



1. PROGRAMME PROFILE

Name of the Higher Education Institution (HEI)	Bindura University of Science Education
Mandate of the HEI	Science Education
Name of the School/Faculty/College	Faculty of Science and Engineering
Name of the Degree Programme	Master of Science Degree in Sports Science (MSc.SS)
Duration:	1½ Years
Minimum Credit Load:	270
MBKs Credit Load	234
Programme Credit Load	324
Maximum Credit Load	330
SADC-QF/ZQF Level:	9

2. PREAMBLE

- 2.1 These regulations should be read in conjunction with the Bindura University of Science Education General Academic Regulations, hereinafter referred to as General Regulations, which have precedence over these regulations.
- 2.2 These regulations only apply to students registered under Bindura University of Science Education.
- 2.3 On successful completion of the programme a student shall be awarded a Master of Science Degree in Sports Science (MSc.SS)

3. RATIONALE

The Master of Science Degree in Sports Science has been developed to bridge the current deficiencies in advanced sports science skills in the Zimbabwean sports industry. This gap in high-level sports science skills is one of the reasons why the country's sports industry is failing to produce world-class athletes. The proposed programme seeks to contribute to the development of sport in Zimbabwe through the application of scientific principles, Information Communication Technology and new technologies to the process of identifying and nurturing sports talent. The curriculum is designed to develop creative thinking, problem-solving technical, research, community engagement and entrepreneurial skills in graduates and enable them to use acquired skills and knowledge to bring about measurable change in professional practice and policies in the fields of sport.

4. ATTENTION TO EDUCATION 5.0 (Teaching, Research, Community Engagement, Innovation and Industrialisation)

4.1 Strategies to incorporate Heritage Based Education Philosophy:-

- By using athletes at the National Sports Academy which is housed at the Bindura University of Science Education and other High-Performance Sports entities in Mashonaland Central Province and Harare for practical tests.
- By inviting distinguished practitioners from the Zimbabwe sports industry to give guest lectures based on their practical experience.

4.2 Articulate proposed Community Engagement Activities related to the programme:-

- A practicum course, which is designed to give students supervised practical application of studied theory in relevant communities.
- Involve students in Community engagement programmes like Sports Science skills gap bridging short courses as part of their practical work.
- Students to do research projects that can bring about measurable change in communities.
- Field visits in communities.

4.3 Articulate the nature of Creation of New Knowledge that will be promoted through this programme:-

- The programme will promote the creation of knowledge that can bring about measurable change in the process of identifying and developing sports talent in the country.

4.4 Identify the National Critical Skills gap to be addressed:-

- There is a gap in advanced Sports Science skills in the Zimbabwean sports industry and this gap is the main reason why the country is failing to produce world-class athletes.

Strategies to Address the National Critical Skills gap through the programme:-

- Give room to sports practitioners in the sports industry with non-sport degrees to enrol on the programme and improve their practice.
- Work with sports entities through practical community engagement projects to address the skills gap.

<ul style="list-style-type: none"> • By adopting comparative analysis (benchmarking) as a teaching approach across all modules.
<p>4.5 Strategies to address the call to Innovation (The Blue Ocean Strategy):-</p> <ul style="list-style-type: none"> • By adopting comparative analysis (benchmarking) as a teaching approach across all modules. • By adopting entrepreneurship-based learning strategies to promote the development of creative thinking and problem-solving skills. • By Integrating ICT, New Technologies and Applications and the Social Media in Teaching. • By Using Webb-based learning approaches. • Promoting project-based learning. • By encouraging students to do research projects that can bring about measurable change in practice.
<p>4.6 Strategies to address the industrialisation call (Industrial Parks):-</p> <ul style="list-style-type: none"> • By encouraging students to do research projects that will result in the production of sports goods and services.
<p>5. AIMS/OBJECTIVES/PURPOSE</p>
<p>5.1 Aim</p> <p>The Master of Science Degree in Sports Science is intended to provide graduates with the advanced practical skills and theoretical knowledge required to efficiently and effectively handle the high-performance sport. This will enable them to take up higher-level responsibilities in such areas as sports research and innovation, talent identification and development and sports entrepreneurship and contribute to the growth and development of the sports industry and the economy at large.</p>
<p>5.2.Intended Learning Outcomes</p> <p>Upon completion of the programme, the graduate will be able to:</p> <p>5.2.1 Use scientific methods to improve performance and reduce injuries and risks in sport.</p> <p>5.2.2 Identify and develop sports talent using digital resources.</p> <p>5.2.3 Improve sports performance and provide scientific solutions to the sport and exercise science problems and risks using applied research skills and data science.</p> <p>5.2.4 Initiate positive sport-related change and provide knowledge-based solutions to sports science problems using creative thinking, abstract reasoning and comparative analysis skills.</p> <p>5.2.5 Improve physical and mental health and development of a health and wellness culture using scientific principles and digital technology.</p> <p>5.2.6 Design, initiate and manage sustainable sport-related enterprises.</p>

