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Physical Education and Sports Science
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SPORT SCIENCE & MANAGEMENT
SS3020 RESEARCH METHODS AND DESIGN IN PHYSICAL ACTIVITY AND SPORT

Academic Year	2026-27	**Semester**	1
Course Coordinator			
Course Code	SS3020		
Course Title	Research Methods and Design in Physical Activity and Sport		
Pre-requisites	-		
No of AUs	3		
Contact Hours	39		

Course Aims

This course aims to provide you with sufficient understanding to appreciate and undertake sport science and management research. The course will cover a basic appreciation of the research process and current directions in sport science and management. Topics will focus on various strategies for conducting qualitative and quantitative research and research communication, reporting and dissemination.

Intended Learning Outcomes (ILO)

By the end of this course, you should be able to:

1. differentiate and classify research and research methodologies used in sport science and management.
2. describe and appreciate issues related to research ethics.
3. adopt quantitative and qualitative research approaches for sport science and management research.
4. acquire the competencies to report research effectively.

Course Content

The following topics will be covered:

1. Broad overview of research and research methods for the field of sport science and management
2. Literature search strategies
3. Ethics in research
4. Quantitative research methods
5. Qualitative research methods
6. Research reporting

NTU Competencies & Graduate Attributes

NTU Competencies	
Character	√
Competence	√
Cognitive agility	√

NTU Graduate Attributes	
Graduate Attributes	Level (i.e., basic, intermediate, advanced)
1. Ethical Reasoning	Intermediate
2. Problem-solving	Basic
3. Transdisciplinary	Basic
4. Information Literacy	Intermediate
5. Critical Thinking	Basic

Assessment (includes both continuous and summative assessment)

Component	**ILO Tested**	**Weighting**	**Team/ Individual**	**Assessment Rubrics**
1. Group Presentation	1-4	25%	Team	Appendix 1
2. In-class Assessment (Quiz)	1-4	25%	Individual	
3. Final Examination	1-4	50%	Individual	
Total		100%		

Formative Feedback

Feedback for learning will be verbally provided during each laboratory class session, where you have the opportunity to learn techniques and apply yourselves to problems related to each organ system.

During the completion of the Group Presentation, you will be given verbal feedback as a group pertaining to your assessed performance. Generic verbal and written feedback will be provided to the class for the test and examination.

Learning and Teaching Approach

Approach	**How does this approach support you in achieving the learning outcomes?**
Lectures	Lectures will provide information for key learning concepts and theories and support understanding of key concepts.
Hands-on Activity	Hands-on activities will augment the learning of concepts and theories.

Reading and References

NIE Research and Publications

1. Lau, E. S., Chung, H. J., & Chia, Y. H. M (2020). Voices of Singapore national beach volleyball female athletes: What is an ideal coach? *International Journal of Sports Science and Coaching, 15*(5-6), 642-652. [SSCI]

2. Hafiz, J., & Chung, H. J. (2021). An Empirical Phenomenological Study of Youths' Experiences Jogging in Singapore Parks. *Asian Journal of Physical Education and Sport Science, 9*(6), 1-16.

Other Readings and References

3. Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches.* London, UK: Sage Publications, Inc.

4. Jones, I., Brown, L., & Holloway, I. (2013). *Qualitative research in Sport and physical activity.* London, UK: London, UK: Sage Publications, Inc.

5. Carless, D., & Douglas, K. (2013). Living, resisting, and playing the part of athlete: Narrative tensions in elite sport. *Psychology of Sport and Exercise, 14*(5), 701-708.

6. Papathomas, A., & Lavallee, D. (2014). Self-starvation and the performance narrative in competitive sport. *Psychology of Sport and Exercise, 15*(6), 688-695.

7. Brewer, J. & Sparkes, A. C. (2011). The meanings of outdoor physical activity for parentally bereaved young people in the United Kingdom: Insights from an ethnographic study. *Journal of Adventure Education & Outdoor Learning 11*(2), 127-143

8. Lake, R. J. (2011) 'They treat me like I am scum': Social exclusion and established-outsiders relations in a British tennis club. *International Review for the Sociology of Sport 48*(1), 112-128.

Course Policies and Student Responsibilities

(1) General

You are expected to complete all assigned pre-class readings and activities, attend all classes – lecture and laboratory – punctually, submit all scheduled assignments and take tests by due dates. You are not allowed to swap laboratory groups without express permission from the course coordinator. You are expected to take responsibility for following up with course notes, assignments and course-related announcements for sessions they have missed. You are expected to participate in all discussions and class activities unless there is a valid medical reason not to do so.

