



Swansea University
Prifysgol Abertawe

**FACULTY OF SCIENCE AND
ENGINEERING**

**UNDERGRADUATE STUDENT
HANDBOOK**

YEAR 3 (FHEQ LEVEL 6)

**MATHEMATICS AND SPORTS
SCIENCE
DEGREE PROGRAMMES**

**SUBJECT SPECIFIC
PART TWO OF TWO
MODULE AND COURSE STRUCTURE
2022-23**

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 22-23 academic year begins on 26 September 2022

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

DATES OF 22-23 TERMS

26 September 2022 – 16 December 2022

9 January 2023 – 31 March 2023

24 April 2023 – 09 June 2023

SEMESTER 1

26 September 2022 – 27 January 2023

SEMESTER 2

30 January 2023 – 09 June 2023

SUMMER

12 June 2023 – 22 September 2023

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. You should also refer to the Faculty of Science and Engineering proof-reading policy and this can be found on the Community HUB on Canvas, under Course Documents.

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.

This has been a challenging period for everyone. The COVID-19 pandemic has prompted a huge change in society as well as how we deliver our programmes at Swansea University and the way in which you study, research, learn and collaborate. We have been working hard to make sure you will have or continue to having an excellent experience with us.

We have further developed some exciting new approaches that I know you will enjoy, both on campus and online, and we cannot wait to share these with you.

At Swansea University and in the Faculty of Science & 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 staff, administrators, and your fellow students - I'm sure you will find many friendly helping hands ready to assist you.

We all know this period of change will continue and we will need to adapt and innovate to continue to be supportive and successful. At Swansea we are committed to making sure our students are fully involved in and informed about our response to challenges.

In the meantime, learn, create, collaborate, and most of all – enjoy yourself!

Professor Johann (Hans) Sienz
Interim Pro-Vice Chancellor/Interim Executive Dean
Faculty of Science and Engineering



Faculty of Science and Engineering	
Interim Pro-Vice Chancellor/Interim Executive Dean	Professor Johann Sienz
Head of Operations	Mrs Ruth Bunting
Associate Dean – Student Learning and Experience (SLE)	Professor Paul Holland
School of Mathematics and Computer Science	
Head of School: Professor Elaine Crooks	
School Education Lead	Dr Neal Harman
Head of Mathematics	Professor Vitaly Moroz
Mathematics Programme Director	Dr Kristian Evans
Year Coordinators	Year 0 – Dr Zeev Sobol Year 1 – Dr Noemi Picco Year 2 – Professor Jiang-Lun Wu Year 3 – Dr Grigory Garkusha Year 4/MSc – Professor Chenggui Yuan

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 9am-5pm.

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 and 01792 6062522 (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/coe-student-info/>

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 22-23 handbooks to ensure that you have access to the most up-to-date versions. Access to print material in the library may be limited due to CV-19; your reading lists will link to on-line material whenever possible. 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) 2022/23
Mathematics and Sports Science
 BSc Mathematics and Sports Science[GC16]
 BSc Mathematics and Sports Science with a Year Abroad[GC17]
 BSc Mathematics and Sports Science with a year in industry[GC18]

Coordinator: Dr G Garkusha

Compulsory Modules

Semester 1 Modules	Semester 2 Modules
MA-301 Complex Analysis 15 Credits Dr K Evans	MA-312 Higher Algebra 15 Credits Dr MD Crossley
MA-322 Topology 15 Credits Dr MD Crossley	SR-314 Health Related Exercise 20 Credits Prof G Stratton/Dr R Churm/Prof J Hudson
SR-305 Sports Biomechanics 20 Credits Dr NJ Owen	
SR-333 Sport, Diet and Disease 20 Credits Dr TD Love/Dr SM Heffernan/Dr RS Metcalfe	
Total 120 Credits	

Optional Modules

Choose exactly 15 credits

MA-393	Lie Theory	Dr I Rodionova	TB2	15
MA-395	Teaching Mathematics via a School Placement	Dr S Lyakhova	TB2	15

MA-301 Complex Analysis

Credits: 15 **Session:** 2022/23 September-January

Pre-requisite Modules: MA-201; MA-202; MA-211; MA-212

Co-requisite Modules:

Lecturer(s): Dr K Evans

Format: 44

Delivery Method: Primarily on campus

Module Aims: The module approaches the theory of complex analytic functions; including concepts of Cauchy-Riemann equations, power series, Laurent series and residue calculus.

Module Content: Complex differentiability, the Cauchy-Riemann equations, holomorphic functions.

Power series. Functions defined by power series. The exponential and trigonometric functions; their definition and fundamental properties.

Paths in the complex plane, the length of a path. Contour integration. Fundamental theorem of contour integration.

Cauchy's Theorem. Cauchy's integral formulas.

Taylor theorem. Cauchy estimates. Liouville's Theorem, the Fundamental Theorem of Algebra.

Laurent's Theorem and Laurent series. Isolated singularities. Removable singularities, poles, essential singularities.

The Residue Theorem. Residue calculus, evaluation of definite integrals.

