University of Pretoria Yearbook 2025

BEd (Senior Phase and Further Education and Training Teaching) (09133031)

Department	Humanities Education
Minimum duration of study	4 years
Total credits	680
NQF level	07

Programme information

Students who aim to teach music as a specialist subject in a high school are advised to apply for the BMus degree or the BMus extended degree in the School of the Arts, Faculty of Humanities. Once completed, such students can register for the PGCE in order to qualify as teachers, or alternatively register with the South African Council of Educators as teachers by means of the Personnel Administrative Measures (PAM).

Admission requirements

Important information for all prospective students for 2025

The admission requirements below apply to all who apply for admission to the University of Pretoria with a **National Senior Certificate (NSC) and Independent Examination Board (IEB) qualifications. Click here for this Faculty Brochure.**

Minimum requirements	
Achievement level	
English Home Language or English First Additional Language	**APS**
NSC/IEB	
4	**28**

An additional subject requirement for elective modules in Economic and Management Sciences is Mathematics, passed with an achievement level of 4 (50%–59%) in the final NSC/IEB examination.

Additional subject requirements for elective modules in Physical Sciences or Life Sciences are Physical Sciences, passed with an achievement level of 5 (60%–69%), and Mathematics passed with an achievement level of 5 (60%–69%) in the final NSC/IEB examination.

Life Orientation is excluded when calculating the APS.

Applicants currently in Grade 12 must apply with their final Grade 11 (or equivalent) results.

Applicants who have completed Grade 12 must apply with their final NSC or equivalent qualification results.

Please note that meeting the minimum academic requirements does not guarantee admission.

Successful candidates will be notified once admitted or conditionally admitted.

Unsuccessful candidates will be notified after 30 June.

Applicants should check their application status regularly on the UP Student Portal at click here.

Applicants with qualifications other than the abovementioned should refer to the International undergraduate prospectus 2025: Applicants with a school leaving certificate not issued by Umalusi (South Africa), available at click here.

International students: Click here.

Transferring students

A transferring student is a student who, at the time of applying at the University of Pretoria (UP) is/was a registered student at another tertiary institution. A transferring student will be considered for admission based on NSC or equivalent qualification and previous academic performance. Students who have been dismissed from other institutions due to poor academic performance will not be considered for admission to UP.

Closing dates: Same as above.

Returning students

A returning student is a student who, at the time of application for a degree programme is/was a registered student at UP, and wants to transfer to another degree at UP. A returning student will be considered for admission based on NSC or equivalent qualification and previous academic performance.

Note:

- Students who have been excluded/dismissed from a faculty due to poor academic performance may be considered for admission to another programme at UP, as per faculty-specific requirements.
- Only ONE transfer between UP faculties and TWO transfers within a faculty will be allowed.
- Admission of returning students will always depend on the faculty concerned and the availability of space in the programmes for which they apply.

Closing date for applications from returning students

Unless capacity allows for an extension of the closing date, applications from returning students must be submitted before the end of August via your UP Student Centre.

Other programme-specific information

Module description	Module code	Credits			
		Y1	Y2	Y3	Y4
Fundamental modules					
Academic information management	AIM 111, 121	8			
Literacies in education	JLZ 110,120 or JLZ 111, 121	12			
Professional Practice	JFP 471				3
Core modules					
Conversational competence: One of IsiZulu, Sepedi, Setswana (an exemption can be written)	CCZ 100 or CCI 100 or CCW100	12			

Education	OPV 112, 122	24			
	OPV 212, 222		40	60	
	OPV 312, 322				
Research project	JNM 461, 464				24
Teaching practice	PRO 280		6		
	PRO 380			6	56
	PRO 452, 453				
Professional studies	JPS 121	6			
Classroom literacies	JLZ 300			12	
Elective modules **School subjects that are specific to the Senior Phase only. Students who choose one of these combinations must still take another elective to teach in the Further Education and Training phase. Modules are chosen according to the class timetable. NO TIMETABLE CLASHES ARE ALLOWED.** **Social Sciences: Students choose either History or Geography at second- year level but take all listed first year modules.**					
Geography and	GGY 156, 168	20			
History	GES 110, 120	24			
	ENV 101, 201	8	14		
	GGY 201, GIS 221		38		
History and	GES 110, 120	24			
Geography	GGY 156, 168	20			
	ENV 101	8			
	GES 210, 220		40		
Technology	JOT 110, 120	24			
(All modules must be taken)	JTT 110, 120	24			
	JOT 210, 220		40		
Natural Science and Design and	JWT 115, 125	16			
Technology	JWT 230, JOT 240		24		
	JWT 315, 325			40	
Elective modules **School subjects that can be chosen as Senior Phase or FET Phase teaching electives. For the Senior Phase these modules should be taken up to second year level and for FET up to third year level. All modules must be taken, except where options are indicated. Modules are chosen according to the class timetable. NO TIMETABLE CLASHES ARE ALLOWED.**					
Art Education	JKG 100, JKU 101	24			
	JKG 200, JKU 201		32		
	JKG 300, JKU 301			40	
Music Education	Beginners:				
	JMO 181, 182	24			
	Prior music certificates:				
	JMO 201, 202, 203, 204		40		
IsiZulu	ZUL 111, AFT 121	24			
	ZUL 211, AFT 220		40		
	ZUL 310, AFT 320			60	
Sepedi	SEP 111, AFT 121	24			
	SEP 211, AFT 220		40		
	SEP 310, AFT 320			60	

IsiNdebele	NDE 110, AFT 121	24		
	NDE 210, AFT 220		40	
	NDE 310, AFT 320			60
Setswana	STW 111, AFT 121	24		
	STW 211, AFT 220		40	
	STW 310, AFT 320			60
Afrikaans	AFR 110, 120	24		
	AFR 214, 220		40	
	AFR 311, 321			60
	*JAF 361			12
	(*JAF 361 may be taken in addition to AFR 311, 321)			
English	ENG 110, 120	24		
	ENG 210, 220		40	
	ENG 310, 320			60
	*JEN 361			12
	(*JEN 361 may be taken in addition to ENG 310, 320)			
FET Mathematics	WTW 114, 124	32		
A complete second year with	WTW 211, 218, 224, 248		48	
WTW 389 or JLW 312 and all	WTW 389 or JLW 312			
Methodologies of Mathematics completes the FET elective.				(18) 12
Senior phase Mathematics	WTW 114, 124	32		
(WTW 134, 146, 148 does not	or	or		
give admission to second year	WTW 134, 146, 148	32		
mathematics.)	and			
	JGT 210, JGI 220		24	
Compulsory combination				
Life Orientation	JLO 110, 120	24		
	JLO 210, 220		24	
and	JLO 310, 320			40
Human Movement Studies and	JMB 112, 113, 122, 123	24		
Sport Management (Students	JMB 212, 213, 222, 223		40	
who choose these electives must	JMB 312, 313, 322, 323			60
take one up to third year and the other one at least up to second year)				

Elective modules
School subjects that are specific to the Further Education and Training Phase (FET). Another elective must be taken for Senior Phase from the other combinations listed above. All modules must be taken, except where options are indicated. Modules are chosen according to the class timetable.
NO TIMETABLE CLASHES ARE ALLOWED.
*** All these Economic and Management Science modules are FET subjects. Students also need to choose a different Senior Phase subject (to teach in Grades 7-9) as another elective up to 2nd year.**

* Business Management	OBS 114, 124	20		
	OBS 210, 220		32	

* Heritage and Cultural Tourism	EFK 110, 120	24		
	EFK 210, 220		40	
*Economics	EKN 110, 120	20		
	EKN 214, 234 (Prerequisite for EKN 214 and 234 is STK 110 and 120 passed)		32	
*Financial Accounting	FRK 111, 121, INF 183	22		
	BAC 200		32	
Mathematical Literacy (must be taken to 3rd year level)	WTW 133, 144	16		
	or WTW 134	16		
	JGT 210, JGI 220		24	
	JWG 311, 321			40
Engineering Graphics and Design (JTT must be taken to 3rd year level)	JTT 110, 120	24		
	JTT 230, 240		24	
	JTT 330, 340			40
Geography	ENV 101	8		
	GGY 156, 168	20		
	GGY 201, GIS 221		38	
	ENV 201		14	
History	GES 110, GES 120	24		
	GES 210, GES 220		40	
Life Sciences	CMY 117, 127	32		
	PHY 131	16		
(JLW 312 must be taken if Mathematics is taken as a teaching elective)	MLB 111	16		
	BOT 161		8	
	BOT 251, 261			24
	GTS 161	8		
	ZEN 161		8	
	ZEN 251, ZEN 261			24
	JLS 310			12
	WTW 134, 146, 148	32		
Physical Sciences (must be taken together with mathematics elective)	WTW 114, 124	32		
	CMY 117, 127	32		
*Choose between Chemistry and Physics at 2nd year level	*CMY 282, 284, 283, 285		48	
	PHY 114, 124	32		
#PHY 255 and 263 must be taken concurrently with WTW 211, 218, 224 and 248)	*#PHY 255, 263		48	
	JPC 310			12

After a Senior Phase and an FET specialisation have been chosen, a student may select only one of the following as an additional elective. All modules of the specialisation must be taken.

