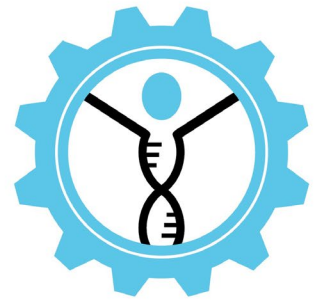




HUB

Department of Human Biology
Physiological Sciences



B(Med)Sc(Hons) in Biokinetics

(HUB4079W Course work, HUB4080W Biokinetics Honours Project)

**DIVISION OF PHYSIOLOGICAL SCIENCES
DEPARTMENT OF HUMAN BIOLOGY
FACULTY OF HEALTH SCIENCES
UNIVERSITY OF CAPE TOWN**

STUDENT BROCHURE 2024

**Course Convenor
Course Assistant
Course Administrator
Postal Address**

Associate Professor Jacolene Kroff
Miss Tayla Ross
Mrs Ayesha Hendricks
Division of Physiological Sciences
Department of Human Biology, Faculty of Health
Sciences
University of Cape Town
P.O. Box 115, Newlands, 7725

Street Address

Division of Physiological Sciences
Sports Science Institute of South Africa
Boundary Road, Newlands, 7700

**Phone
Fax
E-mail
Homepages**

(021) 650 3108
(021) 650 1796
tayla.ross@uct.ac.za
<https://health.uct.ac.za/hpals>
www.ssis.com

Orientation Programme (All New Students)

| ORIENTATION WEEK 2024 | | |
|----------------------------------|---|--|
| WEDNESDAY 24 JANUARY 2024 | | |
| 09H00– 09h30 | Arrival: SSISA Cards & Photos (Classroom 1) | Neezaam Kariem |
| 09h30 – 10h30 | Welcome & Introduction (Classroom 1) | Sharief Hendricks, Jacolene Kroff, Tayla Ross, Robyn Burrows |
| 10h30 – 11h00 | Tea break | |
| 11h00 - 11h15 | Introduction to the Division of Physiological Sciences by the Head of Division | Deputy Head: Andrew Bosch |
| 11h15 – 12h30 | Hons. Biokinetics (Classroom 1) | Jacolene Kroff, Tayla Ross, Robyn Burrows |
| 11h15 – 12h30 | Hons. Exercise Science (Classroom 2) | Sharief Hendricks |
| 12h15– 12h30 | MSc & PhD (Boardroom) | Malcolm Collins |
| 12h30 – 13h30 | Lunch break | |
| 13h30 – 14h30 | Desk Allocation (student lounge) | Rizaan Behardien, Tim Klein |
| 14h30 – 15h30 | Div of Physiological Sciences & SSISA Laboratory Protocols (2 nd floor) | Andrew Bosch, Dale Rae |
| THURSDAY 25 JANUARY 2024 | | |
| 09h00 – 10h00 | ICTS Introductory Session & SSISA Emergency Protocol (Classroom1) | Trevino Larry & Neezaam Kariem |
| 10h00 - 10h30 | Tea | |
| 10h30 – 12h30 | Exercise Science: Overview of Year Programme, Q&A (Classroom 2) | Sharief Hendricks |
| 10h30 – 12h30 | Biokinetics: Overview of Year Programme, Q&A (Classroom 1) | Jacolene Kroff, Tayla Ross, Robyn Burrows |
| 12h30 - 13h30 | Lunch | |
| 13h30 – 14h45 | HPALS - Introduction, History & Structure | Yumna Albertus (HPALS) |
| 14h45 - 15h20 | Biokinetics students – Uniforms and Admin forms (Classroom 1) | Jacolene Kroff, Tayla Ross, Robyn Burrows and Ayesha Hendricks |
| 15h30 -17h30 | Meet and Greet Activity (ALL STAFF AND STUDENTS) Braai _ WP Gazebo area | Sharief Hendricks, Rizaan Behardien, Tim Klein |
| FRIDAY 26 JANUARY 2024 | | |
| 09h00 - 10h00 | Div of Physiological Sciences Staff Introduction (Classroom 1) (ALL STAFF AND STUDENTS) | Sharief Hendricks |
| 10h00 - 10h30 | Cake and Tea (Lesa Sivewright and Ayesha Hendricks) | |
| 10h30 - 11h30 | HPALS Research Meeting (Auditorium) (ALL STAFF AND STUDENTS) | Yumna Albertus |
| 11h30 –13h00 | Social – Ice cream outing | Sharief Hendricks |
| 13h00 – 14h00 | 'Pearls of Wisdom', Student Rules & Codes of Conduct (Classroom 1) | Rizaan Behardien, Tim Klein |

INTRODUCTION TO THE HONOURS PROGRAMME

Welcome to the BSc (Med)(Hons) Biokinetics (Course Code HUB4079W & HUB4080W) course at the University of Cape Town (UCT). We hope that you will enjoy the course and that it will be the basis of a successful and fulfilling career. This brochure describes the history of the various courses offered in our unit and explains how the Biokinetics honours course will be structured and coordinated in 2024.

The Biokinetics honours degree has been evaluated and adapted to include more practical and clinical work. In most institutions, including our own, a multidisciplinary approach is used to acquire an integrated understanding of the effects of physical activity on the body.

Background to the Division of Physiological Sciences (Previously ESSM) & Our Postgraduate Degrees

Professor Timothy Noakes began his exercise research in a small basement laboratory within what was formerly the Department of Physiology, with one laboratory assistant and a single bicycle. By 1989, the research had grown to such an extent that the South African Medical Research Council (MRC) and UCT agreed to fund a MRC/UCT Bioenergetics of Exercise Research Unit (BERU). In 1981, Professor Noakes was appointed by UCT to establish an Honours degree in Sports Science for scientists, physical educators, physiotherapists and doctors. The purpose of the course was to satisfy the South African demand for a more scientific approach to the maintenance of good health and success in sport.

In 1991 the original Sports Science Honours course was divided into two streams: Exercise Science and Biokinetics. As the field evolved, specialist Sport and Exercise Medicine and Sports Physiotherapy MPhil courses were developed in 1990 and 1995 respectively, with the aim of providing physicians and physiotherapists with a more evidenced-based approach to their respective fields. In August 1995, the Unit moved into the Sports Science Institute of South Africa (SSISA) in Newlands, and in 2000 changed its name to the UCT/MRC Research Unit for Exercise Science and Sports Medicine (ESSM). More recently, a new MPhil course in Biokinetics was established in 2011. Professor Noakes retired at the end of 2014 and the Directorship of the Unit was taken over by Professor Vicki Lambert. At the same time, our Unit became recognised as the Division of Exercise Science and Sports Medicine within the Department of Human Biology, Faculty of Health Sciences. From the 1st of May 2021, the division joined another division under the Department of Human Biology and changed the name to the **Division of Physiological Sciences**.

The Honours Exercise Science and Biokinetics courses are now distinct with clearly defined learning objectives and outcomes. There are however certain aspects which are common to both courses. This material will be presented in the Exercise Physiology Fundamentals and Technique modules at the beginning of the year, the Research Methodology module, and in combined lectures throughout the year. Both the Exercise Science and Biokinetics Honours courses are one-year full-time courses, while the MPhil courses in Sports Physiotherapy, Sport and Exercise Medicine and Biokinetics are part-time courses, which take about three years to complete. Since the inception of our Division in 1981, 810 students have been trained (DSc=1, MD=3, PhD=110, MPhil(Sport and Exercise Medicine)=42, MPhil(Biokinetics)=16, MSc=83, Exercise Science Honours = 303, Biokinetics Honours =252).

Our Vision

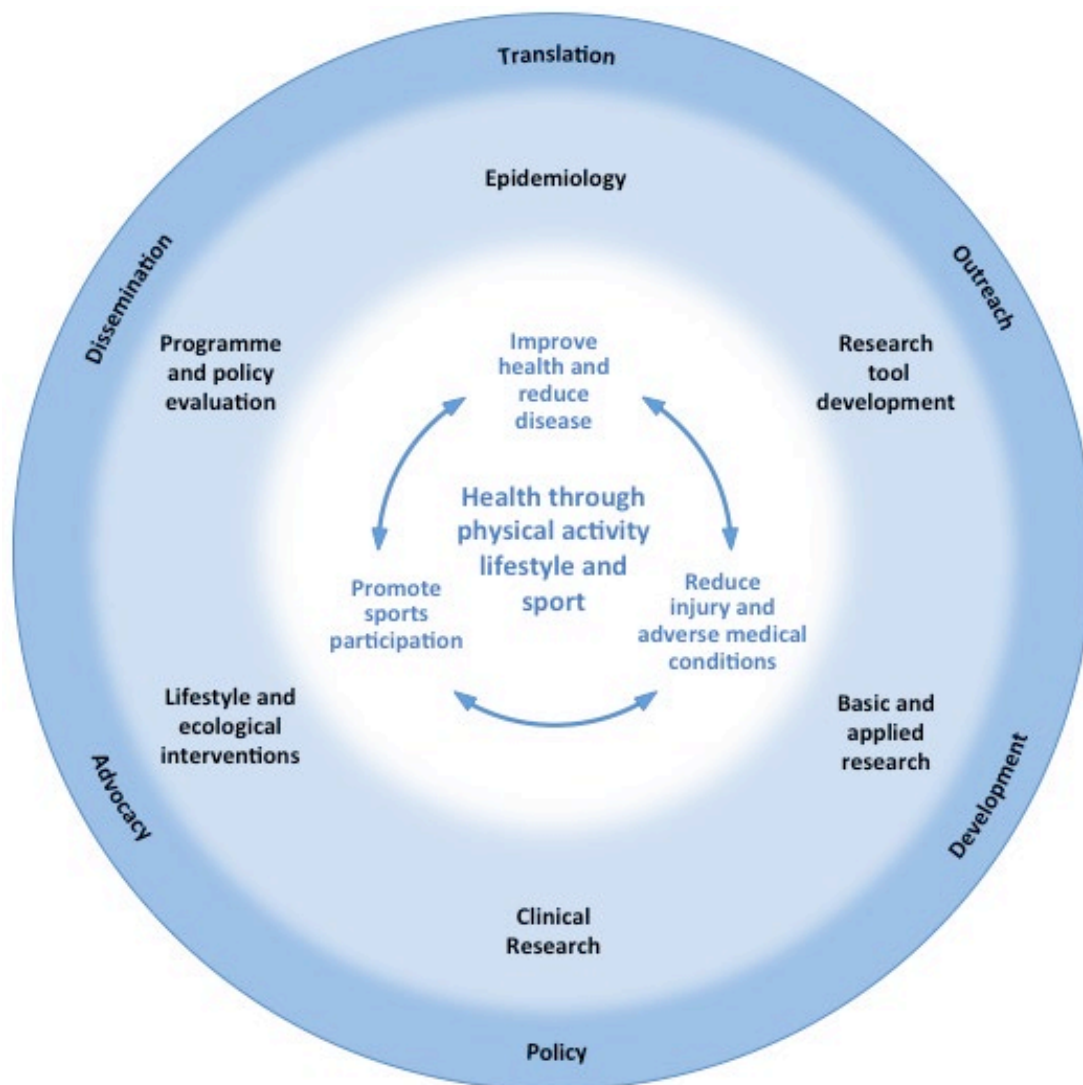
“An active, healthy and winning nation through science”.

Our Mission Statement

“A center of excellence for promoting a healthy, active lifestyle and optimal physical performance, through research, innovation, teaching, training, and clinical services”.

HPALS Research Focus

“Health through physical activity, lifestyle and sport”



HPALS Research Objectives

- To conduct research focused on (i) improving health and reducing disease, (ii) reducing injury and adverse medical conditions associated with physical activity and sport, and (iii) promoting sports participation.
- To conduct research of the highest international standard, recognising the interdisciplinary nature of our work as its key strength.
- To recognise the holistic and complex nature of related lifestyle behaviours and co-morbid conditions, high performance, issues of safety and unintended consequences of participation in physical activity and sport.
- To ensure that our programme of research is relevant to all South Africans, addressing issues of social justice and equity, for the development of human capital, communities and the nation.
- To disseminate knowledge through teaching of an international standard, and through translation to the wider community, informing policy and practice.

The Exercise Science and Exercise Physiology part of the Division consists of research facilities which includes three exercise laboratories, two clinical laboratories, five molecular biology / biochemistry laboratories, a biokinetics laboratory, a biomechanics laboratory, an environmental chamber, a metabolic chamber and a sleep laboratory.

The Sports Science Institute of South Africa (SSISA)

SSISA was built as a Section 21 (not for gain) company called Sports Science Share Block (Pty) Ltd, with funds donated to UCT in 1994. The mission of SSISA is to “optimise the sporting performance and health of all South Africans through the execution, application and dissemination of science”. More information about SSISA can be obtained from www.ssisa.com.

Although both Physiological Sciences and SSISA have worked together on many projects since 1995, their governance has been different. This is partly due to Physiological Sciences being an academic institution and falling under the jurisdiction of the University of Cape Town, whereas SSISA is a not-for profit company. SSISA and Physiological Sciences share their knowledge, scientific application, research and resources to the benefit of both entities and the population it serves.

Degree/Programme Exit Level Outcomes

The successful Biokinetics graduate must be able to:

- Apply foundational knowledge, evaluate information, interpret and integrate information with the purpose to prescribe exercise modalities as a prevention and treatment strategy.
- Conduct health risk screening for various population groups in a variety of settings and implement appropriate intervention/preventative programs based on the findings.
- Conduct thorough patient assessment and interpret the results.
- Respond to the needs of the community in terms of health, wellness and optimal function.
- Design, implement and monitor therapeutic exercise, recreation and physical activity intervention programs, with or without the use of equipment.
- Evaluate and reflect on the effectiveness of interventions.
- Apply sound biomechanical principles in optimising human movement and performance across the life span.
- Assessment of work-related demands and exercise interventions to optimise work-related performance.
- Understand and apply basic pharmacological knowledge related to exercise testing/assessment and intervention.

