

Module specification

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Module Code	SIR704
Module Title	Applied Strength & Conditioning Principles 1 – Performance Measurement
Level	7
Credit value	20
Faculty	FSLS
HECoS Code	100098
Cost Code	GACM
Pre-requisite module	N/A

Programmes in which module to be offered

Programme title	Core/Optional/Standalone
MSc Strength & Conditioning	CORE

Breakdown of module hours

Learning and teaching hours	6 hrs
Placement tutor support hours	0 hrs
Supervised learning hours e.g. practical classes, workshops	15 hrs
Project supervision hours	0 hrs
Active learning and teaching hours total	21 hrs
Placement hours	0 hrs
Guided independent study hours	179 hrs
Module duration (Total hours)	200 hrs

Module aims

- Expose students to a variety of contemporary testing and profiling strategies commonly utilised in applied strength and conditioning (S&C), fostering a critical understanding of their application and effectiveness.
- Enable students to learn and apply a range of monitoring strategies to assess and enhance athletic performance within S&C practice.
- Develop students' technical proficiency in data collection using advanced technologies, ensuring accuracy and reliability in performance assessment using a range of technologies.

- Facilitate the development of comprehensive needs analyses for diverse sports and athlete populations, fostering a strategic and evidence-based approach to performance enhancement.
- Provide opportunities for students to explore and apply a range of data analysis techniques, enhancing their ability to interpret and utilise performance data effectively.
- Engage students in data reporting, communication, and visualisation, equipping them with the skills to present findings clearly and impactfully to different stakeholders.

Module Learning Outcomes

At the end of this module, students will be able to:

1	Critically evaluate strength and conditioning strategies for monitoring physical performance
2	Develop a needs analysis to clearly understand the physical demands placed on an athlete
3	Collect reliable data enabling the design of appropriate training solutions
4	Implement a testing battery for an individual, team and/or client group based on specific needs
5	Critically analyse data from key performance indicators relating to physical qualities

Assessment

Indicative Assessment Tasks:

This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

Assessment: The student will be required to submit a portfolio based on a self selected sport and athlete. The portfolio will incorporate four sections:

1. A one-page infographic of the sport and the key physical requirements that utilises peer-reviewed literature
2. A 1000-word critical analysis of profiling strategies for an athlete or team. Students will pick one area to discuss such as strength profiling, speed profiling, capacity profiling etc.
3. Provide an excel file (or similar software) of collected data and a 500 word detailed account of the data collection process.



4. A digital report sheet visualising and communicating the data for a coach and/or athlete highlighting specific areas for development related to strength and conditioning

Assessment number	Learning Outcomes to be met	Type of assessment	Duration/Word Count	Weighting (%)	Alternative assessment, if applicable
1	1-5	Portfolio	Equivalent of 2000 words	100	N/A

Derogations

N/A

Learning and Teaching Strategies

Students will predominantly learn through applied workshops where group activities will provide opportunities for exploration of data collection and real-world techniques. Students will also be required to attend interactive lectures to underpin applied knowledge with theoretical understanding.

Welsh Elements

The programmes will be delivered through the medium of English. Students are entitled to submit assessments in the medium of Welsh. If students wish to converse in Welsh, they will be assigned a Welsh speaking personal tutor. Support can also be made available for Welsh language students via Coleg Cymraeg Cenedlaethol where students can present their research at their conferences through the Welsh Language. Students will be sign posted to relevant opportunities via the VLE and MS Teams page.

Indicative Syllabus Outline

- Needs analyses
- Strength assessments
- Speed and change of direction assessments
- Aerobic and anaerobic assessments
- Objective and subjective monitoring strategies
- Field and laboratory-based approaches

Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update.

Essential Reads

McGuigan, M.R. (2017), Monitoring Training and Performance in Athletes. Champaign, IL: Human Kinetics.



Other indicative reading

Haff, G. and Triplett, T. (eds.), (2015), *Essentials of Strength Training and Conditioning*. 4th edition. Champaign, IL: Human Kinetics.

Bompa, T.O. and Haff, G.G. (2018), *Periodization: Theory and Methodology of Training*. 6th ed. Champaign, IL: Human Kinetics.

DeWeese, B.H., Hornsby, W.G., Stone, M.E. and Stone, M.H. (2015), 'The Training Process: Planning for Strength-Power Training in Track and Field. Part 1: Theoretical Aspects', *Journal of Sport and Health Science*, Vol.4, No.4, pp. 308-317.

Jeffreys, I. and Moody, J. (eds.), (2021), *Strength and Conditioning for Sports Performance*. 2nd Edition. London: Routledge.

McArdle, W.D., Katch, F.I. and Katch, V.L. (2014), *Exercise Physiology: Nutrition, Energy, and Human Performance*. 9th ed. Philadelphia, PA: Lippincott Williams & Wilkins.

Suchomel, T.J., Nimphius, S. and Stone, M.H. (2016), 'The Importance of Muscular Strength in Athletic Performance', *Sports Medicine*, Vol.46, No.10, pp. 1419-1449.

UK Strength and Conditioning Association (UKSCA), (2024), *UK Strength and Conditioning Association*. Available from: <https://www.uk sca.org.uk/> . [Accessed 24th June 2024]

Winter, E.M., Jones, A.M., Davison, R.C.R., Bromley, P.D. and Mercer, T.H. (eds.), (2007), *Sport and Exercise Physiology Testing Guidelines: Volume 1 – Sport Testing*. British Association of Sport and Exercise Sciences Guide. London: Routledge.

Administrative Information

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