Psychology	SLK 110, 120	24		
Guidance and counselling	JVB 210, 220		24	
Religion studies (*Optional: will be presented only if student numbers are sufficient)	REL 110, 120	24		
	REL 210, 220		40	
	*REL 310, 320			60

Methodology of electives modules **Choose at least two methodologies in accordance with the teaching specialisations.** **The same methodologies will be taken at second, third and fourth-year levels.**				
Methodology of Afrikaans	JMA 200, 300, 451, 454	6	6	12
Methodology of English	JME 200, 300, 451, 454	6	6	12
Methodology of IsiZulu	JZL 200, 300, 451, 454	6	6	12
Methodology of Sepedi	JSP 200, 300, 451, 454	6	6	12
Methodology of IsiNdebele	JND 200, 300, 451, 454	6	6	12
Methodology of Setswana	JSW 200, 300, 451, 454	6	6	12
Methodology of Geography	JMG 200, 300, 451, 454	6	6	12
Methodology of History	JMH 200, 300, 451, 454	6	6	12
Methodology of Music Education	JMM 200, 300, 451, 454	6	6	12
Methodology of Art	JMK 201, 301, 451, 454	6	6	12
Methodology of Mathematical Literacy	JMW 204, 302, 452, 455	6	6	12
Methodology of Mathematics	JMW 204, 300, 451, 454	6	6	12
Methodology of Sciences (Natural)	JMN 203, 304, 451, 454	6	6	12
Methodology of Life Sciences	JMN 203, 308, 452, 458	6	6	12
Methodology of Physical Sciences	JMN 203, 309, 453, 456	6	6	12
Methodology of Life Orientation and Physical Education	JML 201, 301, 461, 464	6	6	12
Methodology of Engineering Graphics and Design	JMC 201, JMT 304, 451, 454	6	6	12
Methodology of Technology	JMC 201, 300, 451, 454	6	6	12
Methodology of Computer Application Technology	JMC 201, JMI 300, 451, 454	6	6	12
Methodology of Information Technology	JMC 201 , JMR 300, 451, 454	6	6	12
Methodology of Religion Studies	JMF 200, 300, 451, 454	6	6	12

Class attendance

The teacher education programmes of the Faculty of Education have been approved and accredited by the Department of Higher Education and Training. Due to the fact that the Faculty places high emphasis on the development of skills and competences, class attendance is compulsory for all student teachers for the full duration of the training period specified by SAQA (South African Qualification Authority).

Mathematics modules

- WTW 134, 146, 148 does not give admission to second year mathematics.
- A complete second year with WTW 389 or JLW 312 and all Methodologies of Mathematics completes the FET elective.
- WTW 146 and WTW 148 are available to BEd students who take only a single full year of Mathematics as an elective with either WTW 114 or WTW 134 as first semester module.

Examinations and pass requirements

Special and Chancellor's examinations

- A third-year student who has failed a maximum of four semester modules or the equivalent thereof, with a final mark of at least 40% in each, may be admitted by the Dean to a special examination in those modules during January of the following year, provided that this will enable the student to comply with all requirements for

promotion to the fourth year of study.

- A final-year BEd student requiring a maximum of 4 semester modules or the equivalent thereof to complete his or her degree, with a final mark of 40% in each, may be admitted to a Chancellor's examination, during January of the following year. If the Chancellor's examination is conducted before 1 February, a student is not required to register again and the examination is treated as a supplementary examination. If the Chancellor's examination is conducted on or after 1 February, the student must register again for the module(s) in question and the lecturer may require that a semester mark be obtained in an appropriate manner. In such a case, the result of the examination will not be taken into consideration with a view to the graduation ceremonies in March/April.
- Students will be promoted to the next semester or year without writing the prescribed examination if their semester mark in the relevant module (OPV 112, 122) is 70% or higher, with the understanding that students will only receive credit for the modules in which they were promoted if the modules are concluded with a prescribed examination in the second semester of the final year (OPV 322).

Pass with distinction

The degree is conferred with distinction to a student who obtains an overall weighted average (GPA) of 75% with a minimum of 70% in the first three years of study (no rounding) with the condition that the degree is completed in the prescribed 4 years.

Curriculum: Year 1

Minimum credits: 170

- WTW 134, 146, 148 does not give admission to second year mathematics.
- Students who do not meet the requirements for GGY 166 must register for GGY 168.

Fundamental modules

Academic information management 111 (AIM 111)

Module credits	4.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Economic and Management Sciences Faculty of Humanities Faculty of Law Faculty of Health Sciences Faculty of Natural and Agricultural Sciences Faculty of Theology and Religion
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Information Science
Period of presentation	Semester 1

Module content

Find, evaluate, process, manage and present information resources for academic purposes using appropriate technology.

Academic information management 121 (AIM 121)

Module credits	4.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Economic and Management Sciences Faculty of Humanities Faculty of Law Faculty of Health Sciences Faculty of Natural and Agricultural Sciences Faculty of Theology and Religion Faculty of Veterinary Science
Prerequisites	No prerequisites.
Contact time	2 lectures per week

Language of tuition	Module is presented in English
Department	Informatics
Period of presentation	Semester 2

Module content

Apply effective search strategies in different technological environments. Demonstrate the ethical and fair use of information resources. Integrate 21st-century communications into the management of academic information.

Literacies in education 110 (JLZ 110)

Module credits	6.00
NQF Level	05
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 1

Module content

The module is aimed at building on students' personal literacies and relating these to the types of literacy they need to study successfully at university. The primary focus is on academic reading abilities, including reading strategies, acquiring an academic vocabulary and learning to read important academic genres critically, such as examination papers and academic articles.

Literacies in education 111 (JLZ 111)

Module credits	6.00
NQF Level	05
Prerequisites	Afrikaans Home Language 50% OR English Home Language 50% OR English 1st Add Language 60%
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 1

Module content

The module is aimed at building on students' personal literacies and relating these to the types of literacy they need to study successfully at university. The module focuses primarily on academic reading abilities, including reading strategies, acquiring an academic vocabulary and learning to read important academic genres critically, such as examination papers and academic articles. Additional support is provided through practical tasks and discussions.

Literacies in education 120 (JLZ 120)

Module credits	6.00
NQF Level	05
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 2

Module content

The module focuses on producing academic texts. Students learn how to use different modes of writing, including description, discussion, cause and effect, explanation and argumentation. They learn how to plan, write and edit an academic essay using a process approach. Specific attention is paid to engaging with other authors, and referencing appropriately. The module also pays attention to formatting academic work and representing verbal information visually.

Literacies in education 121 (JLZ 121)

Module credits	6.00
NQF Level	05
Prerequisites	Afrikaans Home Language 50% OR English Home Language 50% OR English 1st Add Language 60%
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 2

Module content

The module focuses on producing academic texts. Students learn how to use different modes of writing, including description, discussion, cause and effect, explanation and argumentation. They learn how to plan, write and edit an academic essay, using a process approach. Specific attention is paid to engaging with other authors, and referencing appropriately. The module also pays attention to formatting academic work and representing verbal information visually. Additional support is provided through practical tasks and discussions.

Academic orientation 109 (UPO 109)

Module credits	0.00
NQF Level	00
Language of tuition	Module is presented in English
Department	Education Dean's Office
Period of presentation	Year

Core modules

Conversational Competence: Sepedi 100 (CCI 100)

Module credits	12.00
NQF Level	05
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English and Sepedi
Department	African Languages
Period of presentation	Semester 1

Module content

To endow prospective teachers, who has no knowledge of an African language, with a basic conversational competence in Northern Sotho (Sepedi). Successful completion of this module will enable teachers to effectively communicate – verbally and non-verbally - in a multilingual classroom.

Conversational Competence: Setswana 100 (CCW 100)

Module credits	12.00
NQF Level	05
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English and Setswana
Department	African Languages
Period of presentation	Semester 1

Module content

To endow prospective teachers, who have no knowledge of an African language, with a basic conversational competence in Setswana. Successful completion of this module will enable teachers to effectively communicate – verbally and non-verbally - in a multilingual classroom.

Conversational Competence: IsiZulu 100 (CCZ 100)

Module credits	12.00
NQF Level	05
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English and isiZulu
Department	African Languages
Period of presentation	Semester 1

Module content

To endow prospective teachers, who have no knowledge of an African language, with a basic conversational competence in IsiZulu. Successful completion of this module will enable teachers to effectively communicate – verbally and non-verbally - in a multilingual classroom.

Professional studies 121 (JPS 121)

Module credits	6.00
NQF Level	05
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 2

Module content

This module guides the student to develop teaching skills, plan learning activities, and design learning and teaching materials that are suitable for the South African educational context.