Broad Graduate Attributes

The successful Biokinetics Graduate must be able to:

- Refer patients to relevant health professionals.
- Function as part of a multi-disciplinary team following good clinical practice and evidence-based guidelines.
- Conduct and interpret research within the Biokinetics scope of practice.
- Apply evidence-based medicine as a basis for clinical reasoning.
- Conduct the Biokinetics scope of practice in an ethical sound and responsible manner by considering the clients and community and showing understanding and sensitivity to individuals and social-cultural differences.
- Use appropriate technology to support Biokinetics service delivery.
- Apply excellent communication skills (verbal and non-verbal) when engaging with patients and colleagues, including the ability to prepare written reports as required by medical schemes or legal entities.
- Show commitment to professional self-development and self-care through engaging in educational and ongoing learning and self-reflection.
- Engage in the building of inter-professional working relationships and mentoring of new graduates.
- Display leadership and health advocacy qualities.
- Apply entrepreneurial skills.
- Show competency in presenting scientific findings to a research audience.
- Demonstrate appropriate practice management skills.

(Minimum Standards for the training: Biokinetics, Professional Board for Physiotherapy, Podiatry and Biokinetics)

OUTLINE OF THE BIOKINETICS HONOURS PROGRAMME

The Biokinetics Honours Programme is divided into three major components under two separate course codes:

HUB4079W

1. Course Work
2. Clinical Work

HUB4080W

3. Research Project & Write Up

1. COURSE WORK

| | No. | Name | Subsections | Term |
|------------------------|-----|--|--|--|
| Term 1 | 1 | Exercise Physiology Module (EP) | EP Fundamentals Biomechanics Techniques EP Techniques Applied | 29 January – 9 February 12 – 14 February 19 February – 1 March |
| | 2 | Health Promotion & Special Population Module (HP) | Apparently Healthy Population Elderly Children Pregnancy Persons with Disabilities | 4 – 20 March |
| Term 2 | 3 | Chronic Diseases Module (CD) | Patients at Risk Cardiac & Cardiovascular Disease Respiratory Diseases Osteoporosis Arthritis Fibromyalgia Obesity and Diabetes Organ transplant Cancer Neuromuscular Disorders | 12 April – 10 May |
| Term 3 | 4 | Neuromuscular & Skeletal Systems Module (NEMS) | High Performance Periodization Plyometrics Resistance Training Applied Nutrition Athletic Assessments | 5 – 23 August |
| Whole Year (until Sep) | 5 | Orthopaedic Module (ORTHO) | General Biokinetics Practice Module Joints (Anatomy, Assessment & Rehab) | 2 April – 20 September |
| | 6 | Research Methods & Biostatistics Module (RESE) | See Module Explanation | |

Semester Layout

The Exercise Physiology Module (Fundamentals & Techniques) will run during Term 1, as well as the Health Promotion & Special Populations Module. The Chronic Diseases Module will run during the Term 2, and the Neuromuscular and Skeletal Systems Module will run during Term 3. The Orthopaedic Rehabilitation Module and Research Methods & Biostatistics Module will run from Term 1 to Term 3. The Orthopaedic Rehabilitation Module forms part of the Clinical Work Module. Knowledge and experience gained from this Module will mostly be evaluated during all Clinical Exams and during the second theory examination.

The structures of these modules vary, but each one has a theory, practical and applied component. Evaluation of the modules includes lab-based practical's and/or assignments and/or a written test.

The focus of the second semester is to gain more clinical experience and to conduct research. The aim of this component of the course is to integrate the theory and practical teaching from the first semester to the clinical and research setting.

A macro weekly overview of Semester 1 and Semester 2 are illustrated on the next two pages.

SEMESTER ONE

| January 2024 | | | | | | |
|--------------|---------------|-----|-------------|-----|-----|-----|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| | NEW YEARS DAY | | | | | |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| | | | ORIENTATION | | | |
| 28 | 29 | 30 | 31 | | | |
| | FUNDAMENTALS | | | | | |

| February 2024 | | | | | | |
|---------------|--------------|--------------|-----|--------------|-----|-----|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | | | | 1 | 2 | 3 |
| | | | | FUNDAMENTALS | | |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | FUNDAMENTALS | | | | | |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| | BIOMECHANICS | | | BLS | BLS | |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| | FUN TEST | EX PHYS TECH | | | | |
| 25 | 26 | 27 | 28 | 29 | | |
| | EX PHYS TECH | | | | | |

| March 2024 | | | | | | |
|------------|----------------|-----|-----|-----|------------------|-----|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | | | | | 1 | 2 |
| | | | | | EX PHYS TECH | |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | HP MODULE | | | | | |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | HP MODULE | | | | | |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| | HP MODULE | | | | HUMAN RIGHTS DAY | |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | TERM 1 HOLIDAY | | | | | |
| 31 | | | | | | |

| April 2024 | | | | | | |
|------------|-----------------|-------------|-----|-----|-----|-------------|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| | FAMILY DAY | BACK & NECK | | | | |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| | HP TEST | BIO PRAC | | | | CD |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | CHRONIC DISEASE | | | | | |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| | CHRONIC DISEASE | | | | | FREEDOM DAY |
| 28 | 29 | 30 | | | | |
| | CD | | | | | |

| May 2024 | | | | | | |
|----------|------|-----|-------------|-------------|-----------|-----|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | | | 1 | 2 | 3 | 4 |
| | | | WORKERS DAY | CD | | |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | CD | | | | | |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| | HIP | | | | | |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| | KNEE | | | | BLOCK DAY | |
| 26 | 27 | 28 | 29 | 30 | 31 | |
| | | | | THEORY EXAM | | |

| June 2024 | | | | | | |
|--------------------|----------------|----------------|-----|-----|-----|-----|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | | | | | | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | | CLINICAL EXAMS | | | | |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| YOUTH DAY OBSERVED | TERM 2 HOLIDAY | | | | | |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| | TERM 2 HOLIDAY | | | | | |
| 30 | | | | | | |

SEMESTER TWO

| July 2024 | | | | | | |
|-----------|----------------|-----|-----|-----|-----|-----|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| | TERM 2 HOLIDAY | | | | | |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| | TERM 2 HOLIDAY | | | | | |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | SHOULDER | | | | | |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| | STATS WEEK | | | | | |
| 28 | 29 | 30 | 31 | | | |
| | ANKLE | | | | | |

| August 2024 | | | | | | |
|-------------|-------------|-----|-----|-------|-----|------------|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | | | | 1 | 2 | 3 |
| | | | | ANKLE | | |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | NEMS | | | | | WOMENS DAY |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| | NEMS | | | | | |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| | NEMS | | | | | |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |
| | ARM & WRIST | | | | | |

| September 2024 | | | | | | |
|----------------|-----------|--------------|---------------------------|-----|-----|-----|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | | | | | | |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | BIO PRAC | RESE TEST | BIO PRAC & CLIN REASONING | | | |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| | NEMS TEST | REVISION | | | | |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| | | HERITAGE DAY | | | | |
| 29 | 30 | | | | | |

| October 2024 | | | | | | |
|--------------|--------------|------------------------|-----|-----|-----|-----|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | | 1 | 2 | 3 | 4 | 5 |
| | | CLINICAL EXAMS & OSCEs | | | | |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | | | | | | |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| | FINAL THEORY | | | | | |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| | | | | | | |
| 27 | 28 | 29 | 30 | 31 | | |

| November 2024 | | | | | | |
|---------------|---------------------|-----------------|-----|-----|-----|-----|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | THESIS HAND IN | | | | | |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | | FINAL CLINICALS | | | | |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| | | | | | | |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | THESIS PRESENTATION | | | | | |

| December 2024 | | | | | | |
|---------------|-----------------------|-----|---------------|------------|-----|-----|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | | | | | | |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| | DAY OF RECONCILIATION | | | | | |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| | | | CHRISTMAS DAY | BOXING DAY | | |
| 29 | 30 | 31 | | | | |

2. CLINICAL WORK

The clinical component of the course consists of Clinical Rotations and Bio Lab sessions. For the Clinical Work Module, you will be evaluated through 3 Clinical Exams, Objective Structured Clinical Examinations (OSCEs). Your clinical rotation mark will be determined by your clinical rotation hours, your supervisor evaluations and your patient portfolio.

Clinical Rotations

In keeping with the HPCSA's requirements for the training of Student Biokineticists, the Biokinetics honours course comprises designated blocks each week during which students are given the opportunity to gain hands on experience while being supervised by registered Biokineticists in real world clinical settings. Here, biokinetics students are expected to apply the theoretical underpinnings of the controlled use of physical activity in the prevention of disease and as the primary therapeutic modality during final phase rehabilitation (provided during in the form of lectures and workshops).

Importantly, students will be required to keep a detailed record of the sessions they attend in a **patient portfolio**. Each rotation session (including group-based classes) must be documented as this portfolio will be used to assess students during their Clinical Examinations and will furthermore be evaluated at certain times during the year. Students are encouraged to neatly structure a table of contents for their patient folder, type up all contact hours, and to consider that the more comprehensive the cases, and the more cases presented in the portfolio, the better the impression of the student's clinical experience.

Several different rotations will be available to students during the year, which you will be allocated to. You will rotate according to a clinical rotation roster to ensure you have equal exposure to each practice. Some practices are busier than others making it possible for both students to go to the same practice simultaneously, but certain rotations will include 2 (or more) venues where one of you will go to the one practice and one to the second practice. The following week the two students will swap practices, for example, or any other arrangement that fits both students and the clinical rotation.

All rotations will run for **5 weeks per rotation**. Tuesdays and Thursdays have been allocated specifically to clinical rotations, but students are expected to schedule additional hours in throughout the week. Students are expected to schedule **no less than 12-20 hours of rotations per week**. During each rotation, students will be accountable to mentoring supervisors with whom they are expected to schedule and arrange their hours with. It is essential that the student liaise directly with the supervisor to determine the operating hours of the practice, and any other requirements. Should the student be unable to make a clinical rotation due to personal circumstances (illness or family emergency), this must be conveyed to the

supervisor prior to the day, and clinical work hours must be made up at some other time.

Clinical Rotation Slots:

- Mondays: 06h00 – 08h00, 17h00 – 19h00
- Tuesdays: 06h00 – 18h00
- Wednesdays: 06h00 – 08h00, 17h00 – 19h00
- Thursdays: 06h00 – 18h00
- Fridays: 06h00 – 08h00, 17h00 – 19h00

The clinical rotations format and timetable information will be sent to you via email. During lecture block weeks, such as “ortho weeks” or “statistics week”, lectures might clash with clinical rotations. Students must schedule different clinical rotation times with their specific supervisor during these weeks to obtain at least 12 clinical hours. Sometimes official exams will also clash with clinical rotations. The student must inform the supervisor that they cannot attend the rotation due to exam. Students will not be expected to “catch up” lost clinical rotation times due to official exams/tests.

Evaluation of Clinical Rotations

The number of clinical hours obtained plus the average mark of all supervisor evaluations will determine your mark for your clinical rotations. HPCSA regulations recommends 350 hours of clinical rotations during the training year. **The minimum number of hours acceptable during the year is 350 hours.** Fewer than 350 logged hours will negatively influence your mark for clinical rotations, subsequently affecting your Clinical Work Module Mark. Finally, two forms per student are required to be handed in **within 1 week** after rotation completion:

- a. Student Log Sheet
- b. Clinical Supervisor’s Evaluation

The student log sheet is signed off by the rotation supervisor or supervising biokineticist/intern at the end of each session, and may only be completed by a clinician who directly supervises a student (i.e., not by a practice secretary or an individual who did not directly mentor a student while seeing a patient). Request the supervisor of the rotation at least one week prior to the end of your rotation to complete the evaluation form and to hand this back to you on your last day of your rotation (in envelope). You must accumulate at least 8 supervisor evaluation throughout the year. Fewer evaluation forms, late evaluation forms and/or logged forms will negatively influence your mark for clinical rotations.

The mark for clinical rotations is weighted as follows:

- Clinical Rotation Hours: 60%
- Average Supervisor Evaluation Marks: 20%
- Patient Portfolio Folder: 20%

The final mark for clinical rotations will contribute 15% toward your final course work mark (HUB4079W).

Community Outreach

Victoria Hospital and CHIPS are community outreach rotations which is a compulsory section of your overall clinical hours. Apart from Victoria Hospital, where you will complete clinical hours on Monday where possible, the managers of CHIPS will frequently ask for the assistance from Hons Biokinetics students to assist with field testing. Western Cape on Wellness, SHAWCO, as well as some other NPOs, will also provide opportunities throughout the year for students to help and gain community hours. By the end of the year, students must have accumulated at least **80 Community Outreach Hours**.

Clinical Rotation Practices

The following practices/programmes will be part of the clinical rotations:

- SSISA Fitness Centre
- SSISE Old Mutual
- SSISA Shape
- SSISA HighPerformance Centre
- SSISA Ortho & Neuro Rehabilitation (Avinesh Pursad Biokineticist)
- Angie Lander Biokineticist (Peak Biokinetics)
- Loreen Winton Biokineticist
- Robert Evans Biokineticist (Enable Centre)
- Kim Murphy Biokineticist
- Micaela Frade Biokineticist
- Samantha Knobel Biokineticist
- Herschel Girls School
- CHIPS
- Victoria Hospital
- Cape Sports Medicine
- Western Cape on Wellness

Biokinetics Labs

Biokinetics Labs are clinical sessions which focus on different clinical aspects of the Biokinetics profession – including assessment skills, clinical reasoning skills and case study discussions. **These sessions are not compulsory but are highly beneficial and therefore attendance is encouraged.** You will receive clinical rotation hours for attending.