(2) Absenteeism

Absence from class without a valid reason will affect your overall course grade. Valid reasons include falling sick, supported by a medical certificate and participation in NTU's approved activities supported by an excuse letter from the relevant bodies.

If you miss a lecture, you must inform the course instructor via email prior to the start of the class.

(3) Absence Due to Medical or Other Reasons

If you are sick and not able to complete a test or submit an assignment, you have to submit the original Medical Certificate (or another relevant document) to the Sport Science & Management (or Home School) administration to obtain official leave. Without this, the missed assessment component will not be counted towards the final grade. There are no make-ups allowed.

Academic Integrity

Good academic work depends on honesty and ethical behaviour. The quality of your work as a student relies on adhering to the principles of academic integrity and to the NTU Honour Code, a set of values shared by the whole university community. Truth, Trust and Justice are at the core of NTU's shared values.

As a student, it is important that you recognise your responsibilities in understanding and applying the principles of academic integrity in all the work you do at NTU. Not knowing what is involved in maintaining academic integrity does not excuse academic dishonesty. You need to actively equip yourself with strategies to avoid all forms of academic dishonesty, including plagiarism, academic fraud, collusion, and cheating. If you are uncertain of the definitions of any of these terms, you should go to the NTU Student Academic Integrity Policy and Procedures link in the Student Portal for more information. Consult your instructor(s) if you need any clarification about the requirements of academic integrity in the course.

Special note: Generative AI tools will be allowed to the extent stipulated for each assignment in the assignment instructions, and any such use must be duly referenced or disclosed.

Course Instructors

Instructor	Office Location	Phone	Email
TBA			

Planned Weekly Schedule

Week	Topic	ILO	Readings/ Activities
1	Introduction to research methods in sport science and management	1, 2	Lecture Discussion
2	Ethics in research	2	Lecture Discussion
3	Quantitative research designs	3	Lecture Discussion
4	Data collection in quantitative research	3	Lecture Hands-on activity

5	Data analysis in quantitative research	3	Lecture Hands-on activity
6	In-class assessment Reporting quantitative research	4	Assessment activity
7	Qualitative research design: characteristics, process, general structure	1	Lecture
Recess Week			
8	Qualitative approach to inquiry (1)	1, 2, 3	Lecture Hands-on activity
9	Qualitative approach to inquiry (2)	1, 2, 3	Lecture Hands-on activity
10	Data collection in qualitative research	1, 2, 3	Lecture Hands-on activity
11	Data analysis and representation (strategy) in qualitative research	1, 2, 3	Lecture Hands-on activity
12	Qualitative research presentation	1, 2, 3, 4	Assessment activity
13	Closure/Consolidation session	1, 2, 3, 4	

Appendix 1: Assessment Criteria for Group Presentation (25% Final Grade – marked out of 100)

	A+, A, A-	B+, B	B-, C+, C	D+, D	F
Quality of presentation (max 25)	Information provided clearly answers the question set out. Presentation is clear, and the flow is coherent and logical. Pace is appropriate.	Information mostly answers the question set. Presentation is mostly clear, and the flow is generally coherent and logical.	There are weaknesses or absences in the information provided, and the flow of the presentation is unclear at times.	Much of the information provided does not answer the question, and the flow is difficult to understand.	Little relevant information and unclear flow.
Understanding of material (max 40)	Demonstrates a very good understanding of the material. Able to answer questions in a poised and articulate manner with a high level of confidence.	Demonstrates a good understanding of the material. Able to answer most of the questions clearly and with confidence.	Demonstrates a basic understanding of the material. Able to answer some of the questions clearly but lacks confidence at times.	Demonstrates a weak understanding of the material. Has difficulty answering questions and lacks confidence.	Does not demonstrate any understanding of the material. Unable to answer questions.
Use of technology (max 10)	Uses relevant technology very well to supplement and enhance the quality of presentation.	Good use of technology to improve the presentation.	Some use of technology to help improve the presentation.	Little use of relevant technology in the presentation.	No clear use of technology in the presentation.
Communication and teamwork (max 25)	Communication is very clear and easy to understand. All members of the team make active contributions.	Communication is clear and easy to understand most of the time. Most members of the team make good contributions.	Communication is unclear at times. Varied contributions of different team members.	Communication is unclear and there and difficult to understand. Most contributions are provided by a single team member.	Communication is unclear and not possible to understand. No team member makes an active contribution.