Education 112 (OPV 112)

Module credits	12.00
NQF Level	05
Service modules	Faculty of Humanities
Prerequisites	No prerequisites.
Contact time	3 lectures per week
Language of tuition	Separate classes for Afrikaans and English
Department	Humanities Education
Period of presentation	Semester 1

Module content

In this module students are guided to develop knowledge, skills and attitudes with regard to the political, professional, historical and cultural complexities of teaching. Selected themes in the history of South African education will be explored to enable students to think critically about their role as engaged professional educators today.

Education 122 (OPV 122)

Module credits	12.00
NQF Level	05
Service modules	Faculty of Humanities
Prerequisites	No prerequisites.

Contact time	3 lectures per week
Language of tuition	Separate classes for Afrikaans and English
Department	Educational Psychology
Period of presentation	Semester 2

Module content

This module focuses on child development and learning. In addition to the underlying principles of developmental psychology and theories of development, child development is discussed in terms of physical growth and motor development; development of perception, cognition and language; emotional development; social development and moral development. Developmental psychopathology is also introduced. In terms of child learning, the principles of learning, theories of learning and barriers to learning are discussed. In addition, school learning is explained in terms of learning, reading and study skills.

Elective modules

Afrikaans 110 (AFR 110)

Module credits	12.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Law
Prerequisites	No prerequisites.
Contact time	2 discussion classes per week, 2 lectures per week
Language of tuition	Module is presented in Afrikaans
Department	Afrikaans
Period of presentation	Semester 1

Module content

Taalkundekomponent: Inleiding tot die Afrikaanse taalkunde

Inleiding tot die Afrikaanse taalkunde met die klem op skryfvaardighede.

Letterkundekomponent: Inleiding tot Afrikaanse literatuurstudie

Inleiding tot die Afrikaanse literatuurgeskiedenis, -kritiek en -teorie.

Afrikaans 120 (AFR 120)

Module credits	12.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Law
Prerequisites	No prerequisites.

Contact time	2 discussion classes per week, 2 lectures per week
Language of tuition	Module is presented in Afrikaans
Department	Afrikaans
Period of presentation	Semester 2

Module content

Taalkundekomponent: Fonetiek en fonologie

Inleiding tot die Afrikaanse fonetiek en fonologie. Inleiding tot die Afrikaanse taalkunde.

Letterkundekomponent: Afrikaanse populêre kultuur

Inleiding tot kultuurstudie: 'n Oorsig oor populêre fiksie, musiek en films in Afrikaans.

African languages literature: Capita selecta 121 (AFT 121)

Module credits	12.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	NDE 110/SEP 111/ZUL 111/STW 111
Contact time	2 lectures per week
Language of tuition	Module presented in English and African Language
Department	African Languages
Period of presentation	Semester 2

Module content

Aspects of the literature of isiNdebele/isiZulu/Sepedi/Setswana such as an introduction to literary concepts such as literary text(s), topic, characters, events, time and place; the analysis of selected short stories.

General chemistry 117 (CMY 117)

Module credits	16.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Health Sciences Faculty of Veterinary Science
Prerequisites	A candidate must have Mathematics for at least 60% and 60% for Physical Sciences.
Contact time	1 practical per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Chemistry
Period of presentation	Semester 1

Module content

General introduction to inorganic, analytical and physical chemistry. Atomic structure and periodicity. Molecular structure and chemical bonding using the VSEPR-model. Nomenclature of inorganic ions and compounds. Classification of reactions: precipitation, acid-base, redox reactions and gas-forming reactions. Mole concept and stoichiometric calculations concerning chemical formulas and chemical reactions. Principles of reactivity: energy and chemical reactions. Physical behaviour gases, liquids, solids and solutions and the role of intermolecular forces. Rate of reactions: Introduction to chemical kinetics.

General chemistry 127 (CMY 127)

Module credits	16.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Health Sciences Faculty of Veterinary Science
Prerequisites	Natural and Agricultural Sciences students: CMY 117 GS or CMY 154 GS Health Sciences students: none
Contact time	1 practical per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Chemistry
Period of presentation	Semester 2

Module content

Theory: General physical-analytical chemistry: Chemical equilibrium, acids and bases, buffers, solubility equilibrium, entropy and free energy, electrochemistry. Organic chemistry: Structure (bonding), nomenclature, isomerism, introductory stereochemistry, introduction to chemical reactions and chemical properties of organic compounds and biological compounds, i.e. carbohydrates and aminoacids. Practical: Molecular structure (model building), synthesis and properties of simple organic compounds.

Introduction to tourism 110 (EFK 110)

Module credits	12.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	No prerequisites.
Contact time	1 tutorial per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Historical and Heritage Studies
Period of presentation	Semester 1

Module content
Overview of the origin and nature of tourism development of South African cultural, natural and adventure tourist destinations.

Heritage tourism management 120 (EFK 120)

Module credits	12.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	No prerequisites.
Contact time	1 tutorial per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Historical and Heritage Studies
Period of presentation	Semester 2

Module content
An introductory exploration of the relationship between heritage conservation and tourism.

Economics 110 (EKN 110)

Module credits	10.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Humanities Faculty of Natural and Agricultural Sciences
Prerequisites	No prerequisites.
Contact time	1 discussion class per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Economics
Period of presentation	Semester 1

Module content
This module deals with the core principles of economics. A distinction between macroeconomics and microeconomics is made. A discussion of the market system and circular flow of goods, services and money is followed by a section dealing with microeconomic principles, including demand and supply analysis, consumer behaviour and utility maximisation, production and the costs thereof, and the different market models and firm behaviour. Labour market institutions and issues, wage determination, as well as income inequality and poverty are also addressed. A section of money, banking, interest rates and monetary policy concludes the course.

Economics 120 (EKN 120)

Module credits	10.00

NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Humanities Faculty of Natural and Agricultural Sciences
Prerequisites	EKN 110 GS or EKN 113 GS and at least 4 (50-59%) in Mathematics in the Grade 12 examination or 60% in STK 113 and concurrently registered for STK 123
Contact time	1 discussion class per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Economics
Period of presentation	Semester 2

Module content

This module deals with the core principles of economics, especially macroeconomic measurement the private and public sectors of the South African economy receive attention, while basic macroeconomic relationships and the measurement of domestic output and national income are discussed. Aggregate demand and supply analysis stands core to this course which is also used to introduce students to the analysis of economic growth, unemployment and inflation. The microeconomics of government is addressed in a separate section, followed by a section on international economics, focusing on international trade, exchange rates and the balance of payments. The economics of developing countries and South Africa in the global economy conclude the course.

English 110 (ENG 110)

Module credits	12.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Economic and Management Sciences Faculty of Law Faculty of Health Sciences
Prerequisites	No prerequisites.
Contact time	1 discussion class per week, 2 lectures per week, 2 web-based periods per week
Language of tuition	Module is presented in English
Department	English
Period of presentation	Semester 1

Module content

*Alternative evening classes - 2 discussion classes per week Introduction to Literature in English (1)

This module introduces the study of literature by examining a number of texts representing different genres (poetry, prose, drama). The texts studied here will be mainly from the pre-twentieth century era and may include texts written in English from both Africa and other parts of the world. The aim of this module is to equip students with the critical and analytical skills required for a perceptive reading of poetry, novels and plays.

English 120 (ENG 120)

Module credits	12.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Economic and Management Sciences Faculty of Law Faculty of Theology and Religion
Prerequisites	No prerequisites.
Contact time	1 discussion class per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	English
Period of presentation	Semester 2

Module content

*Alternative evening classes: 2 discussion classes per week
Introduction to Literature in English (2)
This module introduces the study of post-nineteenth century literature by examining a number of texts representing different genres (poetry, drama, prose). Texts will be from both Africa and other parts of the world. By the end of this module students should have the background and analytical skills to perceptively read modern and contemporary poetry, novels and plays.

Introduction to environmental sciences 101 (ENV 101)

Module credits	8.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Humanities
Prerequisites	Max 600 students.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 1

Module content

Introducing the basic concepts and interrelationships required to understand the complexity of natural environmental problems, covering an introduction to environmental science and biogeography; including a first introduction to SDGs and Aichi targets.

Financial accounting 111 (FRK 111)

Module credits	10.00

NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Law Faculty of Natural and Agricultural Sciences
Prerequisites	No prerequisites.
Contact time	4 lectures per week
Language of tuition	Module is presented in English
Department	Accounting
Period of presentation	Semester 1

Module content

The nature and function of accounting; the development of accounting; financial position; financial result; the recording process; processing of accounting data; treatment of VAT; elementary income statement and balance sheet; flow of documents; accounting systems; introduction to internal control and internal control measures; bank reconciliations; control accounts; adjustments; financial statements of a sole proprietorship; the accounting framework.

Financial accounting 121 (FRK 121)

Module credits	12.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Natural and Agricultural Sciences
Prerequisites	FRK 111
Contact time	4 lectures per week
Language of tuition	Module is presented in English
Department	Accounting
Period of presentation	Semester 2

Module content

Property, plant and equipment; intangible assets; inventories; liabilities; presentation of financial statements; enterprises without profit motive; partnerships; companies; close corporations; cash flow statements; analysis and interpretation of financial statements.