Tuesday: 08h30 – 10h30 (Ms Tayla Ross)

Thursday: 13h00 – 14h00 (Mr Avinesh Pursad, COTED)

3. RESEARCH PROJECT & WRITE UP

Research Project

Module convenor: A/Prof Dale Rae

This project reflects the student's ability, in consultation with their supervisors, to plan and propose a project and research methodology; to collect data with excellent quality control; to manage and analyse the results and interpret the results of this research study in an evidence-based manner. The students' projects will be selected from a list of available projects that will be handed out within the first several weeks of the course. Projects will be selected based on suitability, and where possible, by choice. In most cases, honours projects form smaller sub-projects under a larger, postgraduate, or funded study. Project "teams" will be formed consisting of staff, and senior students, who will be working with honours students on these projects.

The supervisor(s) will guide the student through the process of preparing a literature review and project proposal. The proposal will then be presented to the Unit for critical input. The data collection phase of the project should ideally be completed by the middle of October. The completed project should be handed in on **Monday 4 November before 16h00**. The research project will be evaluated as a written report and in an oral presentation (**Monday 25th November**). All the skills required to conduct a successful research project will be presented in the Research Methods and Statistics module described above.

CONTRIBUTIONS TO THE FINAL MARK

Assessments for the year are divided into Theoretical and Practical, and formative vs summative assessments. The purpose of formative assessments is to provide feedback from which you will be able to learn and apply to the next series of learning topics within the course. Summative assessments are all the exit level examinations serving as the final theory and practical assessments.

List of Assessments

Module Tests (Summative): Written tests will be conducted on two separate occasions during the first semester, before the June examination. The Exercise Physiology (Fundamentals) test will cover all content of the Fundamentals (first two weeks) of the Exercise Physiology module. The second test will be the Health Promotion Module Test. The Chronic Disease and NEMS module will not have an independent test after the completion of the module. The RESE module consists of several different components that will contribute to the final RESE Module mark (See Module 6).

Lab-Based & Module Assignments (Formative): Assignments will mostly consist of administering exercise testing/physical assessments and exercise prescription. You will receive written or verbal feedback on the outcome of your assignment from

the lecturer to inform you of certain areas/aspects you need to focus on or change and apply this to future similar activities.

Case Study Assignments (Formative): Either during Bio Lab sessions or clinical rotations you may be asked to complete a case study and present this to the class or a small group. Additionally, case study assignments can be in the form of written hand-ins if a presentation is not an option. Real time feedback will be given from the facilitator. Not all but some of the case study presentations may count towards the Module Assignments mark.

Your average mark for all assignments completed within all modules will account for 10% of your final mark for the year. The number of assignments differ from year to year, but the approximate number of assignments to complete are 10 assignments.

Theory Examination 1 (Summative): Paper 1 is a written face-to-face examination (**30 May 2024**) and will contain questions which are designed to integrate the knowledge of all the work during the Health Promotion and Chronic Disease Modules.

Theory Examination 2 (Summative) Paper 2 is a written face-to-face examination (**14 October 2024**) and will cover the content of the Exercise Physiology Techniques, NEMS, and Orthopaedic Module.

Clinical Examinations 1 & 2 and OSCEs (Formative Assessment): Consists of **4 different evaluations** and your clinical rotation mark (previously described). Two clinical examinations will serve as preparation for the final clinical exam (**Exam 1: 11 & 12 June; Exam 2: 1 & 2 October**). The **OSCEs** will also contribute to your final clinical work module mark, these will fall under Clinical Exam 2. Both clinical examination 1 and 2 will count 4% towards the final mark, each and the OSCEs 2% towards the finale mark. The two clinical examinations are completed orally face-to-face in the presence of 3-4 examiners. The layout and structure of the exam will be provided 2-3 weeks prior to the clinical examination dates. Feedback based on performance will be given retrospectively prior to the second (for clinical exam 1) and final (for clinical exam 2) exam to improve on clinical skills. The Structure of the OSCEs will be handed out to you prior to the OSCEs and real-time feedback will be given verbally during the last five minutes of the OSCE session.

Final Clinical Examination (Summative): The final Biokinetics Clinical Exam will take place over 2 days (**13 & 14 November**) and will be assessed by an external examiner. Your final clinical exam will contribute 20% towards your final Coursework mark.

Clinical Supervisor Evaluation (Formative): At the completion of a series of clinical rotations at a private practice, the supervisor will be asked to complete an evaluation form based on your performance during shadowing at his/her practice. During your clinical exams 1 and 2 feedback you will receive feedback on the clinical

supervisor evaluation to improve on specific areas of your clinical skills, communications during clinical rotations.

Important Additional Information:

All clinical exams (Clinical Exam 1, 2 and Final) cover mostly the content of your Patient Portfolio (Clinical Rotations) and the content of the Chronic Disease Module and Orthopaedic Module.

Assessment of the work of all Theory Modules, Final exams, and clinical work module, will each constitute 20%, 30%, and 50% of the final Course Work (HUB4079W) mark for the year, respectively. For your Honours research project, the written hand-in will contribute 80%, the Research and Biostatistics module will contribute 10%; and your project presentation will contribute 10% toward the final mark for Biokinetics Hons Project (HUB4080W).

Prior to each major assessment (tests, exams, and clinical exams) a briefing will be held to provide you with a study guide based on the structure, layout, format and overall broad topic contents of the assessment.

To reach a first class pass for the Honours Degree, the weighted average **(75%/25%) of HUB4079W AND HUB4080W** must be equal or above 75% and both courses must have a mark of 70% or higher. Students **MUST PASS** Theory exams written in June & October as well as the Final Clinical Exam.

FINAL MARK CONTRIBUTIONS

| HUB4079W HONS BIOKINETICS COURSEWORK (75% TO TOTAL FOR DEGREE) | | |
|---|-----------------------------------|--|
| THEORY MODULES | Contribution to final mark | Accumulated contribution of Component to final mark |
| Exercise Physiology Fundamentals test | 5 | 20% |
| Average of all assignments (Ex Physiology Techniques, Orthopaedic Module, CD module, NEMS module, HP module) | 10 | |
| Written Module Tests | 5 | |
| WRITTEN EXAMS | | |
| Theory exam 1 (HP,CD) | 15 | 30% |
| Theory exam 2 (NEMS, Ortho, EP Techniques) | 15 | |
| CLINICAL WORK MODULE | | |
| Clinical rotations (patient portfolio, case study presentation, supervisor evaluation, log hours) | 20% | 50% |
| Clinical exam 1 | 5% | |
| Clinical exam 2 | 5% | |
| Exit Final Clinical Exam | 20% | |
| HUB4080W HONS RESEARCH PROJECT (25% to TOTAL FOR DEGREE) | | |
| Project Hand-In | 80% | |
| Project Presentation | 10% | |
| Research Module (Proposal presentation, proposal hand-in, Test and class assignments) | 8% | |
| Research Paper Examination | 2% | |
| <p>For a first-class pass students must achieve 70% or higher for both course codes and the weighted average: coursework 75% and project 25% must be 75% or higher.</p> | | |

ADMINISTRATION

VULA and Google Calendar

On occasion, notes and/or reading material will be loaded onto the VULA site prior or after lectures, tutorials, or practical's. Students are responsible for printing notes and reading material. However, **access to lecture notes is up to the discretion of the lecturer**, and lecture notes may only be available on VULA after the lecture. Lecturers have the right to not make their lecture slides available to students.

Each student will receive an email inviting them to access the Google calendar. Lecture schedules will be maintained on this electronic calendar. Name of calendar: "Bio Hons classes".

Students are responsible for ensuring that they are up to date with all lectures, tutorials, practical sessions, and exam dates. Lecture times might change occasionally, and this is largely due to travel demands of staff.

Friday HPALS Meetings

Honours students will join the weekly HPALS (Health through Physical Activity, Lifestyle and Sport) Research Centre meeting along with staff, MSc and PhD students and other interested parties and stakeholders of HPALS. At 10h15 on Friday mornings there will be tea and cake, followed by the meeting at 10h30 – the first 15minutes will be administrative with announcement and achievements highlighted. The last 45 minutes will be a hybrid form webinar (so international individuals can join as well) during which various topics will be presented and discussed related to Exercise Science. The presenter will either be a student, staff member or visiting academic. **The HPALS meeting is compulsory to all Honours Students.** If you cannot attend the meeting due to unforeseen circumstances, you must inform the Friday meeting Coordinators via email no later than the Thursday prior to the meeting.

Class Representative & Responsibilities

Early in the year the class will elect a class representative who will help to facilitate communication between the students and convenor/s. More information regarding this great opportunity will be discussed in person.

Additionally, each month two students will be responsible for the cleanliness and upkeep of the Biolab on the second floor. This will entail ensuring that the room is put back to its original set-up at the end of each day, that equipment is accounted for and stored away correctly and that surfaces are cleaned at regular intervals.

Journal Clubs

The Division coordinates several Journal clubs managed by selected members of the Division's respective research teams. If the research domain is of interest to you; or you are advised by your project supervisor to attend a specific journal club, the details – date, time and topic - of the journal club will be displayed on a different Google calendar, called HPALS Diary.

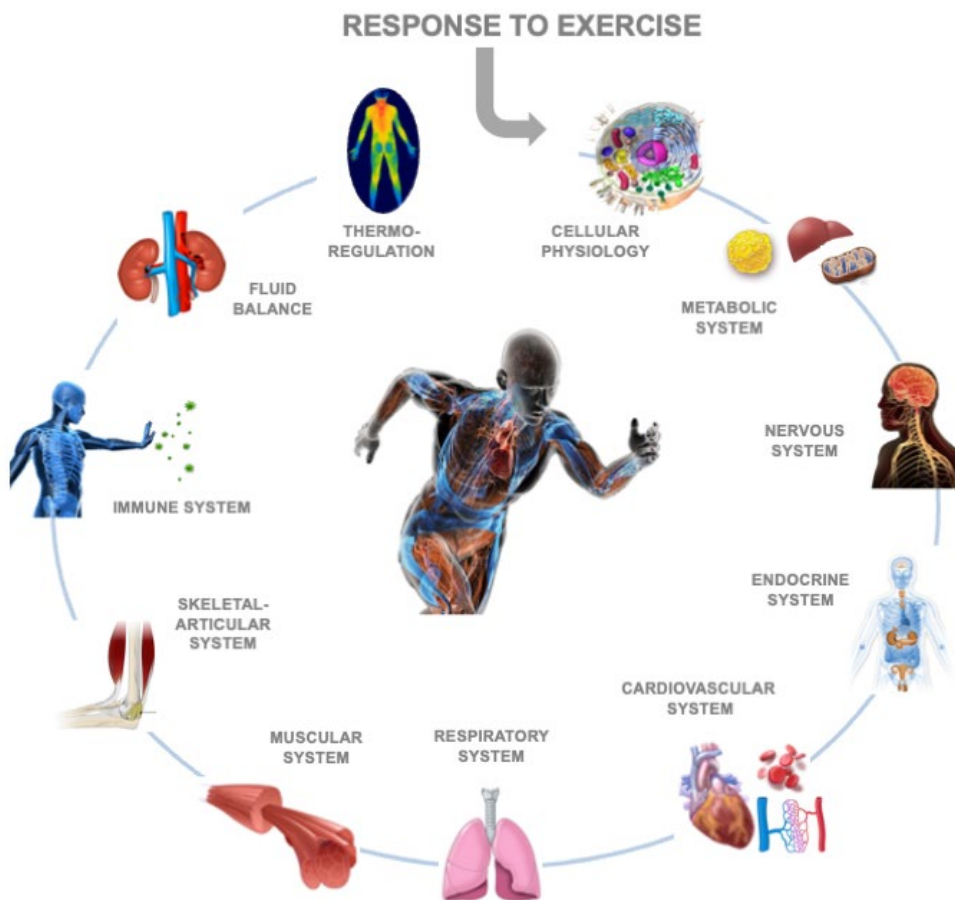
Module 1: Exercise Physiology Module (EP)

Fundamentals of Exercise Physiology

Convenor: Dr Dale Rae

This module will run from Monday 29 January to Friday 9 February 2024 in Classroom 1. A tutorial is scheduled for the last 1.5h of each lecture day to help students with any content-related sticking points arising that day. The detailed programme is shown below.

