



**Swansea University
Prifysgol Abertawe**

**FACULTY OF SCIENCE AND
ENGINEERING**

**UNDERGRADUATE STUDENT
HANDBOOK**

YEAR 3 (FHEQ LEVEL 6)

**SPORT AND EXERCISE SCIENCE
DEGREE PROGRAMMES**

**SUBJECT SPECIFIC
PART TWO OF TWO
MODULE AND COURSE STRUCTURE
2023-24**

DISCLAIMER

The Faculty of Science and Engineering has made all reasonable efforts to ensure that the information contained within this publication is accurate and up-to-date when published but can accept no responsibility for any errors or omissions.

The Faculty of Science and Engineering reserves the right to revise, alter or discontinue degree programmes or modules and to amend regulations and procedures at any time, but every effort will be made to notify interested parties.

It should be noted that not every module listed in this handbook may be available every year, and changes may be made to the details of the modules. You are advised to contact the Faculty of Science and Engineering directly if you require further information.

The 23-24 academic year begins on 25 September 2023

Full term dates can be found [here](#)

DATES OF 23-24 TERMS

25 September 2023 – 15 December 2023

8 January 2024 – 22 March 2024

15 April 2024 – 07 June 2024

SEMESTER 1

25 September 2023 – 29 January 2024

SEMESTER 2

29 January 2024 – 07 June 2024

SUMMER

10 June 2024 – 20 September 2024

IMPORTANT

Swansea University and the Faculty of Science of Engineering takes any form of **academic misconduct** very seriously. In order to maintain academic integrity and ensure that the quality of an Award from Swansea University is not diminished, it is important to ensure that all students are judged on their ability. No student should have an unfair advantage over another as a result of academic misconduct - whether this is in the form of **Plagiarism, Collusion** or **Commissioning**.

It is important that you are aware of the **guidelines** governing Academic Misconduct within the University/Faculty of Science and Engineering and the possible implications. The Faculty of Science and Engineering will not take intent into consideration and in relation to an allegation of academic misconduct - there can be no defence that the offence was committed unintentionally or accidentally.

Please ensure that you read the University webpages covering the topic – procedural guidance [here](#) and further information [here](#). You should also read the Faculty Part One handbook fully, in particular the pages that concern Academic Misconduct/Academic Integrity.

Welcome to the Faculty of Science and Engineering!

Whether you are a new or a returning student, we could not be happier to be on this journey with you.

At Swansea University and in the Faculty of Science and Engineering, we believe in working in partnership with students. We work hard to break down barriers and value the contribution of everyone.

Our goal is an inclusive community where everyone is respected, and everyone's contributions are valued. Always feel free to talk to academic, technical and administrative staff, administrators - I'm sure you will find many friendly helping hands ready to assist you. And make the most of living and working alongside your fellow students.

During your time with us, please learn, create, collaborate, and most of all – enjoy yourself!

Professor David Smith
Pro-Vice-Chancellor and Executive Dean
Faculty of Science and Engineering



Faculty of Science and Engineering	
Pro-Vice-Chancellor and Executive Dean	Professor David Smith
Director of Faculty Operations	Mrs Ruth Bunting
Associate Dean – Student Learning and Experience (SLE)	Professor Laura Roberts
School of Engineering and Applied Sciences	
Head of School	Professor Serena Margadonna
School Education Lead	Professor Simon Bott
Head of Sport and Exercise Sciences	Professor Joanne Hudson
Sport and Exercise Sciences Programme Director	Dr Nick Owen n.j.owen@swansea.ac.uk
Year 3 Coordinator	Dr Denise Hill denise.hill@swansea.ac.uk

STUDENT SUPPORT

The Faculty of Science and Engineering has two **Reception** areas - Engineering Central (Bay Campus) and Wallace 223c (Singleton Park Campus).

Standard Reception opening hours are Monday-Friday 8.30am-4pm.

The **Student Support Team** provides dedicated and professional support to all students in the Faculty of Science and Engineering. Should you require assistance, have any questions, be unsure what to do or are experiencing difficulties with your studies or in your personal life, our team can offer direct help and advice, plus signpost you to further sources of support within the University. There are lots of ways to get information and contact the team:

Email: studentsupport-scienceengineering@swansea.ac.uk (Monday–Friday, 9am–5pm)

Call: +44 (0) 1792 295514 (Monday-Friday, 10am–12pm, 2–4pm).

Zoom: By appointment. Students can email, and if appropriate we will share a link to our Zoom calendar for students to select a date/time to meet.

The current student **webpages** also contain useful information and links to other resources:

<https://myuni.swansea.ac.uk/fse/>

READING LISTS

Reading lists for each module are available on the course Canvas page and are also accessible via <http://ifindreading.swan.ac.uk/>. We've removed reading lists from the 23-24 handbooks to ensure that you have access to the most up-to-date versions.

We do not expect you to purchase textbooks, unless it is a specified key text for the course.

THE DIFFERENCE BETWEEN COMPULSORY AND CORE MODULES

Compulsory modules must be **pursued** by a student.

Core modules must not only be **pursued**, but also **passed** before a student can proceed to the next level of study or qualify for an award. Failures in core modules must be redeemed.

