

BSc (Sports Science)
Faculty of Science and Agriculture
University of Zululand

BSc (Sports Science)
(Qualification code **SUDEGB**)

This is a 3-year qualification consisting of 48 modules.

AIM

This qualification is aimed at producing graduates who intend pursuing a career in the field of sports science.

The qualification leads from a foundation in the necessary human anatomy / physiology, applied physiology, exercise prescription, biomechanics, and kinesiology, combined with a comprehensive grounding provided in all aspects of exercise science.

Graduates with this qualification will be qualified to work in human performance labs, exercise technology, exercise testing and prescription to name but a few out comes. By choosing the right elective stream, graduates can also be qualified as teachers in science or mathematics.

Graduates are encouraged to continue to honours level where they can specialise in biokinetics and ergonomics in particular.

Modules should ideally be studied in the sequence indicated in the qualification template and prerequisites should be passed as they are encountered. Where there is a choice of electives the student is encouraged to consult with the HMS Department to ensure the best possible outcome.

| Year 1 | | | |
|---|---|---|---|
| SFSK011 Life Skills | SDCA010 Introduction to computers and operating syste | *SUAHZ13 Exercise Science 1 | *SUAHZ14 Exercise Science 2 |
| AEKA011 Basic Reading and Comprehension | *SUAB012 Concepts of Human Movement Science | SDWP010 Wordprocessing | SUBP014 Ergonomics |
| *SMGB011 General Mathematics b | *SZPA012 Human Anatomy & Physiology 1 | *SZPB013 Human Anatomy & Physiology 2 | *SZPC014 Human Anatomy & Physiology 3 |
| *SPGB011 General Physics b | SUZZ10 Elective | SUZZ11 Elective | SUZZ12 Elective |
| Year 2 | | | |
| *SZPD011 Human Anatomy and Physiology 4 | SUBG022 Sport Psychology | SUAE013 Sport Sociology | SUAJ014 Physical Measurement & Evaluation |
| *SUBCZ21 | *SUBCZ22 | *SUBDZ23 | *SUBDZ24 |

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|---|---|---|---|
| Laboratory Technology 1 | Laboratory Technology 2 | Exercise Physiology I | Exercise Physiology II |
| *SUBIZ21 Kinesiology & Biomechanics 1 | *SUBIZ22 Kinesiology & Biomechanics 2 | SUZZ15 Elective | SUBQ024 Ergogenic Aids in Human Performance |
| SUZZ13 Elective | SUZZ14 Elective | SUZZ16 Elective | SUZZ17 Elective |
| Year 3 | | | |
| *SUCB031 Applied Biomechanics | *SUCF032 Etiology of Sport Injury | *SUCM033 Exercise Science 3 | *SUCP034 Exercise Science 4 |
| SUCD031 Motor Development | SUCH032 Perceptual Motor Learning | SUCJ023 Adapted Physical Activity | *SUCE034 Research Design |
| SUZZ18 Elective | SUZZ20 Elective | SUZZ22 Elective | SUZZ24 Elective |
| SUZZ19 Elective | SUZZ21 Elective | SUZZ23 Elective | SUZZ25 Elective |

Elective options for BSc (Sports Science)

Choose electives according to the following streams :

Sports Science with

- KEY**
- * Human Movement Science
 - ∇ Biochemistry
 - ♣ Mathematics
 - ♦ Physics

The **four streams** (Human Movement Science, Biochemistry, Mathematics, and Physics) built into the BSc (Sports Science) degree provides the student the opportunity to gain expertise in an additional academic area that will ultimately benefit the student's understanding of Sports Science and / or Biokinetics. The Biochemistry, Mathematics and Physics tracks are developed to provide the student the sufficient credits to present these as teachable subjects at a high school level; if the student does not wish to further his / her studies in any of the postgraduate courses offered in the department. Therefore, the student is not permitted to change his / her track selection during the course of the degree.

Human Movement Science

This BSc (Sports Science) track offers the student further insight into the area of human movement by encompassing various aspects of the field. These include

practical movement experience, ethics in sports, coaching principles, sports development, organisation and administration.

Biochemistry

This BSc (Sports Science) track offers the student insight into the area of biochemistry by focussing on aspects that will be of specific value in the field of Sports Science and Biokinetics. These include basic inorganic and organic chemistry, aspects of metabolism, biomolecules and enzymology.