6. ENTRY REQUIREMENTS

Normal Entry:

A candidate must have a Sport-Related Bachelor of Science Honours Degree with a 2.2 grade or better.

OR

A Sport-Related Bachelor of Science Honours Degree with passes lower than 2.2 and at least two years of relevant post-qualification experience.

Special Entry:

A candidate must have Technical Qualifications equivalent to an Honours Degree from a Sports Federation or Institution of similar status and at least two years of relevant post-qualification experience.

OR

Holders of relevant Bachelor of Science General Degrees with at least two years of relevant post qualification experience may be considered after passing a qualifying examination determine their suitability for the programme with a mark representing a 2.2 division or better.

7. PROGRAMME CHARACTERISTICS

Areas of Study:	Sport and Exercise Psychology, Research Methods, Sport and Exercise Physiology, Biomechanics in Sport and Exercise, Biochemistry of Exercise, Performance Analysis and Coaching Technologies in Sport, Laboratory Techniques in Sports Science, Theory and Methodology of Sports Training, Sport and Exercise Nutrition, Sports Medicine and Rehabilitation.
Specialist Focus:	Sport and Exercise Science
Orientation:	Technical and practical oriented skills development focusing on sport and exercise science.
Distinctive Features:	Knowledge and conceptual, innovation and invention skills acquisition, development and application in sport and exercise science through creative teaching and learning experiences.

Programme Competences

Generic:

- **Multidisciplinary:** Ability to effectively apply knowledge and skills drawn from different disciplines in sports and exercise science settings.
- **Quantitative and innovative reasoning:** Ability to use quantitative logic in sport and exercise science decision-making.
- **Entrepreneurial skills:** Ability to use acquired knowledge and skills to generate new sports products and services.
- **Communication skills:** Ability to communicate effectively and present ideas using an array of personal and non-personal communication channels.
- **Analysis and synthesis:** Ability to analyse sport and exercise science information and situations and make effective and transformational responsive decisions.

<ul style="list-style-type: none"> • Ethical commitment: Ability to consistently maintain professional integrity and uphold organisational values. 	
Discipline-specific: <ul style="list-style-type: none"> • Deep knowledge: Ability to apply research knowledge and sport and exercise science principles in the identification and development of sports talent. • Production skills: Ability to design and create new sports programmes, products and services. • Technology development skills: Ability to use technology to identify and develop sports talent and generate sports products and services. • Problem-solving skills: Ability to use gained knowledge and skills to solve sports and exercise science problems. • Analytical and computational skills: Ability to use technological resources and creative thinking skills to analyse complex sports and exercise science information and situations and make appropriate deductions and decisions. 	
Module requirements	
Module requirements for: <ul style="list-style-type: none"> i. Student class attendance <ul style="list-style-type: none"> • Students are expected to attend at least 80 % of the Lectures for every course. ii. Types of modules (lecture-based, practicum, work-placement) <ul style="list-style-type: none"> • lecture-based and practicum 	
8. MARKET OPPORTUNITIES AND FURTHER EDUCATION	
Further Studies:	Doctoral Studies in Sports Science
Employability:	The career opportunities for the Master of Sport Science graduates include, but are not limited to Exercise Physiologists, Sports Science Academics, Kinesiologists, Biomechanics Practitioners, Physiotherapists, Sports Psychologists, Strength and Conditioning Trainers, Sports Nutritionists, and Sports Science Entrepreneurs.
Entrepreneurship Prospects:	Initiating Sports Science entrepreneurial ventures
9. PROGRAMME STRUCTURE	
9.1 The programme shall extend for 1½ academic years as follows: Part I Semester 1 Semester 2 Part 2 Semester 1 9.2 The first academic year shall comprise two taught semesters, where four Core Courses are mandatory and at least one Elective can be chosen for each semester. 9.3 The second academic year shall have only one semester and it focuses on the six(6) months-long research component, where students shall do a Dissertation. 9.4 All students are expected to do a minimum of ten Courses and the Dissertation.	
10. REGISTRATION	
10.1 Registration shall be held at specified times as determined by Bindura University of Science Education, following the General Regulations.	