Further information can be found under “Modular Terminology” on the following link -

<https://myuni.swansea.ac.uk/academic-life/academic-regulations/taught-guidance/essential-info-taught-students/your-programme-explained/>

Year 3 (FHEQ Level 6) 2023/24
Sport and Exercise Science
 BSc Sport and Exercise Science[C600]
 BSc Sport and Exercise Science with a Year Abroad[C601]

Coordinator: Dr D Hill

SR-311 Sport and Exercise Sciences Research Dissertation 40 Credits Prof KA Mackintosh/Dr SM Heffernan
Total 120 Credits

Optional Modules

Choose a minimum of 20 credits

You should select exactly four module options (80 credits) in year 3. Each optional module will be taught in a single teaching block (TB1 or TB2) and you should choose a minimum of one module option (20 credits) in each teaching block. Note that you may only choose Biomechanics (SR-305) if you have studied SR-258 in Year 2; Psychology (SR-326) if you have studied SR-260 in Year 2; and Physiology (SR-334) if you have studied SR-253 in Year 2

SR-305	Sports Biomechanics	Dr NJ Owen	TB1	20
SR-333	Sport, Diet and Disease	Dr TD Love/Dr SM Heffernan/Dr RS Metcalfe/..	TB1	20
SR-367	Paediatric Exercise Science	Prof MA McNarry/Prof KA Mackintosh	TB1	20
SR-368	Sport Integrity, Ethics and Policy	Dr J Devine	TB1	20

And

Choose a minimum of 20 credits

You should select exactly four module options (80 credits) in year 3. Each optional module will be taught in a single teaching block (TB1 or TB2) and you should choose a minimum of one module option (20 credits) in each teaching block. Note that you may only choose Biomechanics (SR-305) if you have studied SR-258 in Year 2; Psychology (SR-326) if you have studied SR-260 in Year 2; and Physiology (SR-334) if you have studied SR-253 in Year 2

SR-314	Health Related Exercise	Prof G Stratton/Prof J Hudson	TB2	20
SR-326	Applied Sport Psychology	Dr D Hill	TB2	20
SR-334	Sport and Exercise Physiology	Prof RM Bracken	TB2	20

SR-305 Sports Biomechanics

Credits: 20 **Session:** 2023/24 September-January

Pre-requisite Modules: SR-258

Co-requisite Modules:

Lecturer(s): Dr NJ Owen

Format: 22 hrs lectures and 44 hours labs workshops and seminars

Contact Hours will be delivered through a blend of live activities online and on-campus, and may include, for example, lectures, seminars, practical sessions and Academic Mentoring sessions.

Delivery Method: All Programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity, with live and self-directed on-campus activities each week. Students may also have the opportunity to engage with online versions of sessions delivered on-campus

Lecture, seminar, practical, directed independent study.

Lab 1 Basic controls of the force platform

Lab 2 Use of the force platform for muscle function tests 1

Lab 3 Use of the force platform for muscle function tests 2

Lab 4 Comparison of estimates of power measurement

Module Aims: The purpose of the module is to develop competence in biomechanical analysis of human movement and its application to sporting situations. The module builds upon the concepts, principles and methods established in the level 1 module SR-142, SR-146 and the level 2 module SR-254.

Module Content: • Non-uniformly accelerated motion in biomechanics.

- External forces acting on the human body as a projectile.
- Use of force platforms in muscle function tests.
- Limitation of regression models when applied to power estimation.
- Forward and inverse dynamics approaches to quantitative human motion analysis.
- Skeletal muscle mechanics.

Intended Learning Outcomes: At the end of the module the learner is expected to be able to:

1. Analyse muscle function with the use of a force platform
2. Apply the forward and inverse dynamics approaches to quantitative analysis of human movement particularly neuromuscular function testing.
3. Collect and report 2-D kinematic and kinetic analyses of human performance in athletic activity using a force platform.
4. Describe and analyse the stretch-shorten cycle in skeletal muscle function.
5. Determine joint contact forces in 2-D simplified joint systems

Assessment: Examination 1 (70%)
Class Test 1 - Practical Assessment Not Exam Cond (10%)
Class Test 2 - Practical Assessment Not Exam Cond (10%)
Class Test 3 - Practical Assessment Not Exam Cond (10%)

Resit Assessment: Examination (Resit instrument) (100%)

Assessment Description: The module is assessed via lab quizzes (coursework 1) (timed online assessments) during semester 2 (3 x 10% of total mark) and a timed online assessment examination (or traditional exam) at the end of Semester 2 (70% of total mark).

Moderation approach to main assessment: Moderation by sampling of the cohort

Assessment Feedback: Feedback will be received during scheduled feedback sessions within 3 weeks of the end of an assignment. Written feedback will be provided on Canvas for examinations.

Failure Redemption: In line with University regulations, supplementary examinations are not awarded at final year.

Reading List: James Watkins 1946-, Fundamental biomechanics of sport and exercise / James Watkins., New York Routledge, 2014. ISBN: 9780415815086

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus.

The Faculty of Science and Engineering has a ZERO TOLERANCE penalty policy for late submission of all coursework and continuous assessment.

Lecture and lab notes for this module can be found on Canvas.

Not available to visiting and exchange students

SR-258 is pre-requisite for SR-305

SR-311 Sport and Exercise Sciences Research Dissertation

Credits: 40 Session: 2023/24 September-June

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Prof KA Mackintosh, Dr SM Heffernan

Format: Lectures: 13 Hours
Directed private study (incl. meetings with supervisors: 387 Hours)

Contact Hours will be delivered through a blend of lectures and workshops, as well as Academic Mentoring sessions.

Delivery Method: All Programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity (dependent on timetabling). Students may also have the opportunity to engage with online versions of sessions delivered on-campus.

This module, specifically, largely consists of independent programmes of research conducted by the student under the supervision of an academic member of staff. Each student will be required to attend a number of supervision sessions and in addition will be expected to meet their supervisor as determined by their individual needs.