History 110 (GES 110)

Module credits	12.00
NQF Level	05
Service modules	Faculty of Education Faculty of Law

Prerequisites	No prerequisites.
Contact time	1 tutorial per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Historical and Heritage Studies
Period of presentation	Semester 1

Module content

The making of the Modern World: a survey
A selection of themes on Asia, Africa, the Americas and Europe and their contribution to the making of the Modern World.

History 120 (GES 120)

Module credits	12.00
NQF Level	05
Service modules	Faculty of Education Faculty of Law
Prerequisites	No prerequisites.
Contact time	1 tutorial per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Historical and Heritage Studies
Period of presentation	Semester 2

Module content

Africa and South Africa: a survey
An overview focusing on the making of African and South African societies from the earliest times to the present with emphasis on the most significant historical forces, factors and events.

Aspects of human geography 156 (GGY 156)

Module credits	8.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Humanities Faculty of Health Sciences
Prerequisites	Max 600 students.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 1

Module content

This module begins by fostering an understanding of human geography. Then follows with the political ordering of space; cultural diversity as well as ethnic geography globally and locally; population geography of the world and South Africa: and four economic levels of development. The purpose is to place South Africa in a world setting and to understand the future of the country.

Southern African geomorphology 166 (GGY 166)

Module credits	8.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Humanities Faculty of Health Sciences
Prerequisites	A candidate must have passed Mathematics and Physical Science with at least 60% in the Grade 12 examination OR a candidate must have passed PHY 143 and WTW 143. Max 600 students.
Contact time	1 tutorial per week, 3 lectures per week
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 2

Module content

Note: Students cannot register for both GGY 166 and GGY 168.

Investigating southern African landscapes and placing them in a theoretical and global context. The geomorphological evolution of southern Africa. Introduction to the concepts of Geomorphology and its relationships with other physical sciences (e.g. meteorology, climatology, geology, hydrology and biology). The processes and controls of landform and landscape evolution. Tutorial exercises cover basic techniques of geomorphological analysis, and topical issues in Geomorphology.

Introduction to physical geography 168 (GGY 168)

Module credits	12.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Humanities
Prerequisites	No prerequisites.
Contact time	1 practical fortnightly, 2 lectures per week
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 2

Module content

Note: Students cannot register for both GGY 168 and GGY 166.
This module serves as an introduction to the field of physical geography and geomorphology. Initially, a theoretical overview of a variety of geomorphic realms will be studied. Students will be taught about the key processes that are present in each realm and how those processes work together in order to produce specific landforms. In addition, students will receive training in several fundamental analytical techniques, including cartographic skills, aerial photographs and introductory GIS.

Introductory genetics 161 (GTS 161)

Module credits	8.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Veterinary Science
Prerequisites	MLB 111 GS
Contact time	2 lectures per week, fortnightly tutorials
Language of tuition	Module is presented in English
Department	Biochemistry, Genetics and Microbiology
Period of presentation	Semester 2

Module content

Chromosomes and cell division. Principles of Mendelian inheritance: locus and alleles, dominance interactions, extensions and modifications of basic principles.. Probability studies. Sex determination and sex linked traits. Pedigree analysis. Genetic linkage and chromosome mapping. Chromosome variation.

Informatics 183 (INF 183)

Module credits	3.00
NQF Level	05
Prerequisites	No prerequisites.
Contact time	1 practical per week
Language of tuition	Module is presented in English
Department	Informatics
Period of presentation	Year

Module content

Computer processing of accounting information.

Art education 100 (JKG 100)

Module credits	6.00
NQF Level	05

Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 1 and Quarter 4

Module content

This module provides students with an overview of historical and contemporary art movements. Important artists and artworks of this period are emphasized and discussed in context. History of art education within the school context is explored with emphasis on Western art movements and styles.

Art education 101 (JKU 101)

Module credits	18.00
NQF Level	05
Contact time	2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Year

Module content

This module focuses on examining various methods and techniques for stimulating creativity in the classroom, by introducing fundamental art elements and principles, techniques and use of media. This module includes the exploration of concepts of visual literacy, the development of understanding and application thereof by the student in creative ways through experimentation with traditional art media. Community Engagement / Service Learning

Life orientation 110 (JLO 110)

Module credits	12.00
NQF Level	05
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 1

Module content

The main focus of this module is on personal development and therefore the question: “Who am I?” is posed. The content is designed to focus on the student as individual and on the various factors that influence individual development. Students are guided to develop relevant knowledge, intrapersonal skills and attitudes to display resilient behaviour.

Life orientation 120 (JLO 120)

Module credits	12.00
NQF Level	05
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 2

Module content

This module also focuses on personal development, but with the emphasis on the question: " How is my interaction with other people?" Knowledge and application of interpersonal skills such as conflict management,emotional intelligence and assertiveness will be dealt with.

Human movement studies and sport management 112 (JMB 112)

Module credits	6.00
NQF Level	05
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 1

Module content

The purposes of physical activities as well as theories and philosophies of movement are studied. In addition, the coaching of young athletes and the challenges facing the teacher as coach receive attention. The importance of planning as the first phase of sports management is emphasised.

Human movement studies and sport management 113 (JMB 113)

Module credits	6.00
NQF Level	05
Prerequisites	No prerequisites.
Contact time	2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 1

Module content

In this module, the student is required to master and apply techniques to develop motor skills in the school context. The student is introduced to a variety of motor skills in a game context. Other motor skills involve the mastering of practical skills for the development of gymnastic and rhythmic movements.

Human movement studies and sport management 122 (JMB 122)

Module credits	6.00
NQF Level	05
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 2

Module content

In this module students are introduced to the structure and functions of systems in the human body. The skeletal system and the muscular system receive primary attention. Additionally, students acquire knowledge and skills in management – particularly organizational skills in the sports context.

Human movement studies and sport management 123 (JMB 123)

Module credits	6.00
NQF Level	05
Prerequisites	No prerequisites.
Contact time	2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 2

Module content

In athletics, the acquisition of skills in various track and field events receives attention.

Music education 181 (JMO 181)

Module credits	16.00
NQF Level	05
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Year

Module content

To equip students to specialize in music theory and who have no, or limited previous music training. It is a music course with elementary music theory knowledge.

Music education 182 (JMO 182)

Module credits	8.00
NQF Level	05
Contact time	2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Year

Module content

To equip students to specialize in practical music skills and who have no, or limited previous music training. It is a music course with elementary practical music skills and fundamental knowledge.

Design and technology 110 (JOT 110)

Module credits	12.00
NQF Level	05
Prerequisites	No prerequisites.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 1

Module content

This module aims to develop students' design problem solving capabilities in the context of processing: material properties and testing, textiles, food preservation and recycling technologies.

Design and technology 120 (JOT 120)

Module credits	12.00
NQF Level	05
Prerequisites	No prerequisites.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 2

Module content

This module aims to develop students' design problem solving capabilities in the context of structures: types of structures, components of structures, forces/loads acting on structures, properties of forces, strengthening and reinforcement techniques applicable to structures in technology.

Engineering graphics and design 110 (JTT 110)

Module credits	12.00
NQF Level	05
Prerequisites	No prerequisites.
Contact time	4 lectures per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 1

Module content

This module equips students to understand and teach Engineering Graphics and Design. The focus is on intermediate free hand drawing; industrial processes; manufacturing processes; and manufacturing materials (including alloys); machining processes and component finishing processes.

Engineering graphics and design 120 (JTT 120)

Module credits	16.00
NQF Level	05
Prerequisites	No prerequisites.
Contact time	1 practical per week, 3 lectures per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 2

Module content

Drawing standards, geometrical concepts and constructions, scales, 1st and 3rd angle orthographic projections, descriptive geometry: points and line segments, oblique planes. Isometric and perspective drawings. Plane figures, solid geometry, developments and interpenetrations. Conventions, symbols, structures and techniques appropriate to Mechanical and Civil drawings. Freehand sketches. Design principles. Knowledge and skills will be applied in a compulsory design project..

Natural science 115 (JWT 115)

Module credits	8.00
NQF Level	05
Prerequisites	3 (40-49%) in both Physical Science and Mathematics in Grade 12.
Contact time	2 practicals per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 1

Module content

Atoms; nuclei; elements; compounds; chemical bonds; intermolecular forces, chemical reactions; oxidation and reduction; acids and bases; organic chemistry.

Natural science 125 (JWT 125)

Module credits	8.00
NQF Level	05
Prerequisites	3 (40-49%) in both Physical Science and Mathematics in Grade 12.
Contact time	2 practicals per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 2

Module content

Motion; Newton’s laws; momentum; energy; gravity; heat; gases, liquids, electricity, magnetism; waves, sound and light.

Molecular and cell biology 111 (MLB 111)

Module credits	16.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Health Sciences Faculty of Veterinary Science
Prerequisites	A candidate who has passed Mathematics with at least 60% in the Grade 12 examination
Contact time	1 practical/tutorial per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Biochemistry, Genetics and Microbiology
Period of presentation	Semester 1

Module content

Introduction to the molecular structure and function of the cell. Basic chemistry of the cell. Structure and composition of prokaryotic and eukaryotic cells. Ultrastructure and function of cellular organelles, membranes and the cytoskeleton. General principles of energy, enzymes and cell metabolism. Selected processes, e.g. glycolysis, respiration and/or photosynthesis. Introduction to molecular genetics: DNA structure and replication, transcription, translation. Cell growth and cell division.