10.2 No student shall register for the Dissertation unless he/she has passed at least eight Courses in the programme.
10.3 The Departmental Board shall determine the combination and minimum number of courses that a student may do in a given Semester, as well as, the courses to be offered in a particular Semester, putting into consideration the availability of expertise.

11 PROGRAMME DELIVERY

Delivery Mode	The Programme shall utilise a Blended Learning Approach (Block Release and Online Learning) and classes may be carried out at satellite centres.
Learning Sites (all) Physical addresses and Contact Details	The Bindura University of Science Education.
Teaching and Learning Methods:	Online and Face to Face Lectures, Tutorials, Seminar presentations, field excursions, practical work (case analysis, comparative analysis-benchmarking, Action Research-based tasks), research and dissertation, group discussions, independent individual study
Methods of Coordinating Teaching and Learning at different centres	N/A
Assessment and Evaluation of coursework Methods:	Examinations, written assignments, seminar presentations, practical work, dissertation.

12. ASSESSMENT

12.1 Programme Assessment

Coursework	Coursework shall contribute 40 % towards the final mark of each course and shall consist of Laboratory and Field Practicals 15 %, Innovation Tasks (10 %), Written assignments (7.5 %), and In-class tests (7.5 %).
Written Examinations	Examinations shall contribute 60% to the overall assessment of a course.
Conditions for Admission to sit for examinations	To be admitted to the examination for each course, a student must have attained a minimum score of 40% in the coursework.
Dissertation	Written Report (85 %), Oral Examination (15 %)
Practicum	Written Report (85 %), Oral Examination (15 %)