In addition to independent work, the module includes a number of lectures that focus on supporting students to develop the skills and understanding to develop research questions, proposals, presentations and research papers.

Module Aims: The module involves the application of scientific principles to the solution of a practical or theoretical problem associated with Sport and Exercise Sciences that is presented in the form of a final research paper. The student will gain experience in working independently on a substantial, individual project, using accepted planning and ethical procedures. This process will require and develop self-organisation and the critical evaluation of options and results, as well as developing technical and academic knowledge in the chosen topic.

Module Content: - The nature of the research project varies from one student to another. The allotted project may involve a review of the literature, theoretical or experimental studies or computational studies. The academic staff of the School of Sport and Exercise Sciences will produce a list of project descriptors and students will be given a chance to select a project, or, pursue an agreed self-defined project with a named supervisor.

- Each student will be provided with an individual project and a supervisor. It is recommended that students meet their supervisors regularly to discuss progress.
- Briefings on ethical applications, project management, research techniques, record keeping, paper preparation and presentation skills will be given. Precise deadlines, submission formats and instructions will be disseminated via the Canvas web site.
- A Research Proposal will be prepared by the student to be presented mid November.
- An ethical application will usually be required by mid October but this is not assessed.
- A final paper must be submitted in May.
- Each student will prepare and deliver an oral presentation and undertake a viva at the end of the project period to two members of academic staff.

Intended Learning Outcomes: After completing this module you should be able to:

- Propose the development of a research question in some depth, largely on your own initiative, and carry out research to address this question
- Reflect on developments and progress in relation to a planned project schedule
- Compose oral presentations on project progress and the results obtained and defend the research against critical appraisal
- Write a journal style paper on the project work

Transferable skills:

You will have assessed your own verbal, numerical and abstract reasoning skills. You will have developed personal reflection skills, research skills, time and project management, risk assessment and safe working, and your communication skills.

Assessment: Oral Examination (10%)
Coursework 1 (50%)
Coursework 2 (10%)
Viva (15%)
Oral Presentation (15%)

Resit Assessment: Coursework reassessment instrument (100%)

Assessment Description: Research Proposal = 10% (Oral Examination)
Write-Up (paper) = 50% (Coursework 1)
Process Engagement and Independence = 10% (Coursework 2)
Oral Presentation (15%)
Viva (15%)

Moderation approach to main assessment: Universal Non-Blind Double Marking of the whole cohort

Assessment Feedback: Oral and written feedback through regular meetings with a supervisor, as well as via Turnitin/Canvas Gradecentre following formal assessment components.

Failure Redemption: There is no failure redemption for this module. Failure in this module would normally result in an exit qualification due to insufficient credits having been attained.

Reading List: Field, Andy P; Field, Andy P, Discovering statistics using IBM SPSS statistics / Andy Field., Sage Publications, 2018.ISBN: 9781526419521
Judith Bell 1929-2015, author., Stephen Waters (Educator), author., Doing your research project : a guide for first-time researchers / Judith Bell and Stephen Waters., London : Open University Press, McGraw-Hill Education, 2018.ISBN: 033524338X
James E. Mauch 1930- author., Namgi Park author., Guide to the successful thesis and dissertation : a handbook for students and faculty / James E. Mauch, Namgi Park., New York, NY : Marcel Dekker, Inc., 2003.ISBN: 9780824742881
Jones, Ian, 1970- author., Research Methods for Sports Studies, Routledge, 2022.ISBN: 1000540243
Thomas, J., Research Methods in Physical Activity, Human Kinetics, 2022.ISBN: 978-1718201026
Thomas, Jerry R.; Nelson, Jack K.; Silverman, Stephen J., Research methods in physical activity / Jerry R. Thomas, Jack K. Nelson, Stephen J. Silverman., 2015.ISBN: 9781450470445

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus.

Only available to students following the Sport and Exercise Sciences Degree Programme.

The compulsory submissions are a research proposal presentation, a risk assessment, an ethical approval application (where necessary) and a research paper. In addition, the student must attend an oral presentation at which the dissertation results will be presented and the questions will be posed by assessors.

The Faculty of Science and Engineering ZERO TOLERANCE penalty policy for late submission of coursework and continuous assessment will apply to all assessment elements apart from the final paper submission, final oral presentation and viva. Any late submissions on the final paper (not covered by extenuating circumstances) will be capped at 40%. Any late submissions on the final oral presentation (not covered by extenuating circumstances) will be capped at 40%. If a student fails to attend their scheduled Viva (not covered by extenuating circumstances) rescheduling may be permitted but the defence component will be capped at 40%.

Not available to visiting and exchange students.

SR-314 Health Related Exercise

Credits: 20 Session: 2023/24 January-June

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Prof G Stratton, Prof J Hudson

Format: 6 hours lectures
14 hours workshops
10 hours blended learning
6 hours field work
8 hours group work
Contact Hours will be delivered through a blend of live activities online and on-campus, and may include, for example, lectures, seminars, practical sessions and Academic Mentoring sessions.

Delivery Method: All Programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity, with live and self-directed on-campus activities each week. Students may also have the opportunity to engage with online versions of sessions delivered on-campus

Practical and Lecture Based:

6 hours lectures
14 hours workshops
10 hours blended learning
6 hours field work
8 hours group work

There are 4 areas where you will develop your practical and professional experience:

1. Working with adults to assess their physical activity, fitness and health.
2. To experience what life is like as an older person you will take part in Virtual Reality workshops to sensitise you to specific concepts and factors related to ageing and physical activity.
3. There will be 2 laboratory workshops where you will learn about laboratory measures related to musculoskeletal health and cardiovascular disease.
4. Field visits that include older people, adults and their experiences, lifestyles and behaviours using a blend of public health methodologies.

