

NATIONAL DIPLOMA: SPORT AND EXERCISE TECHNOLOGY

Qualification code: NDSX05 - NQF Level 6

Campus where offered: Pretoria Campus (day classes)
Last year of new intake: 2019
Teach-out (phase-out) dates: 31 December 2023

Students registered for this qualification should complete their studies according to the teach-out date prescribed for the qualification, subject to the stipulations of Regulation 3.1.11 and 3.1.13 in the Students' Rules and Regulations.

Information on phased-out programmes can be obtained from the TUT website, www.tut.ac.za.

Key to asterisks:

* Information does not correspond to information in Report 151.
(Deviations approved by the Senex of 24 July 2013.)

CURRICULUM

Consult the 2019 Faculty Prospectus for the full contents of the qualification.

FIRST YEAR

CODE	SUBJECT	CREDIT	PREREQUISITE SUBJECT(S)
APK120T	Anatomy, Physiology and Kinesiology I*	(0,200)	
MRK140T	Marketing I	(0,200)	
SDC110T	Sport Didactics and Coaching I	(0,200)	
SET120T	Sport and Exercise Technology I	(0,200)	
SRT100T	Sport Management I	(0,200)	
TOTAL CREDITS FOR THE FIRST YEAR:		1,000	

SECOND YEAR

CODE	SUBJECT	CREDIT	PREREQUISITE SUBJECT(S)
HMS200T	Human Movement Studies II	(0,250)	
KIN200T	Kinesiology II	(0,250)	Anatomy, Physiology and Kinesiology I
SET220T	Sport and Exercise Technology II	(0,250)	Sport and Exercise Technology I
WPY220T	Work Physiology II	(0,250)	Anatomy, Physiology and Kinesiology I
TOTAL CREDITS FOR THE SECOND YEAR:		1,000	

THIRD YEAR

CODE	SUBJECT	CREDIT	PREREQUISITE SUBJECT(S)
HSN300T	Health Sciences III	(0,250)	
SET320T	Sport and Exercise Technology III	(0,250)	Sport and Exercise Technology II
SRO100T	Sport Psychology I	(0,250)	
WPY320T	Work Physiology III	(0,250)	Work Physiology II
TOTAL CREDITS FOR THE THIRD YEAR:		1,000	
TOTAL CREDITS FOR THE QUALIFICATION:		3,000	



SUBJECT INFORMATION (OVERVIEW OF SYLLABUS)

The syllabus content is subject to change to accommodate industry changes. Please note that a more detailed syllabus is available at the Department or in the study guide that is applicable to a particular subject. At time of publication, the syllabus content was defined as follows:

A

ANATOMY, PHYSIOLOGY AND KINESIOLOGY I (APK120T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Sport, Rehabilitation and Dental Sciences)
An introduction to the various skeletal and muscular systems. (Total tuition time: ± 108 hours)

H

HEALTH SCIENCES III (HSN300T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Sport, Rehabilitation and dental Sciences)
A study of the interaction between nutrition, exercise and health. The emphasis is on general terminology and optimum nutrition for active people. Interdependent factors associated with obesity are studied, as well as the effectiveness of diet and exercise as treatment. Lastly, attention is given to the development of muscle strength and cardiovascular health. (Total tuition time: ± 108 hours)

HUMAN MOVEMENT STUDIES II (HMS200T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Sport, Rehabilitation and Dental Sciences)
A study of motor learning (motor skill acquisition) from a behavioural and physiological perspective. The emphasis is on issues that are particularly relevant for application to human motor skill learning (e.g. sport skills acquisition) and exercise performance situations in a variety of contexts. Biodynamics of physical activity. Dynamics of motor skills acquisition. Physical growth and motor development (tactile development, vestibular system, bilateral integration, motor planning: fine and gross, perception). (Total tuition time: ± 108 hours)

K

KINESIOLOGY II (KIN200T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Sport, Rehabilitation and Dental Sciences)
Kinesiology is the study of human movement in the physical sciences. The study of the human body as an organism for performing work is rooted in three major areas of study, namely mechanics, anatomy and physiology. The following aspects are highlighted: Biomechanics: description of human motion. Condition of linear motion. Condition of rotary motion. Centre of gravity and stability. Musculoskeletal anatomy: the upper extremities (shoulders and elbows). The lower extremities (hips, knees and ankles). The spinal column and thorax. Neuromuscular physiology (skills): standing posture. Kinesiology of fitness and exercise. Throwing, striking and kicking skills. Movement on solid surfaces. Movement in the aquatic environment. Movement when suspended and free of support. The accumulated knowledge of these fields forms the foundation of the study of human movement. (Total tuition time: ± 108 hours)