12.2 Determination of Results and Provision for Progression from one level to the next level

	Results shall be determined by Senate on recommendations from the Faculty Board of Examiners and Departmental Board of Examiners as outlined in the General Regulations.
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	<p>12.2.1 Regulations for Taught Courses</p> <p>12.2.1.1 Each course shall be assessed at the end of the semester in which it is taken.</p> <p>12.2.1.2 The overall results shall be determined in accordance to the General Regulations.</p> <p>12.2.1.3 The final grade in the Course shall be based on the marks obtained the final examination with a weighting of 60 % and coursework which carries a weighting of 40%.</p> <p>12.2.1.4 A student shall not be allowed to proceed to Part Two before accumulating a minimum of 144 Credits in the preceding Part.</p> <p>12.2.2 Regulations for the research project</p> <p>12.2.2.1 Students shall present research proposals to a review panel at the end of Semester two of Part one.</p> <p>12.2.2.2 A student shall proceed to register for the Dissertation only after accumulating a minimum of 144 Credits in the programme.</p> <p>12.2.2.3 The Department shall allocate members of its staff to supervise the student's research work.</p> <p>12.2.2.4 The candidate shall submit three spiral-bound copies of the dissertation to the Department before the end of the final semester for marking.</p> <p>12.2.2.5 The assessment of the Dissertation shall be based on a written Dissertation and a Viva Voce defence of the Dissertation before a selected Departmental Panel of Examiners.</p> <p>12.2.2.5.1 The written Dissertation shall account for 85 % and the <i>Viva Voce</i> defence 15 % of the final mark for the Dissertation.</p> <p>12.2.2.5.2 Normally, the dissertation shall be assessed by two external examiners and one internal examiner, excluding the supervisors.</p> <p>12.2.2.5.3 The Board of Examiners shall consider the Viva Voce examination as well as three examiners' reports and decide on the final mark for the Dissertation. Where appropriate, the Board of Examiners shall advise the candidate on amendments to be made to the dissertation.</p> <p>12.2.2.6 Resubmission of the Dissertation shall be done as outlined in the General Regulations.</p> <p>12.2.3 Regulations for the Practicum</p> <p>12.2.3.1 The Practicum assessment shall be based on an observation report submitted on a specified date set by the Departmental Board and students shall be required to attend an oral examination based on their Practicum report.</p> <p>12.2.3.2 The written report shall account for 85 % and the Oral Examination 15 % of the final mark for the Practicum.</p>
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	<p>12.2.4 Regulations for innovation by students. Students shall do an innovation-based continuous assessment task for every course.</p> <p>12.2.5 Regulations for Credit Allocation, Accumulation and Transfer</p> <p>12.2.5.1 The final mark shall be an aggregate for all the taught Core Courses (144 Notional Credits), two Elective Courses (36 Notional Credits) in which the student has obtained the highest scores, the and the Dissertation (90 Notional Credits).</p> <p>12.2.5.2 The student shall, therefore, require at least 270 Notional Credits to graduate.</p>
12.3 Degree Classification	
	<p>14.2.1 The following classification shall be used for the Programme :</p> <ul style="list-style-type: none"> • 80% and above - Distinction • 70%-79% - Merit • 60%-69% - Credit • 50%-59% - Pass • Below 50% - Fail •
12.4 Degree weighting	
Part 1	60%
Part 2	40%
12.5 Provisions for the Award of the Degree	<p>12.5.1 To be eligible for the award of the Master of Science Degree in Sports Science, candidates shall comply with the General Regulations and complete the curriculum and satisfy the examiners following these Regulations by:</p> <ul style="list-style-type: none"> • passing all the taught Core Courses in the programme. • passing a minimum of two Elective Courses. • passing the Dissertation and submitting two (2) bound copies and a soft copy of the Dissertation, which incorporate all amendments recommended by the Departmental Board of Examiners. • Accumulating a minimum of 270 Notional Credits. <p>12.5.2 At the expiry of the Residence Period, a student who would have passed all the eight (8) taught Core Courses and at least two (2) Electives, before passing the Dissertation shall be awarded a Postgraduate Diploma in Sports Science.</p>

12.6 Academic Offences And Penalties	Academic Offences and Penalties shall be handled following the provisions of the General Academic Regulations.
12.7 Posthumous And Aegrotat Provisions	This shall be handled following the provisions of the General Academic Regulations.
12.8 Publication Of Results	This shall be handled following the provisions of the General Academic Regulations.
12.9 Academic Transcript And Certificates	This shall be handled following the provisions of the General Academic Regulations.
12.10 Award Of Book Prizes To Graduands On Graduation Day	This shall be handled following the provisions of the General Academic Regulations.

13. CREDIT ALLOCATION AND BASIS OF ALLOCATING CREDITS		
13.1 TAUGHT COURSES		
ACTIVITY	TIME IN NOTIONAL STUDY HOURS	CREDITS
CONTACT TIME		
Lectures	48	4.8
Tutorials	10	1.0
Field Visits	10	1.0
Seminars	10	1.0
Practical Work	10	1.0
SCHEDULED ASSESSMENT TIME		
Final written examinations	3	0.3
In-class tests	2	0.2
Seminar Presentations	5	0.5
Practical Assessment	15	1.5
INDEPENDENT STUDY TIME		
Preparation for scheduled sessions	12	1.2
Reading	20	2.0
Written assignments	20	2.0

Revision Work	15	1.5
MAXIMUM CREDITS PER COURSE/MODULE	180	18
13.2 DISSERTATION		
ACTIVITY	TIME IN NOTIONAL STUDY HOURS	CREDITS
Problem Formulation	25	5
Project Supervision	50	5
Proposal Writing	120	12
Literature Review	150	15
Instrument Design and Piloting	50	5
Data Collection	150	15
Data Analysis	50	5
Report Writing	300	30
Thesis Defence	5	0.5
Total Number of Notional Study Hours and Credits for the Dissertation	900	90
13.3 PRACTICUM		
Preparation for scheduled sessions	10	1.0
Observation	100	10.0
Supervision	15	1.5
Report Writing	50	5.0
Oral Presentation or Report	5	0.5
Total Number of Notional Study Hours and Credits for the Practicum	180	18