Introduction to isiNdebele Grammar – Capita selecta 110 (NDE 110)

Module credits	12.00
NQF Level	06

Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in IsiNdebele
Department	African Languages
Period of presentation	Semester 1

Module content

For speakers of isiNdebele as home language or first or second additional language.
Aspects of the grammar of isiNdebele such as an introduction to the word categories; an introduction to the structure, meaning and use of the noun, the adjective, the relative, the possessive; the verb; writing and spelling rules; dictionaries and dictionary use; grammatical analysis.

Business management 114 (OBS 114)

Module credits	10.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Humanities Faculty of Natural and Agricultural Sciences
Prerequisites	May not be included in the same curriculum as OBS 155
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Business Management
Period of presentation	Semester 1

Module content

The entrepreneurial mind-set; managers and managing; values, attitudes, emotions, and culture: the manager as a person; ethics and social responsibility; decision making; leadership and responsible leadership; effective groups and teams; managing organizational structure and culture inclusive of the different functions of a generic organisation and how they interact (marketing; finance; operations; human resources and general management); contextualising Sustainable Development Goals (SDG) in each of the topics.

Business management 124 (OBS 124)

Module credits	10.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Humanities Faculty of Natural and Agricultural Sciences

Prerequisites	Admission to the examination in OBS 114
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Business Management
Period of presentation	Semester 2

Module content

Value chain management: functional strategies for competitive advantage; human resource management; managing diverse employees in a multicultural environment; motivation and performance; using advanced information technology to increase performance; production and operations management; financial management; corporate entrepreneurship.

First course in physics 114 (PHY 114)

Module credits	16.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	A candidate must have passed Mathematics and Physical Science with at least 60% in the Grade 12 examination
Contact time	1 discussion class per week, 1 practical per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Physics
Period of presentation	Semester 1

Module content

SI-units. Significant figures. Waves: intensity, superposition, interference, standing waves, resonance, beats, Doppler. Geometrical optics: Reflection, refraction, mirrors, thin lenses, instruments. Physical optics: Young-interference, coherence, diffraction, polarisation. Hydrostatics and dynamics: density, pressure, Archimedes' principle, continuity, Bernoulli. Heat: temperature, specific heat, expansion, heat transfer. Vectors. Kinematics of a point: Relative, projectile, and circular motion. Dynamics: Newton's laws, friction. Work: point masses, gasses (ideal gas law), gravitation, spring, power. Kinetic energy: Conservative forces, gravitation, spring. Conservation of energy. Conservation of momentum. Impulse and collisions. System of particles: Centre of mass, Newton's laws. Rotation: torque, conservation of angular momentum, equilibrium, centre of gravity.

First course in physics 124 (PHY 124)

Module credits	16.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	(WTW 114 GS or WTW 158 GS or WTW 134) and PHY 114 GS

Contact time	1 discussion class per week, 1 practical per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Physics
Period of presentation	Semester 2

Module content

Simple harmonic motion and pendulums. Coulomb's law. Electric field: dipoles, Gauss' law.Electric potential. Capacitance. Electric currents: resistance, resistivity, Ohm's law, energy, power, emf, RC-circuits. Magnetic Field: Hall-effect, Bio-Savart. Faraday's and Lenz's laws. Oscillations: LR-circuits. Alternating current: RLC-circuits, power, transformers. Introductory concepts to modern physics. Nuclear physics: Radioactivity.

Physics for biology students 131 (PHY 131)

Module credits	16.00
NQF Level	05
Service modules	Faculty of Education Faculty of Health Sciences Faculty of Veterinary Science
Prerequisites	A candidate must have passed Mathematics with at least 60% in the Grade 12 examination
Contact time	1 discussion class per week, 1 practical per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Physics
Period of presentation	Semester 1

Module content

Note: PHY 131 is aimed at students who will not continue with physics. PHY 131 cannot be used as a substitute for PHY 114.

Units, vectors, one dimensional kinematics, dynamics, work, equilibrium, sound, liquids, heat, thermodynamic processes, electric potential and capacitance, direct current and alternating current, optics, modern physics, radioactivity.

Theory of religion 110 (REL 110)

Module credits	12.00
NQF Level	05
Service modules	Faculty of Education Faculty of Humanities
Prerequisites	No prerequisites.
Contact time	1 discussion class per week, 2 lectures per week, 2 tutorials per week
Language of tuition	Module is presented in English
Department	Religion Studies

Period of presentation	Semester 1

Module content

What is religion? The functions of religion. Studying religion. Perspectives on religion. Common concepts and key terms in various religions will be dealt with - also generic dimensions and aspects. The interdependence of religion, culture and society.

Kaleidoscope of religions 120 (REL 120)

Module credits	12.00
NQF Level	05
Service modules	Faculty of Education Faculty of Humanities
Prerequisites	No prerequisites.
Contact time	1 discussion class per week, 2 lectures per week, 2 tutorials per week
Language of tuition	Module is presented in English
Department	Religion Studies
Period of presentation	Semester 2

Module content

The occurrence of religion in societies. Types of religion. Primal religions. Christianity, Judaism, Islam. A variety of religions will be addressed: capita selecta will be made from Christianity; Hinduism; Buddhism; New Religions; New Age; main developments in the world and South Africa.

Introduction to Sepedi grammar - Capita selecta 111 (SEP 111)

Module credits	12.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in Sepedi
Department	African Languages
Period of presentation	Semester 1

Module content

*For speakers of Sepedi as home language or first or second additional language.
Aspects of the grammar of Sepedi such as an introduction to the word categories; an introduction to the structure, meaning and use of the noun, the adjective, the relative, the possessive; the verb; writing and spelling rules; dictionaries and dictionary use; grammatical analysis.

Psychology 110 (SLK 110)

Module credits	12.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Health Sciences Faculty of Natural and Agricultural Sciences
Prerequisites	No prerequisites.
Contact time	2 discussion classes per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Psychology
Period of presentation	Semester 1

Module content

This module is a general orientation to Psychology. An introduction is given to various theoretical approaches in Psychology, and the development of Psychology as a science is discussed. Selected themes from everyday life are explored and integrated with psychological principles. This module focuses on major personality theories. An introduction is given to various paradigmatic approaches in Psychology.

Psychology 120 (SLK 120)

Module credits	12.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Health Sciences Faculty of Natural and Agricultural Sciences
Prerequisites	No prerequisites.
Contact time	2 discussion classes per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Psychology
Period of presentation	Semester 2

Module content

This module introduces the student to a basic knowledge and understanding of the biological basis of human behaviour. The module addresses the key concepts and terminology related to the biological subsystem, the rules and principles guiding biological psychology, and identification of the interrelatedness of different biological systems and subsystems. In this module various cognitive processes are studied, including perception, memory, thinking, intelligence and creativity. Illustrations are given of various thinking processes, such as problem solving, critical, analytic and integrative thinking.

Introduction to Setswana grammar – Capita selecta 111 (STW 111)

Module credits	12.00
NQF Level	05
Contact time	2 lectures per week
Language of tuition	Module is presented in Setswana
Department	African Languages
Period of presentation	Semester 1

Module content

*For speakers of Setswana as home language or first or second additional language. Aspects of the grammar of Setswana such as an introduction to the word categories; an introduction to the structure, meaning and use of the noun, the adjective, the relative, the possessive; the verb; writing and spelling rules; dictionaries and dictionary use; grammatical analysis.

Calculus 114 (WTW 114)

Module credits	16.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Economic and Management Sciences Faculty of Humanities
Prerequisites	60% for Mathematics in Grade 12
Contact time	1 tutorial per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Semester 1

Module content

*This module serves as preparation for students majoring in Mathematics (including all students who intend to enrol for WTW 218 and WTW 220). Students will not be credited for more than one of the following modules for their degree: WTW 114, WTW 158, WTW 134, WTW 165.
Functions, limits and continuity. Differential calculus of single variable functions, rate of change, graph sketching, applications. The mean value theorem, the rule of L'Hospital. Definite and indefinite integrals, evaluating definite integrals using anti-derivatives, the substitution rule.

Mathematics 124 (WTW 124)

Module credits	16.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Economic and Management Sciences

Prerequisites	WTW 114
Contact time	1 tutorial per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Semester 2

Module content

*Students will not be credited for more than one of the following modules for their degree:
WTW 124, WTW 146, WTW 148 and WTW 164. This module serves as preparation for students majoring in Mathematics (including all students who intend to enrol for WTW 218, WTW 211 and WTW 220).

The vector space Rn, vector algebra with applications to lines and planes, matrix algebra, systems of linear equations, determinants. Complex numbers and factorisation of polynomials. Integration techniques and applications of integration. The formal definition of a limit. The fundamental theorem of Calculus and applications. Vector functions and quadratic curves.