FUNDAMENTALS OF EXERCISE PHYSIOLOGY



Objectives

To provide the student with a comprehensive and integrated overview of the bodies' response to exercise, emphasising the acute response to exercise and long-term effects of training on:

- Cellular Physiology
- Metabolic System
- Nervous System
- Endocrine System

- Cardiovascular System
- Respiratory System
- Muscular System
- Skeletal-Articular System
- Immune System
- Fluid Balance
- Thermoregulation

After completion of this module, the student should be able to understand, define and describe:

1. **Cellular Physiology** – Prof Alison September (2 lectures)

- Introduction to the cellular level organisation, structure and functions of the various components and organelles.
- The Nucleus
 - transcription
 - translation
- The cell membrane/ plasma membrane and understand its functions
 - mechanisms of transport across the plasma membrane e.g. passive transport, vesicle transport, phagocytosis, facilitated diffusion, osmosis, active transport

3. **Metabolic System** – Prof Malcolm Collins (4 lectures)

- Overview of metabolic pathways
- Anaerobic metabolism:
 - high energy phosphates, glycolysis, glycogenolysis,
- Aerobic/oxidative metabolism
 - mitochondria
 - tricarboxylic acid cycle
 - electron transport chain
 - oxidative phosphorylation
- Basic concepts of nutrition
- Liver gluconeogenesis
- Glucose transport and homeostasis
- Adipose tissue and free fatty acids
- Protein and amino acid metabolism

3. **Nervous System** – A/Prof Yumna Albertus (3 lectures)

- Overview of anatomy and terminology of the central and peripheral nervous systems
- Voluntary generation and control of movement
- The concept of fatigue

4. **Endocrine System** – Dr Kate Larmuth (3 lectures)

- Overview of components of the endocrine system relevant to exercise
- The importance of homeostasis

- Regulation of the storage and mobilisation of metabolic fuels, blood pressure, heart rate, temperature, fluid balance

5. **Cardiovascular System** – A/Prof Jeroen Swart (3 lectures)

- Overview of anatomy and terminology of the heart and blood vessels
- Regulation and control of the cardiovascular system during exercise by means of neurological, hormonal and metabolic inputs
- Heart rate, cardiac output, stroke volume responses
- Limitations to cardiac performance
- Measurement of cardiovascular function during rest and exercise (e.g. ECG, heart rate)

6. **Respiratory System** – A/Prof Jacolene Kroff (2 lectures)

- Overview of anatomy and terminology of the lungs, airways and respiratory muscles
- Mechanics and regulatory mechanisms of breathing during exercise
- Principles of oxygen and carbon dioxide transport from the lungs to other systems (particularly skeletal muscle) and venous return.
- Measurement of respiratory function during rest and exercise (lung function test, VO_2 max test)

7. **Muscular System** – Dr Sharief Hendricks (3 lectures)

- Overview of anatomy and terminology of skeletal muscle, muscle fibres and the contractile apparatus
- Cross-bridge cycle and muscle mechanics
- Metabolism – energy providing pathways (creatine, carbohydrate, fat and amino acids), metabolite transport
- Neuromuscular control of muscle contraction
- Muscle fibre type and its role in strength, power and endurance exercise
- The concept of muscle fatigue
- Damage, repair and regeneration

7. **Skeletal-Articular System** – A/Prof Yumna Albertus (2 lectures)

- Overview of anatomy and terminology of bone, ligaments and tendons
- Mechanical role in locomotion
- Repair of bone, ligaments and tendons

9. **Immune System** – A/Prof Jeroen Swart (2 lectures)

- Overview of components of the immune system relevant to exercise
- Effects on immune system components (i.e. leukocytes, lymphocytes, natural killer cell activity, immunoglobulins)
- The inflammatory response - cytokines
- Delayed onset of muscle soreness (DOMS)
- Endocrine regulation of immune function during exercise

10. Fluid Balance – A/Prof Dale Rae (2 lectures)

- Regulation of body fluids
- Water balance and fluid shifts
- Exercise-induced dehydration and rehydration
- Exercise-induced hypervolemia

11. Thermoregulation – A/Prof Dale Rae (3 lectures)

- Review of the basics of human thermoregulation
- Thermoregulation during exercise
- Thermoregulatory response to exercise in a hot environment
- Thermoregulatory response to exercise in a cold environment

Schedule:

| Week 1 | Mon 29 Jan | Tue 30 Jan | Wed 31 Jan | Thurs 1 Feb | Fri 2 Feb | |
|---------------|--|----------------------------------|-------------------------------------|----------------------------------|---------------------------------------|------------|
| 09h00-10h00 | Introduction to exercise physiology (DR) | Metabolic system 3 (MC) | Tutorial – cellular physiology (AS) | Tutorial – nervous system (YA) | Tutorial – cardiovascular system (JS) | |
| 10h00-11h00 | Cellular physiology 1 (AS) | Metabolic system 4 (MC) | Tutorial – metabolic system (MC) | Tutorial – endocrine system (KL) | Tea and HPALS meeting | |
| 11h00-11h30 | Break | | | | | |
| 11h30-12h30 | Cellular physiology 2 (AS) | Nervous system 1 (YA) | Endocrine system 1 (KL) | Cardiovascular 1 system (JS) | | Self-study |
| 12h30-13h30 | Metabolic system 1 (MC) | Nervous system 2 (YA) | Endocrine system 2 (KL) | Cardiovascular 2 system (JS) | Self-study | |
| 13h30-14h30 | Lunch | | | | | |
| 14h30 - 15h30 | Metabolic system 2 (MC) | Nervous system 3 (YA) | Endocrine system 3 (KL) | Cardiovascular 3 system (JS) | Self-study | |
| 15h30-16h30 | Self-study | Self-study | Self-study | Self-study | Self-study | |
| Week 2 | Mon 5 Feb | Tue 6 Feb | Wed 7 Feb | Thurs 8 Feb | Fri 9 Feb | |
| 09h00-10h00 | Respiratory system 1 (JK) | Skeletal-articular system 1 (YA) | Tutorial – muscular system (SH) | Tutorial – immune system (JS) | Tutorial – thermoregulation (DR) | |
| 10h00-11h00 | Respiratory system 2 (JK) | Skeletal-articular system 2 (YA) | Tutorial – skeletal-articular (YA) | Tutorial – fluid balance (DR) | Tea and HPALS meeting | |
| 11h00-11h30 | Break | | | | | |
| 11h30-12h30 | Muscular system 1 (SH) | Immune system 1 (JS) | Fluid balance 1 (DR) | Thermoregulation 1 (DR) | | Self-study |
| 12h30-13h30 | Muscular system 2 (SH) | Immune system 2 (JS) | Fluid balance 2 (DR) | Thermoregulation 2 (DR) | Self-study | |
| 13h30-14h30 | Lunch | | | | | |

| | | | | | |
|----------------------|------------------------|------------------------------------|------------|-------------------------|------------|
| 14h30 - 15h30 | Muscular system 3 (SH) | Tutorial – respiratory system (JK) | Self-study | Thermoregulation 3 (DR) | Self-study |
| 15h30-16h30 | Self-study | Self-study | Self-study | Self-study | Self-study |

Module Outcomes

After completion of this module, the student should be able to understand, define and describe:

- Standard anatomical and physiological terminology in describing the organisation of the human body
- Macro- and micro-anatomy/physiology of the neuro- musculoskeletal, neurological, cardiovascular, pulmonary, metabolic, and/or autoimmune system
- The cellular basis of physiology, tissue and body systems including basic biochemistry and applied biochemistry in exercise and training
- Reproduction, growth, development, and aging
- Homeostasis and nutrition and basic metabolic processes
- The principles of support and movement integral to the human body
- The human body's acute responses and chronic adaptation to physical activity, exercise, and exercise training in the neuro-musculoskeletal, neurological, cardiovascular, pulmonary, metabolic, endocrine, and auto-immune system(s)
- The bioenergetics related to different modes of exercise.
- The acute and chronic responses and adaptations associated with exercising in the heat, cold, high altitude, diving and space
- The immune system, including terminology used within pathophysiology, pathogens and disease

Assessment

This content for this module will be assessed in a test on **19 February 2023 (09h00 – 12h00)**.

Biomechanics & Movement Analysis Techniques Course

Coordinator: A/Prof Yumna Albertus & Dr Sharief Hendricks

This three-day course is constructed to provide you with an appropriate understanding behind the biomechanical mechanisms that underpin human movement, performance and injury. The aim is to provide you with an introduction to the fundamental knowledge required to capture, model, and determine the principles of motion and its associated forces. This course provides you with an introduction to some basic physics and mathematics to applied and clinical interpretation. You will learn how to collect movement data, process the movement, construct the necessary movement planes, plot some interesting movement waveforms, and attempt to interpret the biomechanical data from a clinical or performance perspective.

This course will introduce the learners to the use of biomechanics in a sports medicine and sports science environment. Topics include, but are not limited to, throwers shoulder, lower limb injury in runners, illegal action in throwing, special population groups like cerebral palsy, and an introduction to the biomechanics laboratory, including the Vicon system (3-dimensional movement analysis), Force platform and Electromyography.

Practical

Students will be taught to apply reflective markers, collecting biomechanical data and processing it for practical interpretation for walking and running.

Assessment

The assessment for this course will be in the form of a written report for Biomechanics techniques.

Exercise Physiology Techniques Course:

Convenor: A/Prof Dale Rae

This module will take place from Tuesday 20 February to Friday 1 March 2024. It covers 8 topics, each of which comprises a theory session underpinning the practical sessions, which will be run by an expert in the field. Theory sessions will take place in Classroom 1 and practical sessions in the HPALS labs.

Objectives

- To provide the student with the theoretical knowledge underpinning common physiological tests and techniques used to assess aspects of health, metabolism and exercise performance in humans.
- To teach students how to set up equipment, collect data and interpret findings in the context of normative values for the general population as well as for athletes.

At the end of this module, the student should understand and be able to conduct physiological testing relating to:

- **Exercise testing in healthy adults** (Ms Tayla Ross)
 - Screening – pre-exercise screening, blood pressure, glucose, cholesterol
 - Health-related physical fitness testing – cardiovascular fitness, muscle strength and endurance, flexibility
 - Skills-related physical fitness testing – speed, power, agility, balance, coordination, reaction time
- **Body composition** (A/Prof Jacolene Kroff)
 - Height, weight, circumference measures
 - Body fat assessment (BIA, skinfolds)
- **Lung function testing** (A/Prof Jacolene Kroff)
 - Purpose of pulmonary function tests
 - Forced vital capacity test
- **Cardiac function testing** (A/Prof Jeroen Swart, Dr Caro D'Alton, Dr Fallon Hope)
 - The conduction system and electrophysiology
 - Basic principles of the electrocardiogram (ECG)
 - ECG stress test (Bios only)
- **Running physiology** (A/Prof Andrew Bosch)
 - Submaximal testing
 - Running economy and substrate utilisation
 - Maximal testing (e.g. VO₂ max test)
- **Cycling kinematics** (A/Prof Jeroen Swart)
 - Kinematic tools for cycling
 - Approach to and practical skills of bike set up
- **Metabolic testing** (A/Prof Dale Rae)
 - Oral glucose tolerance test
- **Physical activity and sleep monitoring** (Dr Kate Larmuth, A/Prof Dale Rae)
 - Understanding devices used to measure habitual physical activity and sleep
 - Measurement of time spent in habitual physical activity domains using accelerometry
 - Assessment of habitual sleep patterns using actigraphy

Module Outcomes

After completion of this module, the student should be able to understand, describe and apply:

- Basic components and principles as well as exercise testing and interpretation of:
 - Body composition, e.g., body fat percentage
 - Cardio-respiratory system, e.g. blood pressure, lung function, and VO₂max endurance
 - Resting and exercise ECG

- Nutritional and hydration status
- Running & cycling physiology & biomechanics
- Isokinetic testing
- First aid and Basic life support (BLS) level 1 certification.
- The application of ergometric, isokinetic, isotonic, isometric, electromyographic, electrocardiographic, electrophysical, cardiopulmonary, spirometric, anthropometric, photographic, videographic, biochemical, metabolic and biomechanical modalities

Assessment

Students will be assessed based on short reports to be submitted by Wednesday 20 March 2024.

Schedule

| Week 1 | | Tue 20 Feb | Wed 21 Feb | Thurs 22 Feb | Fri 23 Feb |
|-------------|--|--|--|--|---|
| 09h00-10h00 | | Physical activity (PA) monitoring theory (Kate) <i>Classroom 1</i> | Exercise testing theory (Tayla) <i>Classroom 1</i> | Basic ECG theory (Jeroen) <i>Classroom 1</i> | Basic ECG theory (Jeroen) <i>Classroom 1</i> |
| 10h00-11h00 | PA monitor set-up prac – group 1 (Kate) <i>Classroom 1</i> | Tea and HPALS meeting <i>Classroom 1</i> | | | |
| 11h00-11h30 | | Break | Break | Break | |
| 11h30-12h30 | | PA monitor set-up prac – group 2 (Kate) <i>Classroom 1</i> | Skills-related physical fitness testing prac – group 1 (Tayla) <i>Blue floor, Biokinetics lab</i> | Health-related physical fitness testing prac – group 1 (Tayla) <i>Blue floor, Biokinetics lab</i> | Basic ECG theory (Jeroen) <i>Classroom 1</i> |
| 12h30-13h30 | Sleep monitoring theory (Dale) <i>Classroom 1</i> | Free / Mosque | | | |
| 13h30-14h30 | | Lunch | Lunch | Lunch | Lunch |
| 14h30-15h30 | | Sleep monitor set-up prac – group 1 (Dale) <i>Sleep lab</i> | Skills-related physical fitness testing prac – group 2 (Tayla) <i>Blue floor, Biokinetics lab</i> | Health-related physical fitness testing prac – group 2 (Tayla) <i>Blue floor, Biokinetics lab</i> | ECG stress test theory (Caro) <i>Classroom 1</i> |
| 15h30-16h30 | Sleep monitor set-up prac – group 2 (Dale) <i>Sleep lab</i> | Stress ECG prac – group 1 (Bios only) (Fallon) <i>Treadmill lab</i> | | | |

| Week 2 | Mon 26 Feb | Tue 27 Feb | Wed 28 Feb | Thurs 29 Feb | Fri 1 Mar |
|-------------|--|--|---|--|---|
| 08h00-09h00 | | | | OGTT prac – group 1 (Dale) <i>Sleep lab</i> | OGTT prac – group 2 (Dale) <i>Sleep lab</i> |
| 09h00-10h00 | Body composition theory (Jaci) <i>Classroom 1</i> | PA data retrieval prac – group 1 (Kate) <i>Sleep lab</i> | OGTT theory (Dale) <i>Classroom 1</i> | | |
| 10h00-11h00 | | PA data retrieval prac – group 2 (Kate) <i>Sleep lab</i> | Lung function theory (Jaci) <i>Classroom 1</i> | Cycling kinematics theory (Jeroen) <i>Classroom 1</i> | Tea and HPALS meeting <i>Classroom 1</i> |
| 11h00-11h30 | Break | Break | Break | Break | |
| 11h30-12h30 | Body composition prac – group 1 (Jaci) <i>Biodex lab</i> | Sleep data retrieval prac – group 1 (Dale) <i>Sleep lab</i> | Lung function prac (Jaci) <i>Classroom 1</i> | Cycling kinematics prac – group 1 (Jeroen) <i>Bike lab</i> | Free |
| 12h30-13h30 | Body composition prac – group 2 (Jaci) <i>Biodex lab</i> | Sleep data retrieval prac – group 2 (Dale) <i>Sleep lab</i> | Lung function prac (Jaci) <i>Classroom 1</i> | Cycling kinematics prac – group 2 (Jeroen) <i>Bike lab</i> | Free / mosque |
| 13h30-14h30 | Lunch | Lunch | Lunch | Lunch | Lunch |
| 14h30-15h30 | Running physiology theory (Andrew) <i>Classroom 1</i> | Running prac – group 1 (Andrew) <i>Treadmill lab</i> | Running prac – group 2 (Andrew) <i>Treadmill lab</i> | | Stress ECG prac – group 1 (Bios only) (Fallon) <i>Treadmill lab</i> |
| 15h30-16h30 | | | | | |

Module 2: Health Promotion & Special Populations Module

Required Textbook: American College of Sports Medicine Guidelines for Exercise Testing and Prescription, 11th edition, B.A. Franklin (editor), Lippincott Williams and Wilkins

Overview

This module introduces Biokinetics students to working with disease free population groups. Students will gain an understanding of exercise screening, testing and prescription for apparently healthy individuals and special populations. In addition, students will have theory and practical lessons in theories of behaviour change and motivational interviewing.