14. EDUCATIONAL COMPONENTS

14.1 MODULES		
Course/Module Description	Core Course	Credits
Part I Semester I		
SS 501 Sports Psychology and Motor Learning	Y	18
SS 502 Physiology and Biochemistry of Physical Activity	Y	18
SS 503 Biomechanics for Human Movement	Y	18
SS 504 Sports Coaching Pedagogy and Practice		18
SSM 502 Sports Technopreneurship		18
SSM 503 Research Methods for Exercise Sciences	Y	18
Part I Semester II		
SS 505 Nutrition for Exercise and Health	Y	18
SS 506 Sports Medicine and Rehabilitation	Y	18
SS 507 Sports Performance Analysis	Y	18
SS 508 Long Term Athlete Development	Y	18
SS 509 Laboratory Techniques in Exercise Sciences		18
SS 510 Kinanthropometry		18
SS 512 Sports Science Practicum		18
Part II Semester I Part II Semester I		
SS 500 Dissertation	Y	90
Total MBKS Credits		234
Total Credits		324

MODULE SYNOPSES

LEVEL I SEMESTER I

SS 501 Sports Psychology and Motor Learning [Core, 18 Credits]

This module focuses on the process of psychological preparation and motor learning in sports. It covers such topics as the theory of motor learning, the process of motor learning and training, Analysis and prediction of motor learning strategies, and motor learning strategies in Sports Psychology activity. Psychological factors affecting sports performance, the role of Sports Psychology in sport, development of tactical thinking in sport, emotional states related to performance before, during and after competitions, and The application of Sports Psychology in the various stages of the elite athlete development process, building a winning mentality in elite athletes-building self-confidence, goal setting, stress management, imagery and visualisation, concentration and attention control, motivation, socio-economic factors and sports performance, The use of technology in athlete psychological preparation.

SS 502 Physiology and Biochemistry of Physical Activity [Core, 18 Credits]

This module is intended to provide students with an in-depth understanding of sports and Exercise Physiology and Biochemistry. It focuses on Bioenergetics and oxidative Phosphorylation, Metabolic pathways of carbohydrates, lipids, amino acids, nucleic acid metabolism and protein biosynthesis, and metabolism of the muscle tissue. Regulation and the integration of metabolism, metabolic and hormonal adaptation. Amino acids and proteins, the function of proteins, enzymes, and the structure of carbohydrates. Bioenergetics, Biologic Oxidation. Oxidative Phosphorylation. Role of ATP/ADP cycle. Basic concepts of metabolism. Glycolysis. Citric acid cycle. Gluconeogenesis. Cori cycle. Glycogen degradation and synthesis, coordinated control by enzymatic cascade. Lipids and lipid metabolism. Degradation and synthesis of fatty acids. Ketone body formation. Lipoprotein and cholesterol metabolism. Steroid metabolism. Amino acid metabolism. Urea cycle. Conversion of amino acids to specialised products. Nucleic acid metabolism. Biosynthesis of DNA. Gene rearrangements, transportation and cloning. Biosynthesis of RNAs. Protein biosynthesis. Metabolism of nervous tissue. Na⁺ K⁺ ATPase. Biochemistry of neurotransmission. Metabolism of muscle tissue. Biochemistry of muscle contraction. Muscle fibre types. Biochemistry of hormones. Mechanism of action. Transduction by cell-surface receptors. Intracellular messenger systems. Transduction by intracellular receptors. Exercise metabolism, hormonal adaptation and stress during physical exercise and training, Physiological and biochemical determinants of sports performance. Banned substances and the health hazards of their use, Energy transfer in exercise. Human energy expenditure during rest and physical, exercise. Regulation of pulmonary ventilation during exercise. Acid-base regulation exercise. Cardiovascular regulation and integration during exercise. Functional capacity of the cardiovascular system. Training for anaerobic and aerobic power. Neuronal control of human movement. Muscular strength and strength training. Metabolic adaptation to exercise. Biochemical and physiological principles of sports training. Biochemical and physiological basis of exercise fatigue and post-exercise recovery. Exercise and endocrine system. Hormonal response to exercise and sports training. Adaptation and stress. Exercise and immune system. Exercise and thermal stress. Exercise at medium and high altitudes. Assessment of physiological and biochemical determinants of sports performance. Banned substances (doping). Biochemistry of doping. Mechanism of action. Physiological and pathophysiological impact on the performance and health of sportsmen. Anti-doping control.