From the start of the module you will work in "expert groups." Each expert group will nominate a leader who will coordinate activity within the group. Expert groups will present their work once as a group.

Subsequently student will produce one individual written assignment.

Module Aims: Physical inactivity and sedentary time create a significant burden on global health. The science that underpins the relationship between physical activity and health has grown considerably over the past 10 years. The World Health Organisation ranks physical inactivity as the 4th largest non-communicable disease related to early death, one place above obesity and the interdisciplinary science in psychology, physiology, biomechanics fuse together in this module. You will work with adults and older people to better understand the factors affecting health, fitness, quality of life and wellbeing and will use public health and field science approaches in workshops and practical to complement your traditional laboratory skillset. The module uses summary science such as systematic reviews, meta-syntheses and meta-analyses to study what works to improve physical activity health and wellbeing in the population. You will be expected to understand case studies and how exercise may affect health and wellbeing and will work on your own and in a group to demonstrate your knowledge both verbally and in writing. Be prepared to recruit friends and family as case studies to complete practical activity and assessment included in the module. Students wishing to work in the health and fitness industry, public health, health promotion, allied health professions, teaching or clinical areas would most benefit from participation in the module.

<p>Module Content: 1) Physical activity, fitness and sedentary behaviour in adults and older adults 2) Mental health and wellbeing related to psychological health in adults older people 3) Principles of behaviour change 4) Musculoskeletal health 5) Metabolic Health 6) Qualitative and quantitative data analysis 7) Using summary science including systematic reviews, meta-analyses and meta-syntheses</p>	
<p>Intended Learning Outcomes: At the end of this module the learner is expected to be able to:</p> <ol style="list-style-type: none"> 1. Use current systematic reviews, meta analyses and meta syntheses to critically analyse the effectiveness of physical activity promotion programmes. 2. Use systematic reviews, meta-analyses and meta syntheses to interpret exercise benefits in at risk groups. 3. Appraise the risks and benefits associated with regular exercise and physical activity. 4. Analyse the acute and chronic physical and psychological benefits associated with exercise and physical activity. 5. Assess current physical activity and fitness status and critically apply the appropriate guidelines for physical activity programmes. 6. Work individually and as a group when seeking solutions to academic and real problems in promoting physical activity, health and wellbeing. 7. Develop a critical appreciation of laboratory and field approaches appropriate for use in public health and exercise science. 8. Integrate evidence from different scientific disciplines in the context of adults and older adults physical activity, health and wellbeing. 	
<p>Assessment:</p>	<p>Group Work - Presentation (40%) Coursework 2 (60%)</p>
<p>Resit Assessment:</p>	<p>Coursework reassessment instrument (100%)</p>
<p>Assessment Description: Group Work Presentation - 40% (to be recorded via zoom) Coursework 2 - 60%</p>	
<p>Moderation approach to main assessment: Moderation by sampling of the cohort</p>	
<p>Assessment Feedback: Students will received formal feedback on all pieces of assessed work. This will be verbal and written as appropriate to the assessment. Feedback will be given as a group for group presentations and individually for written pieces.</p> <p>There will be numerous possibilities for students to gain informal feedback across the module as a whole these include, but are not limited to:</p> <ul style="list-style-type: none"> E-mail. Peer feedback in expert groups. Office drop in sessions Asking questions during lectures Informal discussion and seeking advice during workshops or field work 	
<p>Failure Redemption: In line with University regulations, supplementary examinations are not awarded at final year.</p>	

Reading List: Nick Draper (Nicholas), editor.; Gareth Stratton 1960- editor., Physical activity : a multi-disciplinary introduction / edited by Nick Draper and Gareth Stratton., Abingdon, Oxon : Routledge is an imprint of the Taylor & Francis Group, an informa business, 2019.ISBN: 9781138696617
Wojtek J. Chodzko-Zajko editor.; Arthur F. Kramer editor.; Leonard W. Poon 1942- editor., Enhancing cognitive functioning and brain plasticity / Wojtek Chodzko-Zajko, Arthur F. Kramer, Leonard W. Poon, editors., Champaign, IL : Human Kinetics, 2009.ISBN: 9781492573586
Aleta L. Meyer editor.; Thomas P. Gullotta 1948- editor., Physical activity across the lifespan : prevention and treatment for health and well-being / edited by Aleta L. Meyer, Thomas P. Gullotta., New York : Springer, 2012.ISBN: 9781461436065
Claude Bouchard; Steven N Blair; William L Haskell, Physical activity and health / edited by Claude Bouchard, Steven N. Blair and William L. Haskell., Human Kinetics, 2012.ISBN: 9780736095419
Welk, Greg., Physical activity assessments for health-related research / Gregory J. Welk, editor., Human Kinetics., c2002..ISBN: 0736037489
ACSM's Guidelines for Exercise Testing and Prescription, 2017.ISBN: 978-1496339072
Pescatello, Linda S; American College of Sports Medicine, ACSM's guidelines for exercise testing and prescription / American College of Sports Medicine ; senior editor, Linda S. Pescatello ; associate editors, Ross Arena, Deborah Riebe, Paul D. Thompson., Wolters Kluwer/Lippincott Williams & Wilkins Health, 2014.ISBN: 9781609139551
Trost, Stewart G, Objective measurement of physical activity in youth: Current issues, future directions, United States, 2001.ISBN: 00916331
Hardman, Adrienne E., 1944- author., Stensel, David J., 1964- author.; Gill, Jason, author., Physical activity and health : the evidence explained, Routledge, 2022.ISBN: 9780415632959

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus.