Mathematics

This BSc (Sports Science) track offers the student the opportunity to study an additional teachable subject. The knowledge gained will be useful in specific areas of Sports Science and Biokinetics, such as biomechanics. It is however, envisaged that the education received provides the student with the option of teaching at a high school level. Subject matter covered includes algebra, calculus and differential equations.

Physics

This BSc (Sports Science) track offers the student the opportunity to study an additional teachable subject. The knowledge gained will be useful in specific areas of Sports Science and Biokinetics, such as biomechanics. It is however, envisaged that the education received provides the student with the option of teaching at a high school level. Subject matter covered includes algebra, calculus, wave and heat motion, optics, electromagnetism, special relativity, atomic nuclear and quantum physics.

Elective 10 options

- *SUAC012 - Health Education
- ∇SCPB012 - Physical Chemistry IB
- ◆♣SMAL012 - Algebra

Elective 12 options

- *SUAK014 - Soccer
- ∇SCOB014 - Organic Chemistry IB
- ◆♣SMCSZ13 - Calculus A

Elective 14 options

- *SUBE02 - Volleyball
- ∇SIBKB2 - Metabolic Regulation
Practicals
- ♣SMCSZ2 - Calculus B
- ◆SPBM02 - Introduction to Classical

Elective 11 options

- *SUAF013 - Motor Learning
- ∇SCIB013 - Inorganic Chemistry IB
- ◆♣SMCSZ13 - Calculus A

Elective 13 option

- SUCC01 - Ethical Considerations in
*Sport
- ∇SIBKA1 - Metabolic Regulation
- ◆♣SMCSZ1 - Calculus A

Elective 15 options

- *∇_vSUCQ03 - Nutrition and Exercise
- ♣SMDE03 - Differential Equations

Mechanics (Bio)

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|--|---|
| Elective 16 options | Elective 17 options |
| *SUCJ03 - Adapted Physical Activity | *SUBO04 - Principles of Coaching |
| ∇SISHA3 - Clinical Biochemistry I | ∇SISHB4 - Clinical Biochemistry II |
| ♣SMAAZ3 - Abstract Algebra I | ♦SPBE04 - Introduction to Electricity and Magnetism (Bio) |
| ♦SPBW03 - Introduction to Wave Motion and Heat (Bio) | ♣SMAAZ4 - Abstract Algebra II |
| Elective 18 options | Elective 19 options |
| *SUBB01 - Hockey | *SISO01 - HIV/AIDS |
| ∇SIBDA1 - Biomolecules I | ∇SIBDC1 - Biomolecules II |
| ♣SMLG01 - Mathematical Logic | ♣SMCAZ1 - Complex Analysis I |
| ♦SPBN01 - Introduction to Atomic and Nuclear Physics (Bio) | SPCT01 - Circuit Theory |
| | ♦ |
| Elective 20 options | Elective 21 options |
| *SUCG02 - Outdoor Activities | *SUCI02 - Basic Statistics for Behavioural Science |
| ∇SIBFA2 - Metabolism I | ∇SIBEA2 - Enzymology I |
| ♣SMLAA2 - Linear Algebra I | ♣SMCAZ2 - Complex Analysis II |
| ♦SPMO02 - Modern Optics | ♦SPEE02 - Energy and The Environment |
| Elective 22 options | Elective 23 options |
| *SUBJ03 - Organisation and Administration | *SUCL03 - Sport Official |
| ∇SIBFB3 - Metabolism II | ∇SIBQA3 - Practical : Biochemistry Principles and Techniques I |
| ♣SMLAB3 - Linear Algebra II | SMND03 - Nonlinear Differential Equations |
| SPQP03 - Quantum Physics | ♦SPSR03 - Intermediate Classical Mechanics and Special Relativity |
| ♦ | |
| Elective 24 options | Elective 25 options |
| *SUCC04 - Sport Development in the Community | *SSAV04 - Analysis of Variance |
| ∇SIBFC4 - Metabolism Practicals | ∇SIBQB4 - Practical : Biochemistry Principles and Techniques II |
| ♦SMDM04 - Elements of Discrete Mathematics | ♣SMCSE4 - Calculus V |
| ♣SPEM04 - Electromagnetism | ♦SDDB00 - Databases |