SS 503 Biomechanics of Human Movement [Core, 18 Credits]

This module examines the mechanics of human movement. Topics to be covered include The nature and significance of Biomechanics of Human Movement, Functional Anatomical Analysis and its limitations, Mechanics of the Musculoskeletal system, Linear and angular kinematics, Fluid Mechanics, and types of motion and movements. Biochemical classification. Force characteristics -forces, force impulse, the quantity of motion, work, energy, power, etc. Inertia characteristics. Body stability variables, torque and momentum of force. Management and control of equilibrium stability. Biomechanics of the human locomotive apparatus. Distribution of mass in the human body. General and specific centres of gravity. Mass and inertia characteristics. Biomechanical properties and characteristics of the motor apparatus. Applied software. Principles for management and control of the motor apparatus. Force structure. Interaction between external and internal force fields (forces of elastic deformation, resistance, friction, drag, specific environmental variables, etc.). Biomechanics of the motor qualities and criteria for their quantitative assessment. Training simulators and technical aids. Biomechanical methods of analysis. Kinematographic methods of registration, analysis and modelling using applied software. The main reverse problem and the task of biomechanics. Motor control. Management of specific movements. Biomechanical feasibility and expediency. Criteria for assessment of specific motor activities. Complex (functional anatomical, video-computer, bio-dynamic) analysis and modelling of movement patterns and motor activities. Applying Biomechanics in sport technical coaching Application of Biomechanics for various sports codes, Applying Biomechanics in training and conditioning, Applying Biomechanics in sports, sports medicine and rehabilitation.

SS 504 Sports Coaching Pedagogy and Practice [Elective, 18 Credits]

The module explores coaching theories and sports coaching pedagogy and their application to practice. Students will learn how to plan, deliver and evaluate sports coaching sessions and undertake coaching placements to gain practical coaching experience in different sports, settings and scenarios. The Module covers principles for developing effective learning environments for athletes from different sports including training principles, the law of bio adaptation, different levels of training, physical fitness, the concept of load and its programming, Methodology and evaluation systems, and Characterisation of various sporting disciplines and their respective training formats. Topics to be covered include: Coaching philosophies, styles, Systems and behaviours and Individual athlete variation focusing on their impact on athletic performance, The coach-athlete communication, feedback and demonstration processes; Motivation and goal setting; Differing approaches to skill-learning; Technical and tactical skill acquisition; Preparation of training schedule, The periodization theory; Principles of sports training, Concept of warming up and warming down; resistance training, aerobic/anaerobic conditioning and other contemporary techniques that are used to prepare high-performance athletes Physical fitness and its components (speed training, strength training, endurance training, flexibility training), Concept of training load, adaptation and recovery, Challenges facing the modern coach such as ethical dilemmas, managerial aspects of athlete and team behaviour and public and media relations, drugs and ergogenic aids and application of technology in coaching.

SSM 501 Research Methods for Exercise Sciences [Core, 18 Credits]

This module aims at equipping students with the skills needed to conduct research using a variety of quantitative, qualitative and mixed research methods and techniques. Students shall also be exposed to publications in the area of exercise science to increase their capacity to critically evaluate published information. Areas to be covered include: Research Purpose