PENALTY: ZERO TOLERANCE FOR LATE SUBMISSION

SR-326 Applied Sport Psychology

Credits: 20 **Session:** 2023/24 January-June

Pre-requisite Modules: SR-260

Co-requisite Modules:

Lecturer(s): Dr D Hill

Format: 22 hours of lectures
15 hours laboratory-based sessions
15 hours of practical

Delivery Method: The module will employ a blended approach to delivery using the Canvas Digital Learning Platform for self-directed activity. In person and self-directed on-campus activities will take place each week within seminar groups and lab-based work.

Lecture based

Practical

Module Aims: The module will enable students to apply sport psychology theory into practice by examining a range of issues that confront the applied sport psychologist in modern practice. Students will consider how to work as a practitioner psychologist at the individual, team and organisational level, to create thriving sporting environments. The module will build on the fundamental material from levels 1 and 2.

Module Content: Professional and ethical boundaries of applied sport psychology
Models of service delivery in applied practice.
Providing evidence-based and theoretically informed psychological support for clients
Understanding how to work as a practitioner psychologist at the individual, team and organisational level
Co-creating a high-performance thriving sporting environment.

Intended Learning Outcomes: At the end of the module the learner is expected to be able to:

1. Identify an applied issue with a client (e.g. athlete/coach/organisation) and provide a solutions
2. Apply psychological principles to address client's needs
3. Utilise knowledge of underpinning theory and research to make applicable recommendations for practice.
4. Apply models of service delivery within a sport psychology practice framework.
5. Understand the factors that contribute to providing psychological support to clients
6. Consider how to engender thriving sporting environments.

Assessment: Examination 1 (60%)
Coursework 1 (40%)

Assessment Description: Assessment Point 1:

2000 word Case Study (40%).

Based on an appropriate issue covered in the module, students are asked to complete a philosophically-driven, and theoretically informed needs analysis with an athlete. There on in, the student must devise a suitable, evidence-based intervention that addresses the athlete's needs.

Assessment Point 2:

Exam (60%)

Students will be asked to provide a theoretically informed, evidence-based intervention for two case studies. One of the cases will be at the team level, with the other will require the student to work at the organisational level.

Moderation approach to main assessment: Moderation by sampling of the cohort

Assessment Feedback: Feedback is provided in the following format to students:

- 1) A lecture session dedicated to module feedback covering general points on the exam/coursework performance of the class.
- 2) Summary powerpoint slides of the feedback session are placed on Canvas.
- 3) A summary of the class mark breakdown for coursework/exams with additional comments is available on the engineering intranet site for students to access.
- 4) All students receive a coursework feedback sheet with marks for each of the assessment criteria together with qualitative comments specific to the assessment criteria.
- 5) Follow-up one to one tutorial sessions are offered for students to further discuss their module performance with the module convener.

Failure Redemption: In line with University regulations, supplementary examinations are not awarded at final year.

Reading List: Stephanie J. Hanrahan 1961-; Mark B. Andersen 1951-, Routledge handbook of applied sport psychology : a comprehensive guide for students and practitioners / edited by Stephanie Hanrahan and Mark Andersen., Routledge is an imprint of the Taylor & Francis Group, an informa business, 2012.ISBN: 9780203851043

Stewart Cotterill author., Team psychology in sports : theory and practice / by Stewart Cotterill., Abingdon, Oxon : Routledge is an imprint of the Taylor & Francis Group, an informa business, 2012.ISBN: 9780203131428

Nicholas T. Gallucci author., Sport psychology : performance enhancement, performance inhibition, individuals, and teams / Nicholas T. Gallucci., New York : Psychology Press, Taylor & Francis Group, 2014.ISBN: 9781315885094

David Tod editor.; Martin Eubank editor.; Routledge (Firm), Applied sport, exercise, and performance psychology : current approaches to helping clients / edited by David Tod and Martin Eubank., Abingdon, Oxon : Routledge is an imprint of the Taylor & Francis Group, an informa business, 2020.ISBN: 9780429503702

Williams, Jean M. (Jean Marie); Krane, Vikki, Applied sport psychology : personal growth to peak performance / edited by Jean M. Williams and Vikki Krane., 2014.ISBN: 9789814577496

Brian John Hemmings editor.; Timothy Peter Holder editor., Applied sport psychology : a case-based approach / editors, Brian Hemmings and Tim Holder., Chichester, UK : John Wiley & Sons Ltd, 2009.ISBN: 9780470725733

Stephen D Mellalieu (Stephen David), editor.; Sheldon Hanton, Advances in applied sport psychology : a review / edited by Stephen Mellalieu and Sheldon Hanton., Abingdon, Oxon : Routledge is an imprint of the Taylor & Francis Group, an informa business, 2009.ISBN: 9780415447638

Hanton, Sheldon.; Mellalieu, Stephen., Professional practice in sport psychology : a review/ edited by Sheldon Hanton and Stephen Mellalieu., Routledge, 2013.ISBN: 9780415858328

Weinberg, Robert S. (Robert Stephen), author., Gould, Daniel, 1952- author., Foundations of sport and exercise psychology, Human Kinetics, 2023 - 2024.ISBN: 9781718207592

Robert S. Weinberg (Robert Stephen) author., Daniel Gould 1952- author., Foundations of sport and exercise psychology / Robert S. Weinberg, Daniel Gould., Champaign, IL : Human Kinetics, 2019.ISBN: 9781492561149

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities and on-campus.