Mathematics 134 (WTW 134)

Module credits	16.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Veterinary Science
Prerequisites	50% for Mathematics in Grade 12
Contact time	1 tutorial per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Semester 1

Module content

**Students will not be credited for more than one of the following modules for their degree: WTW 134, WTW 165, WTW 114, WTW 158. WTW 134 does not lead to admission to Mathematics at 200 level and is intended for students who require Mathematics at 100 level only. WTW 134 is offered as WTW 165 in the second semester only to students who have applied in the first semester of the current year for the approximately 65 MBChB, or the 5-6 BChD places becoming available in the second semester and who were therefore enrolled for MGW 112 in the first semester of the current year.*
Functions, derivatives, interpretation of the derivative, rules of differentiation, applications of differentiation, integration, interpretation of the definite integral, applications of integration. Matrices, solutions of systems of equations. All topics are studied in the context of applications.

Mathematics 144 (WTW 144)

Module credits	8.00
NQF Level	05

Prerequisites	WTW 133 or WTW 135 GS. BCom Extended Programme students who wish to transfer to BCom (Economics):
Contact time	1 tutorial per week, 3 lectures per week, Foundation Course
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Semester 2

Module content

Functions: Rate of change, exponential functions, the natural logarithm, exponential growth and decay, proportionality, power functions, fitting formulas to data. Rates of change and the derivative: Instantaneous rate of change, the derivative function, interpretations of the derivative, the second derivative.
Differentiation: Formulas and rules, applications, extremes of a function. All topics are studied in the context of applications.

Linear algebra 146 (WTW 146)

Module credits	8.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Economic and Management Sciences
Prerequisites	50% for Mathematics in Grade 12
Contact time	1 tutorial per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Semester 2

Module content

*Students will not be credited for more than one of the following modules for their degree:
WTW 124, WTW 146 and WTW 164. The module WTW 146 is designed for students who require Mathematics at 100 level only and does not lead to admission to Mathematics at 200 level.

Vector algebra, lines and planes, matrix algebra, solution of systems of equations, determinants. Complex numbers and polynomial equations. All topics are studied in the context of applications.

Calculus 148 (WTW 148)

Module credits	8.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Economic and Management Sciences
Prerequisites	WTW 114 GS or WTW 134 GS or WTW 154 GS or WTW 153 GS

Contact time	1 tutorial per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Semester 2

Module content

*Students will not be credited for more than one of the following modules for their degree:
WTW 124, WTW 148 and WTW 164. The module WTW 148 is designed for students who require Mathematics at 100 level only and does not lead to admission to Mathematics at 200 level.

Integration techniques. Modelling with differential equations. Functions of several variables, partial derivatives, optimisation. Numerical techniques. All topics are studied in the context of applications.

Introduction to isiZulu grammar – Capita selecta 111 (ZUL 111)

Module credits	12.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in isiZulu
Department	African Languages
Period of presentation	Semester 1

Module content

*For speakers of isiZulu as home language or first or second additional language.
Aspects of the grammar of isiZulu such as an introduction to the word categories; an introduction to the structure, meaning and use of the noun, the adjective, the relative, the possessive; the verb; writing and spelling rules; dictionaries and dictionary use; grammatical analysis.

Curriculum: Year 2

Minimum credits: 170

PHY 255 and PHY 263 must be taken concurrently with WTW 211, 218, 224, 248.

Core modules

Education 212 (OPV 212)

Module credits	20.00
NQF Level	06
Service modules	Faculty of Humanities
Prerequisites	OPV 112 or OPV 122 passed with 40% (GS) in the other module
Contact time	4 lectures per week
Language of tuition	Separate classes for Afrikaans and English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 1

Module content

Curriculum in the classroom:
This module addresses four components that are directly related to classroom teaching and learning. The first unit deals with the foundations of the curriculum covering the work done by Rousseau, Pestalozzi, Montessori, Gandhi, Steiner, Dewey, Piaget, Vygotsky, Illich, Freire and Lakoff. Unit two discusses curriculum design and development and also focuses on the organisation of knowledge through educational taxonomies. The last two units cover teaching strategies as well as issues related to classroom testing and classroom assessment practices.

Education 222 (OPV 222)

Module credits	20.00
NQF Level	06
Service modules	Faculty of Humanities
Prerequisites	OPV 112 or OPV 122 passed with 40% (GS) in the other module
Contact time	4 lectures per week
Language of tuition	Separate classes for Afrikaans and English
Department	Educational Psychology
Period of presentation	Semester 2

Module content

Supportive learning environments:
Theoretical approaches to learning environments (bio-ecological and asset-based approaches, indigenous knowledge systems, solution-oriented intervention; appreciative inquiry); school-based support in terms of Inclusive Education, whole-school approach, the supportive role of the teacher and the well-being of the child; community-based support in the form of community engagement and community education.

Teaching practice 280 (PRO 280)

Module credits	6.00
NQF Level	06
Prerequisites	No prerequisites.
Contact time	3 weeks, attendance only
Language of tuition	Separate classes for Afrikaans and English
Department	Humanities Education
Period of presentation	Quarter 1

Module content

This is a service learning module where students experience the school environment during the first three weeks (15 days) of the school year in the first quarter of the second year. The main focus is on observation of general classroom practice, school administration, extra - mural activities and to act as responsible citizens of the school environment. Students have to develop professional teaching competencies and they are formally assessed by the school principal and mentor-teacher. School placements may take place in any registered school in South Africa. International placements must be approved by the Head of WIL.

Elective modules

Afrikaans 214 (AFR 214)

Module credits	20.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	AFR 110 and AFR 120
Contact time	2 discussion classes per week, 2 lectures per week
Language of tuition	Module is presented in Afrikaans
Department	Afrikaans
Period of presentation	Semester 1

Module content

Taalkundekomponent: Semantiek en pragmatiek

Inleiding tot die Afrikaanse semantiek en pragmatiek.

Letterkundekomponent: Teks en konteks I

Verdere bestudering van Afrikaanse letterkundige en kultuurtekste binne breër geskiedkundige, sosiokulturele en teoretiese konteks. Afrikaanse literatuur tot die 1970's binne historiese en teoretiese konteks.

Afrikaans 220 (AFR 220)

Module credits	20.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	AFR 110 and AFR 120
Contact time	2 discussion classes per week, 2 lectures per week
Language of tuition	Module is presented in Afrikaans
Department	Afrikaans
Period of presentation	Semester 2

Module content

Taalkundekomponent: Sosiolinguistiek

Inleiding tot die Afrikaanse sosiolinguistiek.

Letterkundekomponent: Teks en konteks II

Afrikaanse literatuur sedert die 1970's binne historiese konteks. Verdere bestudering van Afrikaanse letterkundige en kultuurtekste binne breër geskiedkundige, sosiokulturele en teoretiese konteks.

African languages literature: Capita selecta 220 (AFT 220)

Module credits	20.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	NDE 210/SEP 211/ZUL 211/STW 211
Contact time	2 lectures per week
Language of tuition	Module presented in English and African Language
Department	African Languages
Period of presentation	Semester 2

Module content

Aspects of the literature of isiNdebele/isiZulu/Sepedi/Setswana such as the continuation of the study of concepts such as text, topic, characters, events, time and place; the study of plot and style; the critical analysis of a novel/novelette.

Business accounting 200 (BAC 200)

Module credits	32.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Law Faculty of Natural and Agricultural Sciences
Prerequisites	FRK 121
Contact time	4 lectures per week
Language of tuition	Module is presented in English
Department	Accounting
Period of presentation	Year

Module content

To use a conceptual understanding of intermediate foundational knowledge of International Financial Reporting Standards (IFRS) in order to prepare, present and interpret company and basic group company financial statements in a familiar business context and to propose clear solutions with adequate justification to solve financial problems in an ethical manner.

Plants and society 161 (BOT 161)

Module credits	8.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	MLB 111 GS
Contact time	2 lectures per week, fortnightly practicals
Language of tuition	Module is presented in English
Department	Department of Plant and Soil Sciences
Period of presentation	Semester 2

Module content

Botanical principles of structure and function; diversity of plants; introductory plant systematics and evolution; role of plants in agriculture and food security; principles and applications of plant biotechnology; economical and valuable medicinal products derived from plants; basic principles of plant ecology and their application in conservation and biodiversity management.
This content aligns with the United Nation's Sustainable Debelopment Goals of No Poverty, Good Health and Well-being, Climate Action, Responsible Consumption and Production, and Life on Land.

Physical chemistry 282 (CMY 282)

Module credits	12.00
NQF Level	06
Service modules	Faculty of Education
Prerequisites	CMY 117 and CMY 127
Contact time	1 tutorial every other week, 2 lectures per week, 2 practicals every other week
Language of tuition	Module is presented in English
Department	Chemistry
Period of presentation	Semester 1

Module content

Theory: Classical chemical thermodynamics, gases, first and second law and applications, physical changes of pure materials and simple compounds. Phase rule: Chemical reactions, chemical kinetics, rates of reactions.