(exploratory, explanatory and descriptive research); Research Philosophy (Ontology, Epistemology and Axiology); Research Paradigms (Positivism, Interpretivism, and Pragmatism); Research Approach (deduction, induction, and abduction); Research Strategies (Survey, Case Study, Experimental Research, Ethnography, Grounded Theory, and Action Research, Mixed Methods (Convergent Parallel, Exploratory Sequential, Explanatory Sequential, and Imbedded. Transformative, Multiphase); Population and Sampling; Data Collecting Procedures (Questionnaires, Interviews, Focus Group Discussions, Free Thought Listing, Experimental Procedures, Observation); Data Analysis (Quantitative data analysis procedures using SPSS, Starter etc.- including sports analytics procedures and Qualitative Data Analysis-Thematic, Content analysis using NVivo, Atlas TI etc.); Ethical Considerations; Research idea and problem formulation (research topic, statement of the problem, research question, objectives, Research Proposal writing); Literature Review; and Academic writing (use of academic writing, editing and anti-plagiarism software, Dissertation and Manuscript writing, referencing styles).

SSM 502 Sport Technopreneurship [Elective, 18 Credits]

The module covers sport-related entrepreneurial innovation and invention. The module such topics as; The impact entrepreneurship on sport performance and economic development, factors affecting the development of sports entrepreneurship, The entrepreneurial process including the Role of Research and Development in the Creation of Sports Products and Services, business life cycle models, Entrepreneurial planning in sport, Sources of entrepreneurial finance in sport, Change management in sport, Innovation and Invention in sport including innovation adoption and process models, Digital Transformation in Sport including the Nature and Context of Digital Transformation in Sport, Digital Technology as a Sports Coaching Tool, Digital Technology as a Sports Performance Analysis Tool, Digital Technology as a Sports Officiating Tool, Digital Technology as a Sports Management Tool, Digital Technology as a Sports Communication Tool and Ethical Issues Related to the use of Digital Technology to Enhance Sports Performance and The Socio-Economic Impact of the Application of Digital Transformation in Sport, Intellectual Property Rights in sport, Commercialisation and enterprise development strategies, trends and cases in sport; Developing implementable sports entrepreneurial business plans as continuous assessment mini projects; Benchmarking the entrepreneurial innovation and invention practices in Zimbabwean sport against global best practices.

LEVEL I SEMESTER 2

SS 505 Nutrition for Exercise and Health [Core, 18 Credits]

The module seeks to ensure mastery of the role of nutrition in enhancing sports performance, including understanding the role of nutritional ergogenic aids and their regulation. The module focuses on such topics as Exercise Metabolism, Oxygen transportation and utilisation, Nutrition sources for elite sport including carbohydrate and protein needs and fluid balance and hydration for elite sports performance, and the major functions of individual macronutrients and micronutrients in the maintenance of homeostasis, Nutrient and fluid timing, Factors affecting nutrition needs in high-performance sport, Nutrition strategies for specific energy systems, Nutrition principles and strategies and supplements for specific athlete life cycle stages and sports populations, Body mass management for athletes, Innovations in Sports Nutrition, Nutrients support strategies for recovery from athletic injuries, Ergogenic aids and their regulation in elite sport. The module also examines the role of nutrition in disease prevention and health management.

SS 506 Sports Medicine and Rehabilitation [Core, 18 Credits]

This module is designed to equip students with advanced knowledge and skills in the assessment and treatment of sports injuries and illnesses. Particular emphasis is placed upon the development of a sound systematic and methodical evaluation technique to assess abnormal biomechanics (pathomechanics) and abnormal physiology (pathology), Advanced knowledge and skills in Sports Rehabilitation including Kinesiotherapy, anamnesis, hydrotherapy, and thermotherapy message, the physiological influence of message on the nervous system, the skin, muscles, vascular system, joints and ligaments.

SS 507 Sports Performance Analysis [Core, 18 Credits]

This module aims to allow students to critically engage in the process of analysing sports performance. Students will also learn how to design and analyse technical and tactical aspects of sports performance and generate data for appropriate dissemination to both coaches and athletes utilising a range of pertinent software. The module will cover: The principles of observation, Analysis and feedback, Performance analysis technologies, Setting and choosing, Key Performance Indicators in sport, Forecasting and prediction; Trend Analysis and Modelling; Trajectory Models and Motion Analysis; Practical sessions on analysis procedures covering biomechanical analysis, Technique Analysis, Tactical Analysis, Psychological Analysis and Physiological Analysis. Students will also be exposed to such Sports Performance Analysis Methods as Manual Notation System, Global Positioning System (GPS) Trekking, and Video Analysis System and the benefits and drawbacks of performance analysis. The module will enable students to work with developing and professional sports clubs and organisations as well as learn to utilise performance analysis laboratories and Motion and Performance Centres. The module will cover Evidence-Informed Performance Analysis, The Role of the Analyst, and Future Directions in Performance Analysis of Sport, Biometric Modelling, Professional Placement, and Sports Performance Analysis Research Project among other topics. Because of the nature of this module, there will be changes periodically in the interest of keeping the course relevant and reflecting best practices.