Module Outcomes

After completion of this module, the student should be able to understand, describe and apply:

- Historical development of therapeutic recreation as an intervention tool for different populations.
- The role of regular exercise and physical activity (and inactive or a sedentary lifestyle) on health and disease patterns (epidemiology) internationally and in SA.
- International and national trends related to health promotion (e.g., Exercise is Medicine, Millennium Development Goals, Vitality and WOW).
- The interrelationship between physical activity, fitness, functional constraints and perceptual motor development and neurological aspects of motor control over the lifespan to rehabilitation of human motor behaviour.
- Human growth, development, maturation, and aging to a variety of Biokinetics contexts, including special populations.
- Consultation, screening, testing, interpretation & prescription
 - Evidence-based models and approaches to practice
 - Motivational and interviewing skills within a Biokinetics context.
 - Assessment and documentation in therapeutic recreation; and exercise pre-participation health screening and physical activity readiness.
 - Clinical exercise testing, interpretation and patient feedback and education.
 - Health-related physical fitness and functional movement assessment and interpretation of Musculo-skeletal system, e.g., flexibility, proprioception, strength (isometric, isotonic and isokinetic), speed, power, and muscle endurance
 - Identify and correct abnormal posture and gait patterns through appropriate feedback and corrective exercises.
 - General and advanced principles of exercise prescription and how to apply general principles of exercise prescription.
 - Exercise prescription for healthy populations and for special populations: Children and Adolescents; Non-specific low back pain; Older adults; Pregnancy; Special needs: e.g., paraplegics and amputees
 - The principles related to movement through the air and water mediums.

- Therapeutic recreation evaluation protocols and programs for different individuals and groups in therapeutic and recreational contexts programs for different groups/populations; Group dynamics vs individual rehabilitation.
- Foundational theories regarding psychology and sociology in Biokinetics contexts.
 - The human psyche and health behaviour, health promotion (wellness), human functioning and performance.
 - Theoretical foundations for understanding behaviour change, exercise behaviour and adherence
 - Implementation of different strategies and wellness initiatives; Leisure education and elimination of barriers to participation
- Case studies on clinical exercise testing and evaluation

Module Evaluation

- All the work in this module will form part of the clinical exams.
- In addition, students will complete one mini small-group assignment.
- Health Promotion Module Test: **8 April 2024 09h00 – 12h00**

| HEALTH PROMOTION | | | |
|--|-----------------|-------------|---------------|
| Lecture topic | Lecturer | Date | Time |
| Exercise Testing for the Apparently Healthy Adult 1 | Tayla Ross | 4-Mar | 09h00 - 10h30 |
| Exercise Testing for the Apparently Healthy Adult 2 | Tayla Ross | 4-Mar | 11h00 - 12h30 |
| Exercise Testing for the Apparently Healthy Adult Prac | Tayla Ross | 4-Mar | 13h30 - 15h00 |
| Exercise Prescription for the Apparently Healthy Adult 1 | Tayla Ross | 6-Mar | 09h00 - 10h30 |
| Exercise Prescription for the Apparently Healthy Adult 2 | Tayla Ross | 6-Mar | 11h00 - 12h30 |
| Exercise Prescription for the Apparently Healthy Adult Prac | Tayla Ross | 6-Mar | 13h30 - 15h00 |
| Role of Physical Activity in Health and Disease | | 11-Mar | 09h00 - 10h30 |
| Theories and Models of Behaviour Change | | 11-Mar | 11h00 - 12h30 |
| Wellness 1 | Tayla Ross | 11-Mar | 13h30 - 15h00 |
| 5A's Approach and Healthy Messaging | | 13-Mar | 08h30 - 09h30 |
| Motivational Interviewing | | 13-Mar | 09h30 - 10h30 |
| Wellness 2 | Tayla Ross | 13-Mar | 11h00 - 12h30 |
| Wellness 3 | Tayla Ross | 13-Mar | 13h30 - 15h00 |
| Principles of exercise testing and rehabilitation, medical management and prognosis in the physically disabled | Tayla Ross | 14-Mar | 09h00 - 11h00 |
| Exercise Prescription During Pregnancy | Tayla Ross | 18-Mar | 09h00 - 10h30 |
| Exercise Prescription During Pregnancy Prac | Tayla Ross | 18-Mar | 10h30 - 11h30 |
| Exercise Prescription for Children | Tayla Ross | 18-Mar | 12h30 - 14h00 |
| Exercise Prescription for Children Prac | Tayla Ross | 18-Mar | 14h00 - 15h00 |

| | | | |
|--------------------------------|---------------|---------------|----------------------|
| Pubertal Age Assessment | Mike Lambert | 20-Mar | 09h00 - 10h00 |
| Exercise and Elderly | Udhir Ramnath | 20-Mar | 10h30 - 12h00 |
| Exercise and Elderly Practical | Udhir Ramnath | 20-Mar | 12h30 - 13h30 |
| Hydrotherapy Theory & Prac | Kim Murphy | 20-Mar | 14h30 - 17h00 |
| Health Promotion Test | | 08-Apr | 09h00 - 12h00 |

Note: Students must bring their swimming costumes and a cap for the Hydrotherapy Prac.

Module 3: Chronic Diseases Module

Physiology, pathology and rehabilitation in chronic disease.

Recommended Textbooks: ACSM's Exercise Management for persons with chronic diseases and disabilities, 3rd edition. J. Larry Durstine (editor), Human Kinetics, 2009 and American College of Sports Medicine Guidelines for Exercise Testing and Prescription, 11th edition, B.A. Franklin (editor), Lippincott Williams and Wilkins

Overview of Module

The course will introduce the concepts of cardiovascular and respiratory pathology and will also highlight the possible benefits of exercise in the prevention and treatment of certain forms of cardiovascular and respiratory disease.

The following methods of teaching will be utilised throughout the module: lectures, tutorials, demonstrations, and study assignments with report writing.

Module Outcomes

After completion of this module, the student should be able to understand, describe and apply:

- Introduction to Chronic Diseases & -Conditions: epidemiology of common diseases; long-term effects of distress and negative psycho-social factors on health; individually based risk stratification
- The risk factors, causes, pathophysiology, symptoms, management, and treatment for: neuro-musculoskeletal, neurological, cardiovascular, pulmonary, metabolic, and/or autoimmune conditions/diseases.
- Special investigation methods used to assess in chronic diseases and disabilities.
- The role of exercise testing and prescription in the management of different chronic diseases and disabilities.
- The possible role of exercise intervention programs in treating or managing various chronic diseases disabilities.
- Common medications used to treat these diseases or conditions.
 - Basic concepts of pharmacology and appropriate use of the drugs in the management and treatment of diseases related to the neuro- musculoskeletal, neurological, cardiovascular, pulmonary, metabolic, endocrine, and immune system(s).
 - The knowledge of various drugs prescribed for the treatment of and appropriate use of the drugs in the management and treatment of injuries and chronic disease.
 - Adapting exercise assessment, prescription and exercise monitoring for patients on specific drugs.
- Report writing, patient education and or referral.
- Complex problem base/case base diseases/conditions and Journal Club

Module Evaluation

- All the work in this module will form part of the clinical exams.

- In addition, students will complete 1 mini small-group assignments and present case studies.
- Chronic Diseases Module Test: **NA (Content covered in Theory Exam 1)**

| CHRONIC DISEASES | | | |
|---|----------------------|-------------|---------------|
| Lecture topic | Lecturer | Date | Time |
| An integrated approach to chronic disease, "A patient-centered approach" | Klaus von Pressentin | 12-Apr | 14h00 - 15h30 |
| Health screening and risk factor stratification | | 15-Apr | 09h00 - 10h30 |
| Pharmacology basics | Caroline D'Alton | 15-Apr | 11h00 - 12h30 |
| Stress as a risk factor for CAD | Caroline D'Alton | 15-Apr | 13h30 - 15h00 |
| Psychological considerations for patients with chronic disease 1 | Phillipa Skowno | 17-Apr | 09h00 - 10h30 |
| Hypertension and exercise & Cardiovascular pharmacology and exercise | Caroline D'Alton | 17-Apr | 11h00 - 13h00 |
| Clinical pharmacology and exercise testing/training in high-risk patients | Jeroen Swart | 17-Apr | 14h00 - 16h00 |
| Exercise rehabilitation for cardiovascular disease; Peripheral vascular disease; Heart failure | Caroline D'Alton | 19-Apr | 14h00 - 16h00 |
| Exercise Prescription after Organ Transplant | Caroline D'Alton | 22-Apr | 09h00 - 11h00 |
| Risk factors for heart disease & Sudden death during exercise; The athlete's heart | Jeroen Swart | 22-Apr | 11h30 - 13h30 |
| Obesity prevention and obesity management | Jacolene Kroff | 22-Apr | 14h30 - 16h30 |
| Exercise rehabilitation for respiratory and cardiovascular disease; Asthma & EIB | Jacolene Kroff | 24-Apr | 09h00 - 10h30 |
| Osteoporosis and the Female Athlete Triad | Tayla Ross | 24-Apr | 11h00 - 13h00 |
| Cardiac rehabilitation in different settings | Fallon Hope | 24-Apr | 14h00 - 15h30 |
| Exercise prescription for diabetes 1 | Jacolene Kroff | 26-Apr | 14h00 - 15h30 |
| Exercise rehabilitation in patients with spinal cord injuries & introduction to neuroplasticity | Rob Evans | 29-Apr | 09h00 - 11h00 |
| Exercise Rehabilitation for patients with brain injuries | Tayla Ross | 29-Apr | 11h30 - 13h30 |
| Exercise prescription for patients with Cancer | Jacolene Kroff | 29-Apr | 14h30 - 16h30 |
| Exercise prescription for patients with Epilepsy | Avi Pursad | 3-May | 14h00 - 15h30 |
| Exercise prescription for patients with Osteoporosis | Feroza Lekota | 6-May | 09h00 - 10h30 |

| | | | |
|---|------------------|--------|---------------|
| Exercise Prescription for Neurodegenerative Diseases (Parkinsons, ALS, MS etc.) | Elizma Atterbury | 6-May | 11h00 - 13h00 |
| Neurorehabilitation Practical | Rob Evans | 6-May | 14h00 - 16h00 |
| Psychological considerations for patients with chronic disease 2 | Phillipa Skowno | 8-May | 09h00 - 10h30 |
| Exercise prescription for patients with Fibromyalgia | Waseem Choonara | 8-May | 11h00 - 12h30 |
| Exercise prescription for patients with chronic fatigue syndrome | Fallon Hope | 8-May | 14h00 - 16h00 |
| Exercise prescription for patients with Arthritis | Jacolene Kroff | 9-May | 09h00 - 11h00 |
| Exercise prescription for patients with HIV | Caroline D'Alton | 9-May | 11h30 - 13h00 |
| Exercise prescription for diabetes 2 | Jacolene Kroff | 10-May | 14h00 - 16h00 |

Module 4: Neuromuscular and Skeletal Systems Module (NEMS)

Recommended Textbook: **Brooks, G.A., Fahey, T.D., and Baldwin, K.M., Exercise Physiology.** Human Bioenergetics and its Applications. 4th Edition, 2005

Chapter 17, Skeletal Muscle Structure and Contractile Properties, pages 363-395.

Chapter 18, Neurons, Motor Unit Recruitment, and Integrative Control of Movement, pages 396-429.

Overview of Module

This module will cover the consequences of training and the adverse effects of too much unaccustomed physical activity on skeletal muscle function. This module will also focus on the brain and neural structures involved in movement and fatigue.