Analytical chemistry 283 (CMY 283)

Module credits	12.00
NQF Level	06
Service modules	Faculty of Education
Prerequisites	CMY 117 and CMY 127
Contact time	1 tutorial every other week, 2 lectures per week, 2 practicals every other week
Language of tuition	Module is presented in English
Department	Chemistry
Period of presentation	Semester 2

Module content

Statistical evaluation of data in line with ethical practice, gravimetric analysis, aqueous solution chemistry, chemical equilibrium, precipitation-, neutralisation- and complex formation titrations, redox titrations, potentiometric methods, introduction to electrochemistry. Examples throughout the course demonstrate the relevance of the theory to meeting the sustainable development goals of clean water and clean, affordable energy.

Organic chemistry 284 (CMY 284)

Module credits	12.00
NQF Level	06
Service modules	Faculty of Education
Prerequisites	CMY 117 and CMY 127
Contact time	1 tutorial every other week, 2 lectures per week, 2 practicals every other week
Language of tuition	Module is presented in English
Department	Chemistry
Period of presentation	Semester 1

Module content

Resonance, conjugation and aromaticity. Acidity and basicity. Introduction to 13C NMR spectroscopy. Electrophilic addition: alkenes. Nucleophilic substitution, elimination, addition: alkyl halides, alcohols, ethers, epoxides, carbonyl compounds: ketones, aldehydes, carboxylic acids and their derivatives Training in an ethical approach to safety that protects self, others and the environment is integral to the practical component of the course.

Inorganic chemistry 285 (CMY 285)

Module credits	12.00
NQF Level	06
Service modules	Faculty of Education
Prerequisites	CMY 117 and CMY 127
Contact time	1 tutorial every other week, 2 lectures per week, 2 practicals every other week
Language of tuition	Module is presented in English
Department	Chemistry
Period of presentation	Semester 2

Module content

Atomic structure, structure of solids (ionic model). Coordination chemistry of transition metals: Oxidation states of transition metals, ligands, stereochemistry, crystal field theory, consequences of d-orbital splitting, electrochemical properties of transition metals in aqueous solution. Fundamentals of spectroscopy and introduction to IR spectroscopy. During practical training students learn to acquire and report data ethically. Practical training also deals with the misuse of chemicals and appropriate waste disposal to protect the environment and meet the UN sustainable development goals.

Tourism and representation 210 (EFK 210)

Module credits	20.00
NQF Level	06
Service modules	Faculty of Education

Prerequisites	EFK 110
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Historical and Heritage Studies
Period of presentation	Semester 1

Module content

A multidisciplinary look at notions of representation and perception as they pertain to the tourism sector.

Community-based tourism 220 (EFK 220)

Module credits	20.00
NQF Level	06
Service modules	Faculty of Education
Prerequisites	EFK 110, EFK 120
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Historical and Heritage Studies
Period of presentation	Semester 2

Module content

An analysis of tourism’s history and development theories, focussing on community-based tourism (CBT) and pro-poor tourism (PPT).

Economics 214 (EKN 214)

Module credits	16.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Humanities Faculty of Natural and Agricultural Sciences
Prerequisites	EKN 110 GS & EKN 120 OR EKN 113 GS & EKN 123; & STK 110 GS OR STK 113 & STK 123 & STK 120/121 or concurrently registered for STK 120/121 OR WST 111 & WST121 are prerequisites instead of STK 120/121 or WST 111 and concurrently registered for WST 121.
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Economics
Period of presentation	Semester 1

Module content
Macroeconomics
From Wall and Bay Street to Diagonal Street: a thorough understanding of the mechanisms and theories explaining the workings of the economy is essential. Macroeconomic insight is provided on the real market, the money market, two market equilibrium, monetarism, growth theory, cyclical analysis, inflation, Keynesian general equilibrium analysis and fiscal and monetary policy issues.

Economics 234 (EKN 234)

Module credits	16.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Humanities Faculty of Natural and Agricultural Sciences
Prerequisites	EKN 214 and STK 120/121 or WST 121 OR concurrently registered for STK 120/121 or WST 121.
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Economics
Period of presentation	Semester 2

Module content
Macroeconomics
Application of the principles learned in EKN 214 on the world we live in. We look at international markets and dynamic macroeconomic models, and familiarise the students with the current macroeconomic policy debates. We also take a look at the latest macroeconomic research in the world. The course includes topics of the mathematical and econometric analysis of macroeconomic issues.

Modern English literature and English studies 210 (ENG 210)

Module credits	20.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	ENG 110, ENG 120
Contact time	2 discussion classes per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	English
Period of presentation	Semester 1

Module content

*Alternative evening classes - 3 discussion classes per week
Modern English literature and English language studies
This module focuses on post-nineteenth century literature in English as well as on historical and theoretical aspects of the English language.

English 220 (ENG 220)

Module credits	20.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	ENG 110, ENG 120
Contact time	2 discussion classes per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	English
Period of presentation	Semester 2

Module content

*Alternative evening classes - 3 discussion classes per week
Twentieth-century, postcolonial and contemporary literature
This module focuses on post-nineteenth century literature in English. Various genres are covered and particular attention is given to postcolonial writing.

Environmental sciences 201 (ENV 201)

Module credits	14.00
NQF Level	06
Prerequisites	ENV 101 or WKD 155 or BOT 161 or ZEN 161.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 1

Module content

Introduces basic concepts and interrelationships required to understand our atmosphere, with a strong focus on an introduction to weather and climate. A key component of the course is an introduction to climate change, including the science of climate change, introducing climate change projections, and climate change impacts. A key focus of the second part of the course will be climate change implications for the attainment of SDGs and Aichi targets on the African continent, under a range of plausible scenarios.

Aspects of African history 210 (GES 210)

Module credits	20.00
NQF Level	06
Service modules	Faculty of Education
Prerequisites	GES 120
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Historical and Heritage Studies
Period of presentation	Semester 1

Module content

A selection of themes on the history of Africa and its people in the recent past that shaped the African historical experience.

The shaping of a modern South Africa 220 (GES 220)

Module credits	20.00
NQF Level	06
Service modules	Faculty of Education
Prerequisites	GES 110, GES 120
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Historical and Heritage Studies
Period of presentation	Semester 2

Module content

The development of South Africa through segregation and apartheid to democracy.

City, structure, environment and society 201 (GGY 201)

Module credits	14.00
NQF Level	06
Service modules	Faculty of Education Faculty of Humanities
Prerequisites	GGY 156
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 2

Module content
The module introduces students to urban settlement patterns, processes and structures. Using a series of case studies, it aims to develop an understanding of the challenges facing urban areas both in South Africa and globally.

Geographic information systems introduction 221 (GIS 221)

Module credits	12.00
NQF Level	06
Prerequisites	Prohibited combination GGY 283. Max 350 students.
Contact time	1 practical per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 2

Module content

Note: Enrolment is limited. Preference will be given based on choice of majors. Students should enquire at the department if they wish to register for the module, but are unable to do so.
*GIS 221 does not lead to admission to any module at 300 level.
Introduction to Geographic Information Systems (GIS), theoretical concepts and applications of GIS. The focus will be on the GIS process of data input, data analysis, data output and associated technologies.This module teaches students to use GIS as a tool. Examples used throughout the course are drawn from South African case studies.

Statistics for teachers 220 (JGI 220)

Module credits	13.00
NQF Level	06
Prerequisites	WTW 133, 144 OR 134 OR 114
Contact time	1 practical per week, 1 tutorial per week, 3 lectures per week
Language of tuition	Module is presented in English
Department	Statistics
Period of presentation	Semester 2

Module content

Descriptive statistics:
Sampling and the collection of data in the educational environment; frequency distributions and graphical representations. Descriptive measures of location and dispersion.
Probability and inference:
Introductory probability theory and theoretical distributions. Sampling distributions. Estimation theory and hypothesis testing of sampling averages and proportions (one and two-sample cases). Identification, use, evaluation and interpretation of statistical computer packages and statistical techniques.

Geometry for teachers 210 (JGT 210)

Module credits	12.00
NQF Level	06
Prerequisites	WTW 133, 144 OR 143 OR 114
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 1

Module content

Space, shapes, size and measurement. Geometric thinking and reasoning. Euclidean geometry: a synthetic and analytical approach.

Art education 200 (JKG 200)

Module credits	6.00
NQF Level	06
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 2 and Quarter 4

Module content

History of art education as stipulated in the Curriculum and Assessment Policy Statement (CAPS) is explored. Emphasis is placed on European and South African art movements. Important artists and artworks of these periods are emphasized and discussed in context. Evaluations and discussions of art exhibitions will take place, as well as the interpretation and analysis of artwork.

Art education 201 (JKU 201)

Module credits	20.00
NQF Level	06
Contact time	4 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Year

Module content

This module allows students to discover their own creative ideas and thoughts by means of various art media, techniques and processes. There is emphasis on theoretical and practical components such as art appreciation, principles and elements of art, art programmes and the critical evaluation of the creative process. A deeper analysis, interpretation and application of structure, form, composition, texture, spatial relations and colour manipulation are explored. Community Engagement / Service Learning.