The Faculty of Science and Engineering has a ZERO TOLERANCE penalty policy for late submission of all coursework and continuous assessment

Notes, worked examples and past papers for this module can be found on Canvas

Not available to visiting and exchange students

SR-333 Sport, Diet and Disease

Credits: 20 Session: 2023/24 September-January

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr TD Love, Dr SM Heffernan, Dr RS Metcalfe

Format: Contact hours will be delivered through a blend of lectures, PC workshops and interactive seminars. This equates to approximately the following:

Lecture (11 x 2h)

Labs/PC Workshops/Seminars (11 x 2-3h)

Delivery Method: All Programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity, with live and self-directed on-campus activities each week. Students may also have the opportunity to engage with online versions of sessions delivered on-campus

Lecture, practical and workshop based.

Module Aims: The module will explore the major nutrients of concern in maintaining health and performance in athletes, and the nutrition and related issues surrounding selected diseases.

Module Content: 1. Fluid & Electrolyte Balance

2. Role of macronutrients before, during and after exercise

3. Nutritional Supplementation

4. Bone/Joint Health

5. Sarcopenia

6. Cardiovascular disease

7. Diabetes

8. Obesity

Intended Learning Outcomes: By the end of the module students will be expected to be able to:

1. To discuss the mechanisms underpinning nutrition strategies for health and performance

2. To critically appraise nutrition strategies

3. To analyse the nutrient content of a diet

4. To interpret the appropriateness of a diet

5. To evaluate the effect of nutrient intake on health and performance

6. To synthesise clear evidence-based practical advice

Assessment:

- Coursework 1 (2%)
- Coursework 2 (2%)
- Coursework 3 (2%)
- Coursework 4 (2%)
- Coursework 5 (2%)
- Coursework 6 (2%)
- Coursework 7 (2%)
- Coursework 8 (2%)
- Coursework 9 (2%)
- Coursework 10 (2%)
- Assignment 1 (50%)
- Assignment 2 (30%)

Assessment Description: The case study assignment will involve an initial evaluation of a sports participant's diet and relevant issues, followed by the recommendations made by the candidate to improve the person's dietary situation, justified with reference to current literature and guidance. A written report is submitted following the assignment guidance given to the student at the start of the module. This is an individual piece of work".

The critical appraisal assignment will require students to Write a concise critical review of a provided research article related to nutrition and one chronic disease (eg obesity, cardiovascular disease, type II diabetes)

Moderation approach to main assessment: Moderation by sampling of the cohort

Assessment Feedback: Individual written and/or verbal feedback will be provided alongside the marking scheme used to assess the coursework. General feedback on the examination can be made available to students electronically.

Failure Redemption: In line with University regulations, supplementary examinations are not awarded at final year.

Reading List: Lanham-New, S. (Susan), editor.; Stear, Samantha J., editor.; Shirreffs, Susan M., editor.; Collins, Adam L., editor.; Budgett, Richard, author of forward.; Nutrition Society (Great Britain), Sport and exercise nutrition, Wiley Blackwell is an imprint of John Wiley & Sons, 2011 - 2011.ISBN: 9781444334685
Burke, Louise, 1959- editor.; Deakin, Vicki, editor.; Minehan, Michelle, editor., Clinical sports nutrition, McGraw-Hill Education/Australia, 2021.ISBN: 9781760425647
Burke, Louise, 1959- editor.; Deakin, Vicki, editor.; Minehan, Michelle, editor., Clinical sports nutrition, McGraw-Hill Education/Australia, 2021 - 2021.ISBN: 9781760425647
Burke, Louise, 1959-, Deakin, Vicki., Clinical sports nutrition, McGraw-Hill, 2006.ISBN: 0074716026
Burke, Louise, 1959- editor.; Deakin, Vicki, editor.; Minehan, Michelle, editor., Clinical sports nutrition, McGraw-Hill Education/Australia, 2021 - 2021.ISBN: 9781760425647
Burke, Louise, 1959-, Deakin, Vicki., Clinical sports nutrition, McGraw-Hill, 2006.ISBN: 0074716026
Mann, Jim, editor.; Truswell, A. Stewart, editor.; Hodson, Leanne, editor., Essentials of human nutrition., Oxford University Press, 2023.ISBN: 9780198866671
National Institute for Health & Care Excellence.
Department of Health & Social Care.

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus.

The Faculty of Science and Engineering has a ZERO TOLERANCE policy for late submission of coursework, meaning that a mark of zero will be recorded in such cases.

SR-334 Sport and Exercise Physiology

Credits: 20 **Session:** 2023/24 January-June

Pre-requisite Modules: SR-253

Co-requisite Modules:

Lecturer(s): Prof RM Bracken

Format: 12 x 2 h Lectures
9 x 4 h Practicals

Contact Hours will be delivered through a blend of live activities online and on-campus, and may include, for example, lectures, seminars, practical sessions and Academic Mentoring sessions.

Delivery Method: All Programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity, with live and self-directed on-campus activities each week. Students may also have the opportunity to engage with online versions of sessions delivered on-campus

Campus lecture theatres and laboratories

Module Aims: The primary aims of the module are to provide a strong theoretical and practical background in the use of current lab and field-based physiological tests used by sports and exercise physiologists in the areas of (i) endurance (ii) sprinting (iii) team sports (iv) strength events. A secondary aim of this module is to explore the impact of alterations in human body thermoregulation on the above mentioned types of exercise.

Module Content: 1. Physiology and biochemistry of endurance exercise
2. Physiology and biochemistry of sprint exercise
3. Physiology and biochemistry of games exercise
4. Physiology and biochemistry of strength exercise
5. Metabolic and physiological perturbations due to alterations in body temperature
6. Laboratories relevant to 1 - 5 (above).

