | Year Long | | |
| MODULE TUTOR | John Fry | | |
| DATE APPROVED | April 2008, July 2008 | | VERSION NUMBER 2 |
| DEPARTMENT | Tourism & Leisure Management | PARTNER INSTITUTION | Myerscough College |

RELATIONSHIP WITH OTHER MODULES

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|----------------------|------|-----------------------|------|--|---|
| Co-requisites | None | Pre-requisites | None | Excluded Combinations for Foundation Certificate Sports | LS1514 Applied Football Coaching, LS1516 Football Coaching Principles and Practice, LS1518 Introduction to Sports Science in Football |
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MODULE AIMS

The module will introduce sports science from a multidisciplinary approach. Areas covered will be physiology, biomechanics, and psychology. This module will use a theoretical base to develop an understanding of key terminology and, importantly, the application of scientific principles to the golf coaching process.

The module will seek to highlight the relevance of Sports Science in the coaching process. To achieve this, an introduction to the fundamental concepts of Biomechanics/Kinesiology, Physiology and Psychology will be provided. The application of these concepts to golf-related situations will be outlined, thereby illustrating the interdisciplinary nature of the coaching process.

MODULE CONTENT

- 1 The physiology of skeletal muscular contraction.
- 2 Physiological responses of the cardiovascular and respiratory systems to sport and exercise.
- 3 Energy system dynamics.
- 4 Kinesiological terminology and application.
- 5 Skeletal structure and function: Influences on golf performance.
- 6 Angular and linear kinematics and golf performance.
- 7 Angular and linear kinetics and golf performance.
- 8 The application of ICT to the coaching process.
- 9 A review of key theories of sports psychology.
- 10 Application of Mental Skills Training to golf.
- 11 Motivation and concentration in golf.
- 12 Attentional control strategies in golf.
- 13 Biomechanics of golf equipment.
- 14 Impact of Stress on golf performance.
- 15 Implications of arousal and fatigue in golf.
- 16 Nutritional Analysis in golf.

LEARNING OUTCOMES

On successful completion of this module a student will be able to:

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| 1 | Describe how physiological systems affect or are manipulated by golf performance. |
| 2 | Identify key biomechanical theories in relation to golf performance. |
| 3 | Outline those theories underpinning the psychological aspects of golf performance. |
| 4 | Apply Biomechanical and psychological principles to improve golf performance. |

TEACHING AND LEARNING STRATEGY

This module will be taught year long, through a series of lecture sessions, during which key themes are developed. Where necessary, students will apply key learning to practical coaching situations. This will be achieved through the use of directed practical sessions. To facilitate the achievement of the learning outcomes listed, students will need to take a pro-active role in their own learning. Directed reading will need to be undertaken prior to seminar activities and group discussions. Students will be expected to work on their own initiative in the development of appropriate skills, taking a critical appreciation of their progress. Guest lectures from BASES Accredited and BPS Chartered sport scientists will occur. Furthermore, students will learn how to use the latest Golf motion analysis systems used by the PGA.

INDICATIVE CLASS CONTACT

Total of 2 hours per week.

INDICATIVE ASSESSMENT

| Number of Assignments | Assessment | Weighting % | Type/Duration/ Wordcount (indicative only) | Learning Outcomes being assessed |
|-----------------------|-------------------------------|-------------|---|----------------------------------|
| 2 | Multiple Choice Tests | 2 x 25% | 2 x 1 hours (Test 1 undertaken in Semester 1 and Test 2 undertaken in Semester 2) | 1, 2, 3, 4 |
| 1 | Essay | 20% | 1000 words (critique of presentation) | 1, 2, 3, 4 |
| 1 | Group Multimedia Presentation | 30% | 20 minutes of multimedia presentation | 1, 2, 3, 4 |

MODULE PASS REQUIREMENTS

For successful completion of the module, each individual element of assessment must be attempted and an overall average of 40% achieved.

BIBLIOGRAPHY AND LEARNING SUPPORT MATERIAL

Physiology

Adams, G. (1998) *Exercise Physiology Laboratory Manual*. McGraw-Hill Publications, London.

Astrand, P.O. Rodhal, K. Dahl, H.A. and Strømme, S.B. (2003) *Textbook of Work Physiology: Physiological Bases of Exercise*. (4th Ed), Human Kinetics, Champaign.

Draovich, P. and Westcott, W. (1999) *Complete Conditioning for Golf*. Leeds, Human Kinetics.

Farrally, M.R. (1999) *Science and Golf III*. Leeds, Human Kinetics

Foss, W.E. and Keteyian, L. (1998) *Fox's Physiological Basis of Human Performance*. 3rd edition. McGraw-Hill Publications, London.

McArdle, W.D. Katch, F.I. and Katch, V.L. (1996) *Exercise Physiology. Energy, Nutrition and Human Performance*. 4th edition. Lea and Febiger, Philadelphia.

Powers, S. and Howley, F. (2001) *Exercise Physiology*. (4th ed.). McGraw-Hill Publications, London.

Thain, E. (2002), *Science & Golf IV*. Routledge

Wilmore, J.H. and Costill, D.L. (1999) *Physiology of Sport and Exercise*. (2nd Edition) Human Kinetics Publishers, Champaign.

Biomechanics/Kinesiology

Abernethy, B. et al. (1997) *The Biophysical Foundations of Human Movement*. Human Kinetics. Champaign.

Hamill, J. and Knutzen, K.M. (1995) *Biomechanical basis of human movement*. London, Williams & Wilkins.

Knudson, D.V. & Morrison, C.S. (2002) *Qualitative Analysis of Human Movement*; (2nd Edition). Human Kinetics, Champaign, IL.

Sprunt, K. (1992) *An Introduction to Sports Mechanics*. NCF, Leeds.

Wirhed, R. (1996) *Athletic Ability and the Anatomy of Motion*; (2nd Edition). Mosby, London.

Psychology

Cox, R.H. (1998) *Sports Psychology: Concepts and Applications*. McGraw-Hill Publishers, London.

Gill, D.L. (2000). *Psychological Dynamics of Sport and Exercise*. Human Kinetics, Champaign.

Bradley, N. (2004) *The seven laws of the golf swing: Picturing the perfect swing*. London, BBC Books.

Horn, T.S. (1992) *Advances in Sport Psychology*. Human Kinetics, Champaign.

Rottella, B. (1997) *Golf is not a game of perfect*. New York, Simon & Schuster.

Weinberg, R.S. & Gould, D. (2003). *Foundations of Sport and Exercise Psychology*. (3rd Edition) Human Kinetics, Champaign.

Journals

British Journal of Physical Education
Journal of Sports Sciences
Journal of Strength and Conditioning Research
Medicine and Science in Sports and Exercise
Sports Medicine
The Sport Psychologist
International Journal of Sport Psychology
Psychological Bulletin

Websites

www.sportengland.org The general Sport England website
www.sportscoachuk.co.uk The website for Sports Coach UK
www.culture.gov.uk Department for Culture, Media and Sport
www.sportsci.org An excellent site for general sports science issues.
www.acsm.org American College of Sports Medicine.
www.bases.org.uk British Association of Sport and Exercise Sciences
www.golf-foundation.org Golf foundation website
www.europeantour.com European Tour website
www.englishgolfunion English Golf Union website