Intended Learning Outcomes: At the end of this module students should be able to:

- 1) understand the concept of a holomorphic function and apply the Cauchy-Riemann equations;
- 2) define the complex exponential and trigonometric functions and prove their basic properties;
- 3) manipulate power series, express a holomorphic function as a power series;
- 4) understand the residue calculus and calculate residues;
- 5) evaluate contour integrals using the Residue Theorem;
- 6) understand Laurent's Theorem and its applications.

Assessment: Examination (80%)
Assignment 1 (20%)

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

Assessment Description: Component 1 is a written, closed-book examination at the end of the module.

Component 2 is formed of a number of coursework assignments during the semester.

Moderation approach to main assessment: Universal second marking as check or audit

Assessment Feedback: For the homework assignments, students will receive feedback in the form of marks, model solutions, overall feedback on the cohort performance, and some individual comments on their work.

For the exam, students will receive feedback in the form of marks and overall feedback on the cohort performance.

Further, individualised feedback, can be provided upon request.

Failure Redemption: Supplementary examination.

Additional Notes: Delivery of the teaching will be on-campus. Continuous assessment submission will be online.

Available to visiting and exchange students

MA-312 Higher Algebra

Credits: 15 Session: 2022/23 January-June

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr MD Crossley

Format: 44

Delivery Method: Primarily on campus

Module Aims: This course approaches the theory of groups, rings and modules as abstract algebraic objects. The course also introduces categories as a language and unifying force in modern mathematics.

Module Content: Review of group theory. Definition of rings and maps of rings. Ideals, quotient rings. Domains, fields. Examples: integers, polynomials, matrices. Definition of modules and module homomorphisms. Generators, submodules and quotient modules. Irreducible modules. Direct sums and free modules. Bases of free modules, matrices. Short exact sequences. Projective modules. Modern uses of projective modules in (non-commutative) geometry and theoretical physics. Modules with additional properties and modules over special rings. Finite abelian groups and their decompositions. Elementary divisors and invariant factors. Torsion free abelian groups. Free generators and unimodular matrices. Classification of finitely generated abelian groups. Categories. Definition and motivation: categories as a language and unifying force in modern mathematics. Categories of modules.

Intended Learning Outcomes: At the end of this module students should be able to:

recognise the differences between groups;
construct proofs of abstract results;
characterise all finite abelian groups;
determine the structure of all groups of small order;

Assessment: Examination (80%)
Assignment 1 (20%)

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

Assessment Description: Component 1 is a written, closed-book examination at the end of the module. Component 2 is formed of a number of coursework assignments during the semester.

Moderation approach to main assessment: Universal second marking as check or audit

Assessment Feedback: For the homework assignments, students will receive feedback in the form of marks, model solutions, overall feedback on the cohort performance, and some individual comments on their work. For the exam, students will receive feedback in the form of marks and overall feedback on the cohort performance. Further, individualised feedback, can be provided upon request.

Failure Redemption: Supplementary examination.

Additional Notes: Delivery of teaching will be on-campus. Continuous assessment will be submitted online.

Available to visiting and exchange students

MA-322 Topology

Credits: 15 Session: 2022/23 September-January

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr MD Crossley

Format: 44

Delivery Method: Primarily on campus

Module Aims: This module explores the topological approach to continuity and the study of objects via their topological structure

Module Content: - Continuity by open sets;
- Topological spaces, examples of spaces and maps;
- Connectivity, compactness, the Hausdorff condition;
- Constructions: disjoint unions, products quotients;
- Homotopy and homotopy equivalence;
- Simplicial complexes and the Euler number;
- Homology

Intended Learning Outcomes: At the end of this module students should be able to:

- 1) work with the topological approach to continuity and check continuity for elementary functions
- 2) verify topological properties such as connectedness
- 3) understand topological constructions such as products and quotients
- 4) establish when functions are homotopic
- 5) calculate the Euler number of a cellular space
- 6) handle basic algebro-topological invariants such as simplicial homology groups

Assessment: Examination (80%)
Assignment 1 (20%)

Assessment Description: Component 1 is a written, closed-book examination at the end of the module. Component 2 is formed of a number of coursework assignments during the semester.

Moderation approach to main assessment: Universal second marking as check or audit

Assessment Feedback: For the homework assignments, students will receive feedback in the form of marks, model solutions, overall feedback on the cohort performance, and some individual comments on their work. For the exam, students will receive feedback in the form of marks and overall feedback on the cohort performance. Further, individualised feedback, can be provided upon request.

Failure Redemption: Supplementary examination. The original coursework mark will be retained, and these two will be combined in the way detailed above under 'Component descriptions'.

Additional Notes: Delivery of teaching will be on-campus. Continuous assessment will be submitted online.

Available to visiting and exchange students

MA-393 Lie Theory

Credits: 15 Session: 2022/23 January-June

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr I Rodionova

Format: 44

Delivery Method: Primarily on campus

Module Aims: This course provides an introduction to the theory of Lie groups and Lie algebras building on examples of matrix groups.