Intended Learning Outcomes: By the end of this module students will be able to:

1. Demonstrate a critical understanding of the research literature of energy metabolism and the physiological changes pertinent to a variety of sports (assessed by written exam)
2. Apply the research literature to the exploration of the human responses to different exercise test conditions (assessed by laboratory practicals and laboratory report)
3. Critically evaluate the use of laboratory and field-based physiological tests to the improvement of the athlete's training plan (assessed using interactive practicals)

Assessment: Examination 1 (50%)
Laboratory work (50%)

Assessment Description: In-person examination: written exam (3-hours) on theoretical content covered in Semester 1

Laboratory Practical Report: assessment based on data collected from practical and written into a 2000-word report

Moderation approach to main assessment: Moderation by sampling of the cohort

Assessment Feedback: Students will receive feedback on Exam within the scheduled feedback weeks following the Examination period.

Laboratory report feedback will be available 3 weeks following the submission deadline.

Failure Redemption: In line with University regulations, supplementary examinations are not awarded at final year.

Reading List: Tiidus, Peter M., Tupling, A. Russell,, Houston, Michael E., Houston, Michael E.,, Biochemistry primer for exercise science / Peter M. Tiidus, A. Russell Tupling, Michael E. Houston., Human Kinetics,, 2012.ISBN: 9780736096058
Maughan, Ron J., Gleeson, Michael,, Greenhaff, Paul., Biochemistry of exercise and training / Ronald Maughan, Michael Gleeson and Paul Greenhaff., Oxford University Press,, 1997.ISBN: 978019262414
Maughan, Ron J.; Gleeson, Michael, The biochemical basis of sports performance / Ron Maughan, Michael Gleeson., Oxford University Press, 2010.ISBN: 9780199208289
Frayn, K. N., Metabolic regulation: A human perspective, Wiley-Blackwell, 2019.ISBN: 978-1119331438
Frayn, K. N. (Keith N.), Metabolic regulation a human perspective / Keith N. Frayn., Blackwell, 2010.ISBN: 1-118-68533-4
Frayn, K. N., Metabolic regulation : a human perspective / Keith N. Frayn., Blackwell,, c2003..ISBN: 063206384X
Reilly, Thomas,, Waterhouse, J. M.,, Sport, exercise, and environmental physiology / Thomas Reilly and Jim Waterhouse ; foreword by Richard Budgett., Elsevier Churchill Livingstone,, 2005.ISBN: 9780443073588
Spurway, Neil., Genetics and molecular biology of muscle adaptation., Elsevier Churchill Lvgst., 2006.ISBN: 0443100772

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus.

PENALTY: Faculty of Science and Engineering has a ZERO TOLERANCE penalty policy for late submission of all coursework and continuous assessment

SR-367 Paediatric Exercise Science

Credits: 20 Session: 2023/24 September-January

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Prof MA Mcnarry, Prof KA Mackintosh

Format: 11 1-hour lectures
10 2-hour labs/workshops

Delivery Method: The module will be delivered in person only. Lectures will be recorded and made available afterwards but are not a substitute for the in-person lecture. The workshops will not be recorded and attendance is compulsory. .

Module Aims: This module will explore the central tenet that children are not mini-adults and that we can't simply assume their response to exercise and training is a scaled down version of that observed in adults. Indeed, youth are a unique group in which we must distinguish effects of external stimuli such as training from the simultaneous effects of growth and maturation. As we continue to face the global obesity and physical inactivity epidemic, understanding the physiological, psychological and behavioural underpinnings that determine sports performance and participation and physical activity is of ever greater importance.

This module will provide an in depth insight into our current understanding of these issues in healthy children and those with chronic disease.

This module concentrates on the paediatric population and requires a good prior understanding of anatomy and physiology to facilitate the discussions at this level. To explore the unique context of paediatric responses to exercise and how we assess their physical activity levels, the workshops will predominantly involve data analysis tasks in Excel and SPSS.

Module Content: 1) Biological maturation: Characteristics of normal biological maturation during childhood. Morphological, sexual and skeletal manifestations of maturations. Factors that influence normal biological development.

2) Dimensionality and scaling: The problem of size. Longitudinal comparisons with normative data. Ratio standard. Dimensionality theory. Scaling using allometric equations. Regression standards.

3) Influence of training during childhood and adolescence

4) Physical activity and sports participation patterns, youth drop-out rate and overtraining

5) Exercise and physical activity in the clinical context

6) Early years PA, fundamental movement skills and physical literacy

7) Exercise and physical activity for cognitive function

Intended Learning Outcomes: At the end of the module the learner is expected to be able to:

1. Critically discuss the process of growth and maturation and it's interaction with exercise training and physiological responses
2. Discuss and analyse the changes in physical activity and sports participation across childhood and their determinants and correlates
3. Critically consider the issues surrounding clinical conditions in youth and their influence on exercise, growth and development.
4. Explain the concept that children are not mini-adults

Assessment: Oral Examination (40%)
Examination 1 (60%)

Assessment Description: There will be one coursework assignment involving an oral presentation and subsequent question and answer session. The presentation will be 5 minutes and Q&A 3 minutes.

The presentation will be based on the data analysis techniques learnt in the workshops and their application to real data provided. The assessment will test the student's ability to accurately and appropriately analyse data having identified a relevant research question and to interpret those findings, applying them to the real world in terms of their application and implications.

There will also be an exam with a choice of 5 essay questions from which the students must choose 3 questions to answer.