Module Outcomes

After completion of this module, the student should be able to understand, describe and apply:

- Nutritional demands/needs for special populations such as pregnancy, children, the elderly, and those diagnosed with depression, and in patients undergoing neuro-musculoskeletal rehabilitation, in patients with chronic disease.
- Nutritional demands for different types of exercise, and nutrition in sport and exercise recovery and optimal performance, and evidence surrounding new trends in nutrition.
- Apply biomechanical knowledge to the development and implementation of appropriate and scientifically based exercise programs.
- Apply appropriate strategies to ensure progression and adherence to interventions.
- Qualitative biomechanical analyses on basic resistance exercises and common sporting techniques.
- Anatomical analyses of both isolated and integrated movements as well as common exercises and simple sporting manoeuvres.
- Neuro-musculoskeletal rehabilitation: Advanced assessment and rehabilitation techniques within MSK
- Exercise testing and interpretation of EMG & isokinetic testing
- Apply the criteria for return to play/sport protocols & for successful discharge.

Module Evaluation

- All of the work in this module will form part of the June written exam and the clinical exams.
- In addition, students will complete 1 mini small-group assignment.
- NEMS Module Test: **16 September 09h00 – 11h20**

NEUROMUSCULAR AND SKELETAL MUSCLE SYSTEMS MODULE/HIGH PERFORMANCE MODULE

| Lecture topic | Lecturer | Date | Time |
|--|-------------------|-------------|---------------|
| High Performance Athlete | Sharief Hendricks | 5-Aug | 09h00 - 10h30 |
| Introduction to High performance testing and Management | Sharief Hendricks | 5-Aug | 11h00 - 12h30 |
| Plyometric Training 1 | Ayden Smith | 5-Aug | 13h00 - 15h00 |
| Heart Rate, Exercise Performance and HIMS | Sharief Hendricks | 7-Aug | 09h00 - 10h30 |
| Overview of types of resistance training | Sharief Hendricks | 7-Aug | 11h00 - 12h30 |
| Measurement and interpretation of strength, local muscle endurance and power | Ayden Smith | 7-Aug | 13h00 - 15h00 |
| EMG activity – theory | Yumna Albertus | 12-Aug | 09h00 - 10h30 |
| Periodization 1 | Sharief Hendricks | 12-Aug | 11h00 - 12h30 |
| Nutrition for weight gain (including supplements) | Marie McGregor | 12-Aug | 13h30 - 15h30 |
| Resistance training for different goals and Programme Design | Sharief Hendricks | 14-Aug | 09h00 - 10h30 |
| Periodization 2 | Sharief Hendricks | 14-Aug | 11h00 - 12h30 |
| Isokinetic Testing: THEORY | Ayden Smith | 14-Aug | 13h30 - 15h00 |
| Isokinetic Testing: PRACTICAL | Ayden Smith | 14-Aug | 15h00 - 16h30 |
| EMG activity – practical | Yumna Albertus | 16-Aug | 14h00 - 16h00 |
| Biomechanics of resistance exercise | Sharief Hendricks | 19-Aug | 09h00 - 10h30 |
| Resistance training and “spotting” techniques prac & self-directed learning | Sharief Hendricks | 19-Aug | 11h00 - 12h30 |
| Plyometric Training 2 | Ayden Smith | 19-Aug | 13h30 - 15h00 |
| Nutrition for weight loss (fads and fashions) | Marie McGregor | 21-Aug | 09h00 - 10h30 |
| Sports specific nutrition with practical applications | Marie McGregor | 21-Aug | 11h00 - 12h30 |
| Readiness to return to play | Ayden Smith | 21-Aug | 13h30 - 15h00 |
| NEMS Test | | 16-Sep | 09h00 - 12h00 |

Module 5: Orthopaedic Rehabilitation and Biokinetics Practice Module

*Recommended Textbooks: **Techniques in Musculoskeletal Rehabilitation**, W. E Prentice and Voight MI, McGraw-Hill, 2001. ISBN 0 07 135498 0 and **The Foundations of Athletic Training: Prevention, Assessment and Management**. 3rd edition, M.K. Anderson, S.J. Hall, M. Martin, Lippincott Williams & Wilkins, 2008. ISBN 978 0781784450*

Overview of Module

The main aim of this module is to teach Biokinetics students the aetiology, assessment and exercise prescription for various orthopaedic injuries. In addition, the scope of practice of Biokinetics and related professions, developing a business plan, the basic principles of starting a business, and general HPCSA rules and regulations about Biokinetics.

Module Outcomes

Part one of this module aims to teach students about Biokinetics Practise. The objectives are:

- Rules and regulations of Biokinetics practice, the scope of Biokinetics practice and ethical rules formulated by the Health Professions Council of South Africa.
- Health policy, health systems and structures, capacity building and interdisciplinary healthcare as required in SA legislation, including ICD 10 and BHF codes.
- Practice management skills and competencies, including equipment maintenance, human resources and supervise programs, individuals, teams and subordinates within the value system of the profession
- Market and financial aspects, and entrepreneurial skills of a Biokinetics practice

Part two and three: The specific objectives are:

- Introduction to Orthopaedic Injuries & -Conditions.
 - Wound healing and pain; Acute and chronic inflammation.
 - Effects of common drugs used on exercise testing or training responses.
 - Fundamental motor development and perceptual- motor development theories and concepts to a variety of contexts
 - Structure and function of the central nervous system as it relates to human functioning in Biokinetics context.
 - Neuromuscular control for rehabilitation and body posture; The principles of optimal flexibility, muscle strength and proprioception on static and dynamic postures.
 - Normal and abnormal human movement patterns in relation to neuromuscular functioning (e.g., gait).
- The basic understanding of incidence, symptoms, and aetiology of specific orthopaedic injuries/conditions.
 - Medical and injury histories of a variety of patients.
 - Specialised manual evaluation techniques in assessing an individual's injury.
 - Advanced exercise testing equipment and techniques to assess individuals with different injuries.

- Signs and symptoms indicating emergency medical attention, further investigation, or referral of the patient.
- Report writing and referral.

Module Evaluation

- All the work in this module will form part of the clinical exams.
- Students will complete five mini small-group assignments.
- No theory test will be conducted, competencies are tested during clinical examinations and theory aspects during the June Written Exam.

| ORTHOPAEDIC MODULE | | | |
|---|------------------|-------------|---------------|
| I) ORTHOPAEDIC MODULE (GENERAL) | | | |
| Lecture topic | Lecturer | Date | Time |
| Gen: Grading of injuries; Receiving referrals; Components of clinical assessment: Introduction to pathophysiology of orthopaedic injury & healing | Caroline D'Alton | 2-Apr | 08h30 - 10h00 |
| Gen: Motor learning & motor control basics I | Elizma Atterbury | 2-Apr | 10h30 - 12h00 |
| Gen: Principles and Application of Balance and Proprioceptive Training 1 | Elizma Atterbury | 2-Apr | 13h00 - 14h30 |
| Gen: End of Range Feels and Clinical Measurement and assessment (Goniometry etc) | Avi Pursad | 8-Apr | 13h00 - 14h30 |
| Gen: Motor development and motor learning in sports rehabilitation | Janine Gray | 10-Apr | 13h30 - 15h00 |
| Gen: Neurodynamics 1 | Janine Gray | 15-May | 14h30 - 16h00 |
| Gen: Motor learning & motor control basics 2 | Elizma Atterbury | 22-May | 13h30 - 15h00 |
| Gen: Principles and Application of Balance and Proprioceptive Training 2 | Elizma Atterbury | 22-May | 15h00 - 16h30 |
| Gen: Neurodynamics 2 | Janine Gray | 17-Jul | 11h30 - 13h00 |
| Gen: Gait retraining | Neil Hopkins | 28-Aug | 12h30 - 14h30 |
| Gen: Amputee conditioning | Neil Hopkins | 28-Aug | 14h30 - 16h30 |
| Gen: Anatomy Revision Workshop | | 17-Sep | 08h30 - 10h30 |
| II) DIFFERENT JOINTS (THEORY AND APPLIED) | | | |
| Back and Neck | | | |
| Spine: Clinical and functional surface anatomy of the spine, neck and head: | | 3-Apr | 08h30 - 10h30 |
| Spine: Clinical biomechanics of the spine and aetiology of common back injuries | Janine Gray | 3-Apr | 11h00 - 13h00 |
| Spine: Assessment of back injuries | Janine Gray | 3-Apr | 14h00 - 16h00 |
| Spine: clinical Biomechanics of neck and aetiology of common neck injuries. | Janine Gray | 4-Apr | 08h30 - 10h30 |
| Spine: Neck injury assessment | Janine Gray | 4-Apr | 11h00 - 13h00 |
| Spine: Spine and Neck rehabilitation 1 | Janine Gray | 4-Apr | 14h00 - 16h00 |

| | | | |
|---|-------------|--------|---------------|
| Spine: Spine and Neck rehabilitation 2 | Janine Gray | 5-Apr | 14h00 - 16h00 |
| Spine: Spine rehabilitation Case Study | | | |
| Spine: Back & Neck Revision Workshop | Janine Gray | 17-Sep | 11h00 - 12h30 |
| Hip | | | |
| Hip: Clinical and functional surface anatomy of the hip, thigh and pelvis | | 13-May | 08h30 - 10h30 |
| Hip: Clinical biomechanics and aetiology of common hip, pelvis and thigh injuries 1 | Kim Murphy | 13-May | 11h00 - 13h00 |
| Hip: Hip / thigh / pelvis injury assessment | Kim Murphy | 13-May | 14h00 - 16h00 |
| Hip: Clinical biomechanics and aetiology of common hip, pelvis and thigh injuries 2 | Kim Murphy | 15-May | 09h00 - 11h00 |
| Hip: Rehabilitation of hip/thigh/pelvis injuries | Kim Murphy | 15-May | 11h30 - 13h30 |
| Hip: Hip Rehab Case study | Avi Pursad | 17-May | 14h00 - 15h30 |
| Hip: Hip/Pelvis Recap and feedback on hip/pelvis rehabilitation | Kim Murphy | 18-Sep | 09h00 - 10h30 |
| Knee | | | |
| Knee: Clinical and functional surface anatomy of the knee and lower leg | | 20-May | 08h30 - 10h30 |
| Knee: Clinical biomechanics and aetiology of knee injuries 1 | Avi Pursad | 20-May | 11h00 - 12h30 |
| Knee: Clinical biomechanics and aetiology of knee injuries 2 | Avi Pursad | 20-May | 13h30 - 15h00 |
| Knee: Knee injury assessment | Avi Pursad | 22-May | 09h00 - 10h30 |
| Knee: Knee injury rehabilitation | Avi Pursad | 22-May | 11h00 - 12h30 |
| Knee: Knee Case study discussion & exercise examples | Avi Pursad | 23-May | 09h00 - 10h30 |
| Knee: Knee Revision Workshop | Avi Pursad | 18-May | 13h30 - 15h00 |
| Shoulder | | | |
| Shoul: Clinical and functional surface anatomy of the shoulder and upper limb | | 15-Jul | 08h30-10h30 |
| Shoul: Clinical Biomechanics & Aetiology of common shoulder injuries 1 | Janine Gray | 15-Jul | 11h00 - 12h30 |
| Shoul: Clinical Biomechanics & Aetiology of common shoulder injuries 2 | Janine Gray | 15-Jul | 13h30 - 15h00 |
| Shoul: Shoulder injury assessment | Janine Gray | 17-Jul | 09h00 - 11h00 |
| Shoul: Shoulder injury rehab | Avi Pursad | 17-Jul | 14h00 - 15h30 |
| Shoul: Shoulder Case study discussion & exercise examples | | 18-Jul | 09h00 - 10h30 |
| Shoul: Shoulder Recap and Feedback | Janine Gray | 17-Sep | 13h30 - 15h00 |
| Ankle and Foot | | | |
| Ankle: Clinical and functional Anatomy of Ankle and Foot | | 29-Jul | 08h30 - 10h30 |

| | | | |
|--|------------------|--------|---------------|
| Ankle: Clinical biomechanics and aetiology of the foot and ankle injuries 1 | Kim Murphy | 29-Jul | 11h00 - 12h30 |
| Ankle: Aetiology of common foot/ankle injuries: implications for rehab | Kim Murphy | 29-Jul | 13h00 - 14h30 |
| Ankle: Foot/ankle injury assessment | Kim Murphy | 31-Jul | 09h00 - 10h30 |
| Ankle: Rehabilitation of foot/ankle injuries | Kim Murphy | 31-Jul | 11h00 - 12h30 |
| Ankle: Clinical biomechanical assessment of the lower limb, foot and ankle: Practical | Caroline D'Alton | 31-Jul | 13h00 - 14h30 |
| Ankle: Clinical biomechanical assessment of the lower limb, foot and ankle: Practical (cont) | Caroline D'Alton | 31-Jul | 14h30 - 16h00 |
| Ankle: Ankle Case Study Discussion | | 1-Aug | 09h00 - 10h30 |
| Ankle: Ankle Recap and Feedback | Kim Murphy | 18-Sep | 11h00 - 12h30 |
| Arm & Wrist | | | |
| Arm: Clinical and functional Anatomy of arm & Wrist | | 26-Aug | 08h30- 10h30 |
| Arm: Clinical Biomechanics & Aetiology of common elbow, arm and hand injuries | Tayla Ross | 26-Aug | 11h00 - 12h30 |
| Arm: Assessment of elbow, arm and hand injuries | Tayla Ross | 26-Aug | 13h30 - 15h00 |
| Arm: Rehabilitation of hand injuries | Tayla Ross | 28-Aug | 08h30 - 10h00 |
| Arm: Case study discussion | Tayla Ross | 28-Aug | 11h00 - 12h30 |
| Arm: Elbow, Arm & Hand Revision Workshop | Tayla Ross | 19-Sep | 09h00 - 10h30 |
| III) BIOKINETICS PRACTICE | | | |
| BioPrac: Scope of Biokinetics Practise | Neil Hopkins | 8-Apr | 15h00 - 16h30 |
| BioPrac: ICD10 coding and implementation of the NHPRL | Avi Pursad | 9-Apr | 09h00 - 10h30 |
| BioPrac: Rules and regulations, and practice ethics in Biokinetics practice | Neil Hopkins | 9-Apr | 11h00 - 13h00 |
| BioPrac: Professional ethics in Biokinetics | Neil Hopkins | 9-Apr | 14h00 - 16h00 |
| BioPrac: Introduction to rehab. modalities (theory) | Rob Evans | 10-Apr | 09h00 - 10h30 |
| BioPrac: Introduction to rehab. modalities (incl prac) | Rob Evans | 10-Apr | 11h00 - 12h30 |
| BioPrac: Entrepreneurship 1 | | 9-Sep | 13h00 - 15h00 |
| BioPrac: Entrepreneurship 2 | | 11-Sep | 09h00 - 10h30 |
| BioPrac: Developing a business plan and market research: | Neil Hopkins | 11-Sep | 11h00 - 12h30 |
| BioPrac: Professional Communication | Neil Hopkins | 13-Sep | 14h00 - 15h30 |