Module Content: Review of group theory,

Matrix Groups: $O(n)$ $SO(n)$ $U(n)$ $SU(n)$ $Sp(n)$

Matrix groups as manifolds

One parameter subgroups, the exponential mapping

Lie groups,

The Lie algebra of a Lie group - basic construction, properties.

The classification and representation problems

Lie groups in geometry, Symmetric spaces.

Intended Learning Outcomes: At the end of the module the student should be able to:

- 1) identify and work with the classical matrix groups
- 2) demonstrate a knowledge of the basic properties of Lie groups
- 3) demonstrate a knowledge of the properties of Lie algebras
- 4) explain the importance of Lie algebras in the study of Lie groups
- 5) apply the theory to problems in geometry

Assessment: Examination (80%)

Coursework 1 (20%)

Assessment Description: Component 1 is a written, closed-book examination at the end of the module.

Component 2 is formed of a number of coursework assignments during the semester.

Moderation approach to main assessment: Universal second marking as check or audit

Assessment Feedback: For the homework assignments, students will receive feedback in the form of marks, model solutions, overall

feedback on the cohort performance, and some individual comments on their work.

For the exam, students will receive feedback in the form of marks and overall feedback on the cohort performance.

Further, individualised feedback, can be provided upon request.

Failure Redemption: Supplementary examination.

Additional Notes: Delivery of teaching will be on-campus. Continuous assessment will be submitted online.

Available to visiting and exchange students

MA-395 Teaching Mathematics via a School Placement

Credits: 15 **Session:** 2022/23 January-June

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Dr S Lyakhova

Format: 1 day preparatory training on campus.

8 half days on placement

Delivery Method: 1 day preparatory training on campus

8 half days on placement in a local school under supervision of an approved teacher-mentor (see attached proposal for further details)

Module Aims: This module is for students with an interest in entering teaching, and involves a weekly placement in a local school under the mentorship of a mathematics teacher. The student will engage both in observation and in various teaching activities. The module will be assessed on the basis of the mentor's report, on written project work and a final presentation.

Module Content: No formal syllabus - students will have an introductory training day to provide basic information and practical advice. Students will then spend 8 half-days in schools under the supervision of a teacher-mentor, first mainly observing, and then progressing to small-scale teaching activities.

Intended Learning Outcomes: After completing this module, students will have:

First-hand experience of teaching in a secondary-school environment.

Demonstrated the interpersonal and improvisational skills necessary to work in a secondary-school environment.

Demonstrated ability to confidently present to an audience.

Demonstrated ability to interact with and educate secondary-school age children in a pedagogical environment.

Assessment: Other (100%)

Assessment Description: (a) written assessment by teacher mentor (20%)

(b) continuous assessment based on student log of activities within schools (20%)

(c) assignment (preparation of learning materials) (40%)

(d) 15 minute presentation (20%)

Moderation approach to main assessment: Universal second marking as check or audit

Assessment Feedback: Cover sheets for continuous assessment.

Failure Redemption: resubmission of project work

Additional Notes: Not available to visiting and exchange students.

Requires an enhanced Criminal Records Bureau check.

Students cannot go on a placement at their former school.

SR-305 Sports Biomechanics

Credits: 20 Session: 2022/23 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: Second marking as sampling or moderation

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.

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-314 Health Related Exercise

Credits: 20 Session: 2022/23 January-June

Pre-requisite Modules:

Co-requisite Modules:

Lecturer(s): Prof G Stratton, Dr R Churm, 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 ushc 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.

Module Content: 1) Physical activity and fitness in adults
2) Functional fitness and wellbeing in older people
3) Principles of behaviour change
4) Musculoskeletal health
5) Cardiovascular disease
6) National Exercise Referral Scheme
7) Meta-analyses and meta-syntheses.

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

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 metabolic 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 in children and older adults.
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.

Assessment: Group Work - Presentation (40%)

Coursework 2 (60%)

Resit Assessment: Coursework reassessment instrument (100%)

Assessment Description: Group Work Presentation - 40% (to be recorded via zoom)

Coursework 2 - 60%

Moderation approach to main assessment: Second marking as sampling or moderation

Assessment Feedback: Students will receive 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.

There will be numerous possibilities for students to gain informal feedback across the module as a whole these include, but are not limited to:

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

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

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-333 Sport, Diet and Disease

Credits: 20 Session: 2022/23 September-January

Pre-requisite Modules:

Co-requisite Modules:

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

Format: Lecture (11 x 2h)
Workshop (9 x 2h)
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, 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 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 formal examination can cover any of the topics discussed during the module.

Assessment Dates as follows :

CW1 14-Oct-22

CW2 21-Oct-22

CW3 28-Oct-22

CW4 04-Nov-22

CW5 11-Nov-22

CW6 18-Nov-22

CW7 25-Nov-22

CW8 02-Dec-22

CW9 09-Dec-22

CW10 16-Dec-22

A1 21-Nov-22

A2 09-Jan-23

Moderation approach to main assessment: Second marking as sampling or moderation

Assessment Feedback: Individual written and 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.

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.