Moderation approach to main assessment: Moderation of the entire cohort as Check or Audit
Assessment Feedback: Individual feedback will be provided alongside the marking scheme used to assess the coursework. General feedback on the examination will be made available to students electronically.
Failure Redemption: In line with University regulations, supplementary examinations are not awarded at final year.
Reading List: Neil Armstrong editor.; Willem Van Mechelen editor., Oxford textbook of children's sport and exercise medicine / edited by Neil Armstrong and Willem van Mechelen., Oxford : Oxford University Press, 2017.ISBN: 9780198757672 Neil Armstrong; British Association of Sport and Exercise Sciences., Paediatric exercise physiology / edited by Neil Armstrong ; foreword by N.C. Craig Sharp., Churchill Livingstone, 2007.ISBN: 0443102600 David R. Brown author.; Gregory Heath author.; Sarah Levin Martin author.;; Promoting physical activity : a guide for community action / David R. Brown, Gregory W. Heath, and Sarah Levin Martin, editors, Human Kinetics, 2010.ISBN: 9781450488792 Timothy A. Brusseau Jr. editor.; Stuart J. Fairclough editor.; David R. Lubans editor., The Routledge handbook of youth physical activity / edited by Timothy A. Brusseau, Stuart J. Fairclough, and David R. Lubans., New York, NY : Routledge, 2020.ISBN: 9781003026426 Rowland, Thomas W., Developmental exercise physiology / Thomas W. Rowland., Human Kinetics,, c1996..ISBN: 0873226402
Additional Notes: Please note that an understanding of physiology and physical activity assessments. Whilst not a prerequisite, it would be advised that students have completed SR-253 and SR-256 prior to this module. Competency with Excel and SPSS are also required for this module.

SR-368 Sport Integrity, Ethics and Policy

Credits: 20 Session: 2023/24 September-January

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr J Devine

Format: 11 x 2 hour lectures plus
Tutorial, Case study and Small Group sessions
Contact Hours will be delivered through a blend of live activities online and on-campus, and may include, for example, lectures, seminars, practical sessions and Academic Mentoring sessions.

Delivery Method: All programmes will employ a blended approach to delivery using the Canvas Digital Learning Platform for live and self-directed online activity, with live and self-directed on-campus activities each week.

Module Aims: This module examines the role of ethics in assessing the rationality of practice, policy, and governance in sport. The module will help students to develop a deeper understanding of the ethical dimensions of practical decision making in sport and the philosophical foundations that underlie these ethical debates. Students will come to appreciate the significance of ethics in various sporting contexts, and they will develop their understanding of what constitutes a rationally defensible ethical approach to sport.

Module Content: 1. The nature of ethical argument.
2. Normative theories of sport: a. Formalism; b. Conventionalism; c. Broad internalism.
3. Ethical theories: a. Virtue ethics; b. Consequentialism; c. Deontology.
4. The application of ethical theories to moral problems in sport. Such problems might include topics such as: a. Violence and Sport; b. Enhancement and Sport; c. Gender, Eligibility, and Sport, d. Sportsmanship; e. Cheating and Sport; and f. Competition integrity.

Intended Learning Outcomes: By the end of this module, students will be expected to have achieved sufficient knowledge and expertise to:

1. Demonstrate a critical understanding of the nature of sport as an ethical practice;
2. Demonstrate a critical understanding of normative theories of sport;
3. Demonstrate a critical understanding of relevant moral theories;
4. Identify and outline moral problems in sports ethics and apply relevant philosophical literature, theories, and arguments to those problems; and
5. Critically evaluate relevant philosophical literature, theories, and arguments, when applied to problems in sports ethics, and in light of other theoretical approaches to sports ethics.

Assessment: Coursework 1 (25%)
Coursework 2 (75%)

Assessment Description: Coursework 1: 25% of the module mark – Short essay, critical notice, presentation, podcast, 'policy' document, or blog post (to vary year on year).
Coursework 2: 75% of the module mark – Essay or examination (the assessment will address a practical ethical problem or practical ethical problems that arise in sport).

Moderation approach to main assessment: Moderation by sampling of the cohort

Assessment Feedback: Individual written feedback on submitted coursework.

Failure Redemption: In line with University regulations, supplementary examinations are not awarded at final year.

Reading List: William J. Morgan 1948- author., Sport and moral conflict : a conventionalist theory / William J. Morgan., Philadelphia : Temple University Press, 2020.ISBN: 9781439915417
Harvey, Andy, editor.; McNamee, M. J. (Mike J.), editor., Sport Integrity : ethics, policy and practice, Routledge is an imprint of the Taylor & Francis Group, an informa business, 2020 - 2020.ISBN: 036789517X
Fausto-Sterling, Anne, 1944- author., Sexing the body : gender politics and the construction of sexuality, Basic Books, 2020 - 2020.ISBN: 9781541672895
Ordway, Catherine, editor., Restoring trust in sport : corruption cases and solutions, Routledge, 2021.ISBN: 9781000375565
Huggins, Mike, editor.; Hess, Rob, editor., Match fixing and sport : historical perspectives, Routledge is an imprint of the Taylor & Francis Group, an informa business, 2019.ISBN: 9780367368821
Morgan, William J., 1948- author., Leftist theories of sport : a critique and reconstruction, University of Illinois Press, 1994.ISBN: 0252020685
Faye, Shon, 1988- author., The transgender issue : an argument for justice, Allen Lane, 2021.ISBN: 9780241423141

Additional Notes: Delivery of both teaching and assessment will be blended including live and self-directed activities online and on-campus.

On-campus lectures will not be recorded, but recorded lecture summaries may be made available following lectures.