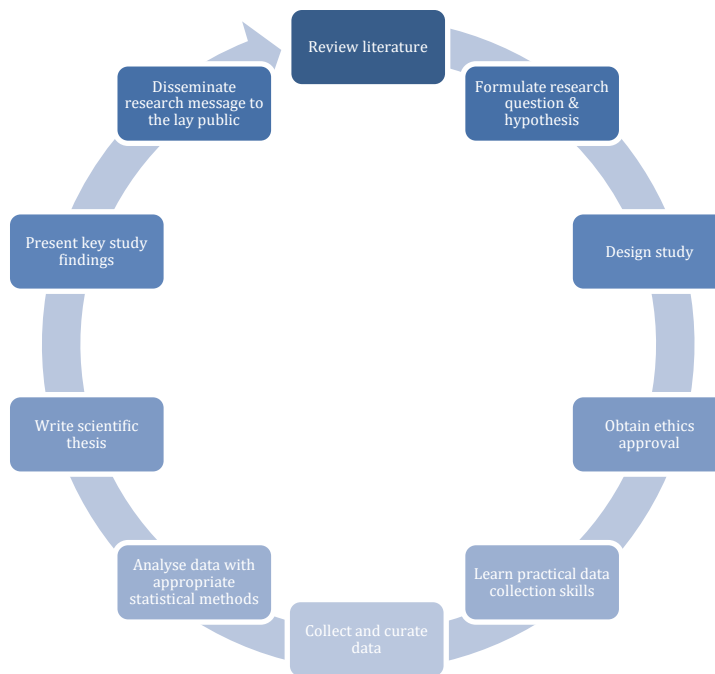
Module 6: Research Methods and Biostatistics (RESE)

Convenors: A/Prof Dale Rae

This module will run from Friday 8 March to Monday 25 November 2024. We will typically meet on a Friday in Classroom 1 for lectures and tutorials. In addition to our weekly Friday sessions, we will have a dedicated Biostats week from 22-26 July 2024. Students are expected to attend the weekly HPALS research meetings (10h30-11h30, SSISA Auditorium) as part of this module. The Journal Club is compulsory for the Exercise Science students, strongly encouraged for the new MSc/PhD students and optional for the Biokinetics students. The detailed schedule for this module is shown below.

Objective

- To provide students with the necessary theoretical concepts and practical analytical skills to complete the lifecycle of a research study, beginning with formulating an appropriate research question through to communicating the key findings to a scientific and lay audiences.



Life Cycle of a Research Study

Module Outcomes

After completion of this module, students should be able to:

- Develop a testable hypothesis designed to answer a scientific research question

- Critically evaluate scientific publications with regards to study design, statistical approach used, interpretation and strength of findings
- Understand common study designs to a test a scientific research question
- Understand the ethical considerations relating to human and animal research
- Think about appropriate questionnaires, tests or tools to collect data
- Demonstrate ability to collect and manage data
- Define, understand and be able to apply key statistical tests using SPSS (or similar software)
- Demonstrate ability to communicate key scientific findings through a written task and oral presentation

Important Dates

| Important dates | |
|-------------------|---|
| Mon 12 Feb | Honours Research Project booklet released |
| Mon 19 Feb | Honours Research Projects discussion (13h00 – 14h00) |
| Mon 26 Feb | Students to submit Honours Research Project choices (17h00) |
| Mon 4 Mar | Assignment of Honours Research Projects |
| Fri 12 Apr | Honours Research Project Proposal presentations |
| Fri 3 May | Honours Research Project Proposals due (17h00) |
| Thur 8 Aug | Research module assignment 1 due (17h00) |
| Fri 30 Aug | Research module assignment 2 due (17h00) |
| Tue 10 Sep | Research Paper Examination |
| Mon 4 Nov | Honours Research Project Thesis due (17h00) |
| Mon 25 Nov | Honours Research Project Oral presentations |

Schedule

| Terms 1 and 2 | | | |
|---------------|--|--|---|
| Date | Time | Topic | Lecturer |
| 8 Mar | 09h00-10h00 11h45-12h45 14h00-16h00 | Introduction to the research process Critical appraisal Time management skills | Dale Rae Dale Rae Zulfah Albertyn-Blanchard |
| 15 Mar | 08h00-09h00* 11h45-12h45 14h00-16h00 | Ethical considerations 1 Ethical considerations 2 TRREE – module 1 (Introduction to Research Ethics) | Malcolm Collins Malcolm Collins Malcolm Collins |

| | | | |
|--------|---|---|---|
| 22 Mar | In your own time | TRREE – module 3 (Informed consent) | Malcolm Collins |
| 29 Mar | Vac week | | |
| 5 Apr | 09h00-10h00 11h45-12h45 14h00-15h00 | Study design Research protocol development <i>Journal club</i> | Dale Rae Dale Rae Mike Lambert |
| 12 Apr | 09h00-13h00 | Research project proposal presentations | |
| 19 Apr | 09h00-10h30 11h45-12h45 14h00-15h00 | Introduction to searching research literature databases Questionnaire development <i>Journal club</i> | Gill Morgan Dale Rae Mike Lambert |
| 26 Apr | 09h00-10h30 11h45-12h45 14h00-15h00 | Introduction to EndNote Writing for research <i>Journal club</i> | Gill Morgan Alison September Mike Lambert |
| 3 May | 17h00 | Research project written proposals due | |
| 10 May | 09h00-10h00 11h45-12h45 14h00-15h00 | Literature reviews: narrative, systematic and meta-analyses 1 and 2 <i>Journal club</i> | Dale Rae Mike Lambert |
| 17 May | 09h00-10h00 11h45-12h45 | Introduction to qualitative research methodology 1 Introduction to qualitative research methodology 1 <i>Journal club</i> | Lisa Di Paolo? Mike Lambert |

| Terms 3 and 4 | | | |
|---------------|---|---|--------------------------------------|
| Date | Time | Topic | Lecturer |
| 19 Jul | 09h00-10h00 11h45-12h45 14h00-15h00 | Variables, measures of central tendency, variability, descriptive statistics 1 and 2 <i>Curating data in spreadsheets tutorial</i> | Dale Rae Dale Rae |
| 22-26 Jul | 09h00-16h00 | Biostats week | |
| 2 Aug | 09h00-10h00 11h45-12h45 14h00-15h00 | <i>Reporting data and results tutorial</i> <i>Displaying data (graphing) for research tutorial</i> <i>Journal club</i> | Dale Rae Dale Rae Mike Lambert |
| 16 Aug | 09h00-10h00 11h45-12h45 14h00-15h00 | <i>Writing a Discussion tutorial 1</i> <i>Writing a Discussion tutorial 2</i> <i>Journal club</i> | Dale Rae Dale Rae Mike Lambert |
| 23 Aug | 09h00-10h00 11h45-12h45 14h00-15h00 | <i>SPSS tutorials: Integrated biostats 1</i> <i>SPSS tutorials: Integrated biostats 2</i> <i>Journal club</i> | Dale Rae Dale Rae Mike Lambert |

| | | | |
|--------|---|---|--------------------------------------|
| 30 Aug | 09h00-10h00 11h45-12h45 14h00-15h00 | <i>SPSS tutorials: Integrated biostats 3</i> <i>SPSS tutorials: Integrated biostats 4</i> <i>Journal club</i> | Dale Rae Dale Rae Mike Lambert |
|--------|---|---|--------------------------------------|

Biostats week:

| | Mon 22 Jul | Tue 23 Jul | Wed 24 Jul | Thurs 25 Jul | Fri 26 Jul |
|--------------------|--|--|---|--|---|
| 09h00-10h30 | Introduction to probability testing, exploring data (DR) | ANOVA: one-way, two-way and with covariance (DR) | Correlation and limits of agreement (ML) | Simple linear regressions (KL) | Logistic regression analyses (DR) |
| 10h30-11h00 | Break | | | | HPALS meeting |
| 11h00-12h30 | Two-group comparisons: t-tests (DR) | Repeated measures ANOVA (DR) | Typical error of measurement, effect size and smallest worthwhile change (ML) | <i>SPSS tutorial: Simple linear regressions (KL)</i> | <i>11h30-13h00</i> <i>SPSS tutorial: Non-parametric stats (DR)</i> |
| 12h30-13h30 | Lunch | | | | |
| 13h30-16h00 | <i>SPSS tutorial: Exploring data, t-tests (DR)</i> | <i>SPSS tutorial: ANOVAs (DR)</i> | <i>SPSS tutorial: Correlations and effect sizes (ML)</i> | Non-parametric statistics (DR) | <i>SPSS tutorial: Logistic regressions (DR)</i> |

Ethics

Each student is required to submit their TRREE Training Certificate for both the Introduction to Research Ethics and Informed Consent modules via Vula as proof of having completed and passed the modules. This is a DP requirement for this module.

Journal Club

Journal club is compulsory for the Exercise Science students but optional for all other students. The aim is to help students learn to critically appraise scientific research. Sessions will be led by Prof Mike Lambert. In addition to traditional journal article

discussions, students will discuss how to review journal articles. They will also then have the opportunity to actually review articles as well as get involved with some of SSISA's High Performance Centre activities.

Assessment

The overall module mark is comprised of the following components:

| | |
|--|-----|
| Research project proposal presentation | 20% |
| Research project written proposal | 40% |
| Research module assignment 1 | 20% |
| Research module assignment 2 | 20% |

Research Project Proposal Presentation (Friday 12 April 2024)

These are oral presentations in which each student will have 10 minutes to present their Research Proposal, with 5 minutes for questions. Students should make use of presentation software like PowerPoint, KeyNote, Prezi, Canva or similar. The presentation should include sections on: Background, Aim, Methods (Study design, participants, data collection tools and procedures, planned statistical analysis approach), Time frame. Apart from having the opportunity to practice presentation skills, a key outcome of this process is for students to integrate feedback from staff and fellow students on their design to strengthen their written project proposal.

Research Project Proposal (due: Friday 3 May 2024, 17h00)

Each student is required to submit a written research project proposal. Proposals must follow the format required for research proposals submitted to the Faculty of Health Science's Human Research Ethics Committee. Guidelines for submissions are available here and students will be assisted in this process before handing in. There is no word limit / requirement but students are encouraged to be concise. These are the required sections:

- Introduction: Build a clear case for the research study
- Purpose: Clearly articulate the study aims, objectives and hypotheses
- Methods: Study design, overview and setting; participants (including recruitment, inclusion and exclusion criteria; detailed study procedures; data and statistical analyses.

- Ethical considerations: Potential risks and discomforts, potential benefits to participants, informed consent process, privacy and confidentiality, participant reimbursement, emergency care and insurance
- Timeframe
- References
- Appendices

Proposals (single pdf document) are to be emailed to Ms Ayesha Hendricks by 17h00 on the due date. Late submissions shall incur a 5% penalty. Proposals handed in more than 48h after the submission deadline will not be marked.

Research module assignments (due: Thursday 8 and Friday 30 August 2024, 17h00)

As part of continuous assessment, students will be required to submit two assignments based on the theory aspects of the module. The assignments are designed to simulate the Results and Discussions section of a thesis, in order to help students with the skills needed to write their theses. Students will be guided through this process in tutorials ahead of the submission deadlines.

Research module test (Tuesday 10 September 2024, 09h00-12h00)

Students will write a test to assess their (i) understanding of the theory underpinning research design and biostatistics and (ii) ability to interrogate and interpret the Methods, Results and Discussion/Conclusions sections of a scientific journal article. The test will be 3h (70 marks), allowing for 1h of reading time and 2h to answer the questions.

Research Project Thesis (due: Monday 4 November 2024, 17h00)

Each student will prepare and submit a small written thesis relating to their research project. The format shall be that of a manuscript to be submitted to a scientific journal for publication. Together with the supervising team, the student should select the most appropriate journal for their “thesis manuscript”, and follow the guidelines with regards to structure, word count, style, format for tables and figures, references etc. Additional material such as consent forms, questionnaires or other tools used in data collection may be included as Appendices. The students should also include the Author Instructions for the journal for which their thesis has been prepared as an Appendix. Each thesis needs to contain a Plagiarism declaration and a Turnitin report. Theses (single pdf document) should be emailed to Ms Ayesha Hendricks by 17h00 on the due date. Late submissions

shall incur a 5% penalty. Theses handed in more than 48h after the submission deadline will not be marked.

Research Project Final Oral Presentations (due: Monday 25 November 2024)

Finally, students will communicate the most important aspects of their Research Projects through an oral presentation delivered to staff, colleagues, parents and peers. Students should prepare a 12 minute scientific presentation which comprises Introduction, Methods, Results and Conclusions sections and be prepared to respond to questions (3 minutes) from the audience.