M

MARKETING I (MRK140T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Marketing, Supply Chain and Sport Management)
Introduction to marketing and the market in which businesses function. Background to the functional interaction between the marketing department and the other departments in an organisation. Directives are given on dealing with case studies and the subject terminology used in marketing. An introduction to entrepreneurship. The decision-making areas of the marketing strategy, namely the product, price, distribution, and marketing communication, are studied in depth. (Total tuition time: ± 72 hours)

S

SPORT AND EXERCISE TECHNOLOGY I (SET120T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Sport, Rehabilitation and Dental Sciences)
This subject provides the student with insight into the basic concepts of health, wellness and fitness. A wide range of topics pertaining to motor- and health-related fitness components, and an introduction to a number of practically orientated exercises which form the foundation for Sport and Exercise Technology II. (Total tuition time: ± 108 hours)



SPORT AND EXERCISE TECHNOLOGY II (SET220T)**1 X 3-HOUR PAPER****(Subject custodian: Department of Sport, Rehabilitation and Dental Sciences)**

Students will be able to design a seasonal year-round programme for resistance exercise, plan athletic-type functional strength exercises for developing optimum potential, and will have theoretical knowledge on how to test an athlete for muscle strength and cardiovascular endurance. Students will also develop a broader knowledge base for the application of finer, specific exercise techniques and programme designs and the prescription of metabolic exercises. (Total tuition time: ± 108 hours)

SPORT AND EXERCISE TECHNOLOGY III (SET320T)**1 X 3-HOUR PAPER****(Subject custodian: Department of Sport, Rehabilitation and Dental Sciences)**

Students will have a theoretical basis for the further testing of anaerobic power and capacity, kinanthropometry and flexibility, as well as the general health status of a sports person. Students will also learn to prescribe exercises for the improvement of all the above parameters from the existing test data. (Total tuition time: ± 198 hours)

SPORT DIDACTICS AND COACHING I (SDC110T)**1 X 3-HOUR PAPER****(Subject custodian: Department of Sport, Rehabilitation and Dental Sciences)**

Foundations of coaching. Coaching techniques. Introduction to the psychology of sport. Basic sport psychology. The steps to a successful activity series, which means that activities are the primary building blocks of the curriculum. Each activity block has been designed from a knowledge-based perspective that reflects across the disciplinary framework; that is, it identifies skills and strategies and shows how scientific concepts in exercise physiology, motor learning, biomechanics, psychology, history, sociology and other areas that affect performance, teaching and coaching. A rationale is offered for fitness, the basic concepts behind fitness programmes, and the practical application of the basic principles in constructing a basic training programme for diverse population groups. The increasingly formalised sports structures have led to a greater commitment among coaches to the care and preparation of athletes. Didactic aspects place the learning of skills and strategies into the context of game play as soon as possible. It is also the approach used by most of the master teachers and coaches. (Total tuition time: ± 108 hours)

SPORT MANAGEMENT I (SRT100T)**1 X 3-HOUR PAPER****(Subject custodian: Department of Marketing, Supply Chain and Sport Management)**

An introduction to the basic principles of sport management and of entrepreneurship with special attention to the establishment of a small business enterprise and/or sport club. (Total tuition time: ± 108 hours)

SPORT PSYCHOLOGY I (SRO100T)**1 X 3-HOUR PAPER****(Subject custodian: Department of Sport, Rehabilitation and Dental Sciences)**

The subject examines psychological theories and clinical approaches in understanding the 'why' of human behaviour. This subject examines the general psychological theories and research related to sport and exercise behaviour. It is designed to introduce the learner to the field of sport and exercise psychology by emphasising the ever-existing effects psychological factors have on a participant's sport and exercise performance. (Total tuition time: ± 72 hours)

W**WORK PHYSIOLOGY II (WPY220T)****1 X 3-HOUR PAPER****(Subject custodian: Department of Sport, Rehabilitation and Dental Sciences)**

An extension of first-year Anatomy. The functioning of the body is discussed in detail with special reference to the interdependence of the different systems (respiratory, cardiovascular, etc.). On completion of this subject, the student will be able to describe the complementarity of anatomy and physiology. The effects of exercise on the systems will be discussed in detail. (Total tuition time: ± 108 hours)

WORK PHYSIOLOGY III (WPY320T)**1 X 3-HOUR PAPER****(Subject custodian: Department of Sport, Rehabilitation and Dental Sciences)**

Work Physiology III focuses on the application of basic and advanced physiology principles within an exercise setting. Students build a strong foundation in energy transfer and exercise training/physiology. (Total tuition time: ± 216 hours)