SS 508 Long Term Athlete Development [Core, 18 Credits]

The module is designed to ensure mastery of the processes of identifying and developing sports talent. Topics to be covered include Talent Detection, Talent Identification, Talent Selection and Talent Development procedures and models. It also explores the factors affecting the success rate of talent identification and development programmes and the Key Success Factors in High-Performance Sports management. The module explores LTAD Models, Key factors of long term athlete development- Factors influencing LTAD (The 10-Year Rule, The FUNdamentals, Specialisation, Developmental Age (Peak Height Velocity (PHV), Trainability, Physical, Mental, Cognitive, and Emotional Development, Periodization, Calendar Planning for Competition, System Alignment and Integration, Continuous Improvement, Long Term Programme Development (LTPD), LATD Application- in Various Sport Discipline, Model Development

SS 509 Laboratory Techniques in Exercise Sciences [Elective, 18 Credits]

The module seeks to equip students with the skills necessary to execute measurement and laboratory techniques used in the assessment of athletic performance and develop practical laboratory-based skills that can be applied to other modules on the degree programme. It covers such areas as laboratory safety, training in the use of laboratory and field equipment, laboratory tests and procedures, principles of measurement and evaluation including errors and precision,

types and characteristics of effective tests, and the importance of laboratory and field tests in sports and exercise science, analytical methods for the study of the physiological and biochemical responses to exercise, biomechanical analysis, psychological tests, testing for motor ability, nutrition analysis, sports performance analysis, Health screening and risk stratification for athletes and exercising individuals, practical emergency response procedures to sports injuries and ethical issues in testing and measurement in sport. Students may be assigned to work with sports clubs/teams, physical fitness centres and sports medicine clinics to gain a mastery of the techniques.

SS 510 Kinanthropometry [Elective, 18 Credits]

The module focuses on the anatomical location, structure and function of the musculoskeletal and cardiopulmonary systems that are involved in human movement. Topics to be mastered include human body composition and anthropometric measurements and their implications for health and Performance, Somatotyping, Goniometric aspects of movement such as assessment of posture and flexibility measurements with goniometry, Assessment of physical activity and performance including field methods of assessing physical activity and energy balance, assessing aerobic and anaerobic performance and adjusting aerobic and anaerobic performance for body size, Statistical methods in kinanthropometry. The course will also equip students with the skills necessary to execute measurement and laboratory techniques used in the assessment of athletic performance and develop practical laboratory-based skills that can be applied to other modules of the degree programme.

SS 512 Sports Science Practicum [Elective, 18 Credits]

The module is designed to give students supervised practical application of studied theory. It allows students to observe and document how sports science professionals perform their job responsibilities for a minimum of three months. Students will also participate to a limited extent in performing tasks under supervision by programme Lecturers and on-site staff. Students shall produce a report, based on their observations at the end of the Practicum.

LEVEL 2 SEMESTER 1

SS 500 Dissertation [Core, 90 Credits]

Students to complete a research project in their area of choice, with some innovation on it through a supervised process. The research projects should be based on any one of the areas covered in the programme and focus on solving real-life sport and exercise science problems and transforming practice. Students will work with a designated academic adviser who will mentor them throughout the research process. Frequent consultations between the student and the mentor will substitute lectures and tutorials as held in other courses. In preparation for the research, a Dissertation Seminar is held to equip students with the necessary research techniques and analytical tools. Student attendance at the Seminar is compulsory. Each candidate is required to submit a dissertation written according to the supplied guidelines and participate in the final oral examination (viva voce) normally held after the submission of the dissertation.