TEXTBOOKS AND REFERENCE MATERIALS

The following text books are available in Ayesha's office and can be signed out as needed. Note, students are not allowed to have the text books for more than 4 consecutive days, as we have limited copies and would like all the students to have equal opportunity to use the books.

ACSM's Exercise Management For Persons With Chronic Diseases And Disabilities, 10th & 11th Edition, Lippincott Williams & Wilkins, 2009. ISBN 978-0-7817-6903-7

Biomechanics of the Musculo-skeletal System 3rd Edition, BM Nigg, W Herzog, 2007. ISBN 13:978-0-470-01767-8

Clinical Exercise Physiology, 2nd Edition. JK Ehrman, PM Gordon, PS Visich, SJ Keteyian, 2009. ISBN 13: 978-0-7360-6565-8

Clinical Sports Medicine 4th Edition, P. Brukner, K. Khan, ISBN 9780070998131 (hbk)

Joint Structure And Function 4th Edition, PK. Levangie, C. Norkin, 2005. ISBN0-8036-1191-9

Mosby's dictionary of medicine C. Brooker, 2010. ISBN978-7234-350404

Muscles (Testing and function) 5th Edition, FP. Kendall, EK Macreary, PG Provance, MM Rodgers, WA Romani, 2005. ISBN0-7817-4780-5

Orthopaedic physical assessment 4th Edition, DJ. Magee, 2006. ISBN10:1-4160-3109-X, ISBN 13: 978-1-4160-3109-3

Pathophysiology 3rd Edition, Tomas J. Nowak, A. Gordon Handford, 2004. ISBN 0-07-027255-7

Rehabilitation techniques for Sports Medicine & Athletic Training, WE Prentice, 2011. ISBN978-007-128953-5

Statistics in Kinesiology 3rd Edition, WJ Vincent 2005. ISBN 0-7360-5792-7

The Olympic textbook of science in sport. Vol. XV Of Encyclopaedia of Sports Medicine, RJ Maughan, 2008. ISBN 978-1-4051-5638-7

Course Textbooks

Clinical Exercise Physiology, 2nd Edition. JK Ehrman, PM Gordon, PS Visich, SJ Keteyian, 2009. ISBN 13: 978-0-7360-6565-8

Clinical Sports Medicine 4th Edition, P. Brukner, K. Khan, ISBN 9780070998131 (hbk)

In addition to the suggested textbooks for the modules, each module will include pertinent reference material. The lecturers will give out these references either prior or during their lectures. Most of this reference material is available in either the Unit's Resources Centre or in the UCT's Medical Library.

The following books are useful reference materials:

1. **Metabolic Regulation. A Human Perspective**, 2nd edition, K.N. Frayn, Blackwell Science Inc., 2003. ISBN 0 632 06384 X
2. **Statistics in Kinesiology**, 2nd edition, W.J. Vincent, Human Kinetics, 1999. ISBN 0 7360 0148 4
3. **Lore of Running**, 4th edition, T.D. Noakes, Oxford University Press, Cape Town, 2001. ISBN 0 19 578 016 7
4. **Biochemistry of Exercise and Training**, R. Maughan, M. Gleeson, P. Greenhaff, Oxford University Press, 1998. ISBN 0 19 262741 4
5. **Physiological Testing of the High Performance Athlete**, 2nd Edition, J.D. MacDougall, H.A. Wenger and H.J. Green, Human Kinetics Publishers, 1991. ISBN 0 87 322300 4
6. **Exercise in Health and Disease: Evaluation and Prescription for Prevention and Rehabilitation**, 2nd edition, M.L. Pollock and J.H. Wilmore, WB Saunders Company, 1990. ISBN 0 72162948 2
7. **Anatomy & Human Movement Structure and Function**, 3rd edition, N. Palastanga, D. Field and R. Soames, Butterworth Heinemann, 1998. ISBN 0 75 063268 2
8. **Joint Structure & Function – A comprehensive analysis.** C.C. Norkin, P.K. Levangie, F.A. Davis Company, 2005. ISBN: 0803611919
9. **Muscle Testing and Function – With posture and pain**, 5th Edition. F.P. Kendall, E.K. McCreary, P.G. Provance, Lippincott Williams and Wilkins, 2005. ISBN: 0781747805
10. **Orthopedic Physical Assessment**, 4th Edition, D.J. Magee, Saunders, 2005. ISBN: 0721693520
11. **ACSM's Exercise Management for Persons with Chronic Disease and Disabilities**, 2nd Edition J.L. Durstine, G.E. Moore, Human Kinetics, 2003. ISBN: 0736038728
12. **Rapid Interpretation of EKG's** D. Dubin, Cover Publishing Company, 2000. ISBN: 0912912065

13. **Pathophysiology: Concepts & Applications for Health Care Professionals**, 3rd Ed
T.J. Nowak, A.G. Handford, McGraw-Hill, 2005. ISBN: 0070272557
14. **MIMS- Drug Reference Handbook**, 4th Ed, Reuters, 2022.

STAFF LIST

| NAME | ROLE AND RESPONSIBILITY | EMAIL ADDRESS | OFFICE TEL |
|---|---|-------------------------------|--------------|
| ACADEMIC STAFF | | | |
| A/Prof Yumna Albertus <i>Senior Lecturer</i> | <ul style="list-style-type: none"> Divisional Research Committee Chair HUB ExCo: Postgraduate Student Affairs | Yumna.Albertus@uct.ac.za | 021 650 4560 |
| A/Prof Andrew Bosch <i>Associate Professor</i> | <ul style="list-style-type: none"> Third year Physiology course convener Animal Ethics Committee Member ESSM Teaching Portfolio | Andrew.Bosch@uct.ac.za | 021 650 4578 |
| Prof Malcolm Collins <i>Professor</i> | <ul style="list-style-type: none"> Head of Department (Human Biology) Chair: FHS Health and Safety Committee Chair: HUB ExCo | Malcolm.Collins@uct.ac.za | 021 650 4574 |
| Dr Caroline D'Alton <i>Lecturer</i> | <ul style="list-style-type: none"> Clinical Lecturer Sport and Exercise Medicine Course Administrator | Heatstroke.Research@gmail.com | 021 650 1528 |
| A/Prof Janine Gray <i>Honorary Senior Lecturer</i> | <ul style="list-style-type: none"> Research Coordinator – Cricket South Africa Biomechanics Laboratory Supervisor | JanineG@cricket.co.za | 021 650 4557 |
| A/Prof Jacolene Kroff <i>Senior Lecturer</i> | <ul style="list-style-type: none"> Biokinetics Course Convener MPhil Biokinetics Programme Convener Biokinetics Lab Supervisor | Jacolene.Kroff@uct.ac.za | 021 650 5126 |
| Prof Vicki Lambert <i>Emeritus Professor</i> | <ul style="list-style-type: none"> Head of Division (ESSM) HUB ExCo: ESSM Representative | Vicki.Lambert@uct.ac.za | 021 650 4571 |
| Dr Dale Rae <i>Senior Lecturer</i> | <ul style="list-style-type: none"> UCT-SSISA Portfolio Sleep and Metabolic Suite Supervisor Sleep Science Director – SSISA | Dale.Rae@uct.ac.za | 021 650 4577 |
| Dr Laurie Rauch <i>Researcher</i> | <ul style="list-style-type: none"> Neurophysiology | Laurie.Rauch@uct.ac.za | 021 650 4640 |
| Prof Alison September <i>Head of Division</i> | <ul style="list-style-type: none"> FHS transformation committee: deputy chair HUB EXCO: transformation and social engagement portfolio ESSM Human Resources Portfolio | Alison.September@uct.ac.za | 021 650 4559 |
| A/Prof Jeroen Swart <i>Associate Professor</i> | <ul style="list-style-type: none"> Sports and Exercise Medicine Course Convener Science to Sport Cycle Lab Director – SSISA ESSM Clinical Portfolio | Jeroen.Swart@uct.ac.za | 021 659 4562 |
| Dr Sharief Hendricks <i>Senior Lecturer</i> | Hons in Exercise Science Coordinator | Sharief.Hendricks01@gmail.com | 021 650 1528 |
| Ms Tayla Ross | Assistant Biokinetics Convenor | Tayla.ross@uct.ac.za | |
| Dr Kate Larmuth | Part-time lecturer | Kateus65@gmail.com | 021 650 4567 |
| POSTDOCTORAL RESEARCH FELLOWS | | | |
| Dr Nancy Laguette | HPALS researcher & meeting coordinator | NancyLaguette@gmail.com | 021 650 1976 |
| Dr Roopam Dey | Researcher | Roopam.dey@uct.ac.za | |
| Dr Zulfah Albertyn- | HPALS Junior Researcher | | |

| NAME | ROLE AND RESPONSIBILITY | EMAIL ADDRESS | OFFICE TEL |
|--|--|--|--------------|
| ADMINISTRATIVE, SUPPORT AND TECHNICAL STAFF | | | |
| Ayesha Hendricks | <ul style="list-style-type: none"> • Academic Administrator | Ayesha.Hendricks@uct.ac.za | 021 650 3108 |
| Neezaam Kariem | <ul style="list-style-type: none"> • Biochemistry Laboratory manager • IT Support • Health and Safety Representative: ESSM • Fire marshal | Neezaam.Kariem@uct.ac.za | 021 650 4564 |
| Trevino Larry | <ul style="list-style-type: none"> • Technical officer • IT Support • Health and Safety Representative: ESSM • Fire marshal | Trevino.Larry@uct.ac.za | 021 650 3037 |
| Nandi Sinyanya | <ul style="list-style-type: none"> • Research assistant • First aider | Nandipha.Sinyanya@uct.ac.za | 021 650 4575 |
| Lesa Sivewright | <ul style="list-style-type: none"> • Operations and Financial Administration • Health and Safety Representative: ESSM • First aider • Fire marshal | Lesa.Sivewright@uct.ac.za | 021 650 4661 |
| Roger Woodruff | <ul style="list-style-type: none"> • Research Assistant | RogerjWoodruff@yahoo.com | 021 650 4640 |
| STUDENTS | | | |
| Rizaan Behardien | <ul style="list-style-type: none"> • Student representative | bhrmuh003@myuct.ac.za | 066 202 5501 |
| Tim Klein | <ul style="list-style-type: none"> • Student representative | klntim003@myuct.ac.za | 076 146 1048 |

General Administrative Contact Details

General postgraduate contacts

| | |
|--|--|
| <p>Office of Postgraduate Studies</p> <p>Room 2.04, Level 2 Otto Beit Building University Avenue North Upper Campus Email: pgstudies@uct.ac.za Tel: +27 (0)21 650 3171</p> | <p>UCT Fees Office</p> <p>Level 3 Kramer Building Middle Campus Email: fd-feeeng@uct.ac.za Tel: +27 (0)21 650 1704</p> |
| <p>Postgraduate Funding Office</p> <p>Level 3 Otto Beit Building University Avenue North Upper Campus Email: pgfunding@uct.ac.za Tel: +27 (0)21 650 3622</p> | <p>Research Office</p> <p>Allan Cormack House 2 Rhodes Avenue (corner Main Road) Mowbray Email: researchvisibility@uct.ac.za Tel +27 (0)21 650 4015</p> |

IMPORTANT DATES 2024

| HONOURS BIOKINETICS IMPORTANT DATES 2024 | |
|---|---------------------------------------|
| FIRST SEMESTER | |
| 24 -26 Jan | ORIENTATION |
| 29 Jan – 9 Feb | FUNDAMENTALS |
| 12 - 14 Feb | BIOMECHANICS TECHNIQUES |
| 15 -16 Feb | FIRST AID COURSE |
| 19 Feb – 1 Mar | EXERCISE PHYSIOLOGY TECHNIQUES |
| 4 Mar – 25 Oct | CLINICAL ROTATIONS START AND END DATE |
| 19 Feb | FUNDAMENTALS TEST |
| 4 Mar – 20 Mar | HP MODULE |
| 25 Mar - 1 Apr | TERM 1 HOLIDAY |
| 2 - 5 Apr | ORTHO NECK AND BACK WEEK |
| 8 Apr | HP MODULE TEST |
| 9 -11 Apr | BIO PRAC WEEK |
| 12 Apr – 10 May | CHRONIC DISEASES MODULE |
| 13 - 17 May | ORTHO HIP |
| 20 - 23 May | ORTH KNEE |
| 30 May | THEORY EXAM 1 |
| 11 & 12 Jun | CLINICAL EXAM 1 |
| 13 Jun - 12 Jul | TERM 2 HOLIDAY |

| HONOURS BIOKINETICS IMPORTANT DATES 2024 | |
|---|--------------------------------|
| SECOND SEMESTER | |
| 15- 19 Jul | ORTHO SHOULDER |
| 22 – 26 Jul | STATS WEEK |
| 29 Jul – 2 Aug | ORTHO ANKLE |
| 5 - 23 Aug | NEMS MODULE |
| 26 Aug - 30 Aug | ORTHO ARM AND WRIST |
| 2 - 6 Sep | TERM 3 HOLIDAY |
| 10 Sep | SCIENTIFIC PAPER REVIEW TEST |
| 9 -13 Sep | BIOPRAC & CLINICAL REASONING |
| 16 Sep | NEMS MODULE TEST |
| 17 – 20 Sep | REVISION WEEK |
| 1 & 2 Oct | CLINICAL EXAM 2 & OSCE'S |
| 14-Oct | THEORY EXAM 2 |
| 4 Nov | HONS PROJECT HAND IN |
| 13 & 14 Nov | FINAL CLINICAL EXIT LEVEL EXAM |
| 25-Nov | HONS PROJECT PRESENTATIONS |