Life orientation 210 (JLO 210)

Module credits	12.00
NQF Level	06
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 1

Module content

The human being in context: social and community life. Life orientation educator. Social skills.

Life orientation 220 (JLO 220)

Module credits	12.00
NQF Level	06
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 2

Module content

The human being in the world. Diversity, values and principles. Issues concerning discrimination, race, religion, culture, sexuality, age, abilities. Contemporary issues concerning classrooms, individual and systemic perspectives. Support for matters concerning HIV/Aids. Safe schools. Violence in schools. Crime. Emotional problems. Prevention of deviant social behaviour.

Methodology of Afrikaans 200 (JMA 200)

Module credits	6.00
NQF Level	06
Prerequisites	No prerequisites.
Contact time	1 lecture per week

Language of tuition	Module is presented in Afrikaans
Department	Humanities Education
Period of presentation	Year

Module content

* This module is only presented in Afrikaans.

'n Deeglike inleidende oorsig oor die beginsels en praktyk van Afrikaansonderrig. Generiese leerinhoude ten opsigte van taalverwerwing word verbesonder deur die praktiese toepassing soos voorgeskryf deur die Nasionale Kurrikulumverklaringsdokumente. Studente behoort aan die einde van die module tersaaklike tekste te kan gebruik om voorbeeldlesse uit te werk.

Human movement studies and sport management 212 (JMB 212)

Module credits	10.00
NQF Level	06
Prerequisites	JMB 112 and JMB 122
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 1

Module content

Recreational studies - demarcation and terminology. The importance and development of values for spending free time in a meaningful way in modern society. The importance of leading as a management function in Sport Management is emphasized. Special reference is made to communication, leadership and motivation.

Human movement studies and sport management 213 (JMB 213)

Module credits	10.00
NQF Level	06
Prerequisites	JMB 113 and JMB 123
Contact time	2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 1

Module content

In this module, the student (activity level: novice) is required to master and apply water safety skills and water activities - mastering and practical execution of some swimming styles as well as life-saving skills. Students will master the skills in recreational and leisure physical activities.
Students are required to choose between an invasion game (hockey) or a striking and fielding game (cricket). Skills and methods for hockey is taught and applied. Cricket will focus on basic cricket skills and cricket as a sport.

Human movement studies and sport management 222 (JMB 222)

Module credits	10.00
NQF Level	06
Prerequisites	JMB 112 and JMB 122
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 2

Module content

Sport injuries and posture deviations - demarcation and terminology. General principles for prevention and treatment of sport injuries. Posture development and the influence of proper habits in the development of a good posture. Identification and pathology of specific deviations. A theoretical and practical perspective on control as the final phase of the management process in sport to ensure the success of the management process is emphasised.

Human movement studies and sport management 223 (JMB 223)

Module credits	10.00
NQF Level	06
Prerequisites	JMB 113 and JMB123
Contact time	2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 2

Module content

In this module, the student is required to master basic skills and techniques of soccer.
The student (activity level: skilled) is also required to master and apply water safety skills and water activities - mastering and practical execution of some swimming styles as well as life-saving skills. Students will master the skills in recreational and leisure physical activities.

Methodology of Design and Technology 201 (JMC 201)

Module credits	6.00
NQF Level	06
Prerequisites	No prerequisites.
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Year

Module content

A thorough overview of the learning content with specific focus on practical application as prescribed by the National Curriculum Statement documents. Emphasis is placed on reaching the prescribed learning outcomes.

Methodology of English 200 (JME 200)

Module credits	6.00
NQF Level	06
Prerequisites	No prerequisites.
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Year

Module content

This module introduces the principles and practice of teaching and learning English as a home or an additional language. A theoretical underpinning strengthens students' understanding of language development. Students are also guided in the theory of instructional design as they practise planning, designing and presenting optimal learning opportunities. Students are familiarised with the principles contained in the NCS and CAPS.

Methodology of Religion studies 200 (JMF 200)

Module credits	6.00
NQF Level	06
Prerequisites	No prerequisites.
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Year

Module content

A thorough overview of the learning content with specific focus on practical application as prescribed by the National Curriculum Statement documents. Emphasis is placed on reaching the prescribed learning outcomes.

Methodology of Geography 200 (JMG 200)

Module credits	6.00
NQF Level	06
Prerequisites	No prerequisites.
Contact time	1 lecture per week
Language of tuition	Module is presented in English

Department	Humanities Education
Period of presentation	Year

Module content

An intensive study of the 2012 Curriculum and Assessment Policy (CAPS) relating to the teaching of Geography to learners in the FET-, Senior- and Intermediate Learning Phases. The following aspects are addressed: The long-, medium- and short term planning of learning activities, the design of sensible learning activities, assessment, the effective use of teaching media as well as the preparation and presentation of mini lessons with a duration of 18 minutes.

Methodology of History 200 (JMH 200)

Module credits	6.00
NQF Level	06
Prerequisites	No prerequisites.
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Year

Module content

This module aims to apply the NCS and CAPS documents in order for students to teach the subject History. Students synthesise and analyse the content in the History curriculum and are equipped to create new methods of teaching to enhance learning in this subject, as well as to conduct assessment in all its aspects as prescribed by the CAPS document for the relevant phases. Themes are, among others, trends in International and South African Historiography; authentic and alternative assessment; selected themes from the prescribed textbook; teaching strategies: worksheets, assignments, games and simulations; using newspapers in the classroom.

Methodology of Art education 201 (JMK 201)

Module credits	6.00
NQF Level	06
Prerequisites	No prerequisites.
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Year

Module content

A thorough overview of the learning content with specific focus on practical application as prescribed by the National Curriculum Statement documents. Emphasis is placed on reaching the prescribed learning outcomes.

Methodology of Life Orientation and Physical Education 201 (JML 201)

Module credits	6.00
NQF Level	06
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Year

Module content

To guide students to develop skills, knowledge and attitudes with specific reference to the National Curriculum and Policy Statement (CAPS) and Physical Education as a topic of Life Orientation. To equip the student teacher with the knowledge and skills to maintain themselves in managing, developing and organising Physical Education activities as prescribed for specific phases. The student teacher is trained further in the CAPS document relating to Life Orientation, and learns how to plan lessons based on this document.

Methodology of Music education 200 (JMM 200)

Module credits	6.00
NQF Level	06
Prerequisites	No prerequisites.
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Year

Module content

A holistic approach to Music Education as part of the Learning area Creative Arts is followed where the integration of different art forms is incorporated. The focus in this module is on active involvement in music making (music activities) providing opportunities for learners to develop their music skills as well as music theoretical knowledge (music concepts). The school-based activities offer opportunities for practical experience.

Methodology of Sciences 203 (JMN 203)

Module credits	6.00
NQF Level	06
Prerequisites	No prerequisites.
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Year

Module content
A thorough overview of the learning content with specific focus on practical application as prescribed by the National Curriculum Statement documents. Emphasis is placed on reaching the prescribed learning outcomes.

Music education 201 (JMO 201)

Module credits	8.00
NQF Level	06
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Year

Module content

To build on the knowledge of music theory obtained in the previous year to provide them with the requirements needed for the music modules in the following years.

Music education 202 (JMO 202)

Module credits	8.00
NQF Level	06
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Year

Module content

This module offers further development of technical aspects and musical development with the focus on instrumental and vocal progress. Accompaniment and the performance of concert compositions are included.

Music education 203 (JMO 203)

Module credits	12.00
NQF Level	06
Prerequisites	No prerequisites.
Contact time	2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Year

Module content

To equip students with the necessary knowledge, skills, values and attitudes needed to apply the principles of Music Education in practice and to develop and enhance the inherent musicality of all learners. A holistic approach to Music Education is followed, based on the Curriculum and assessment policy statement (CAPS) and its application to Music Education within the Creative Arts. The focus in this module is on active involvement in music making (music activities) including instrumental accompaniment. Opportunities are provided to develop students' music skills as well as music theoretical knowledge (music concepts).

Music education 204 (JMO 204)

Module credits	12.00
NQF Level	06
Contact time	2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Year

Module content

To equip students with a general overview on music history, style periods and tone colour. The contents include the tone colour of various music instruments and the characteristics of music style periods (Western Art Music, Indigenous African Music, and popular music styles).

Methodology of Mathematics 204 (JMW 204)

Module credits	6.00
NQF Level	06
Prerequisites	No prerequisites.
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Year

Module content

A thorough overview of the learning content with specific focus on practical application as prescribed by the National Curriculum Statement documents. Emphasis is placed on reaching the prescribed learning outcomes.

Methodology of IsiNdebele 200 (JND 200)

Module credits	6.00
NQF Level	06
Prerequisites	NDE 110, AFT 121
Contact time	1 lecture per week

Language of tuition	Module is presented in IsiNdebele
Department	Humanities Education
Period of presentation	Year

Module content

This module aims to develop students' skills which will enable learners to communicate in isiNdebele as effectively as possible on a more academic level. The module offers a thorough overview of the learning content with specific focus on practical application as prescribed by the National Curriculum Statement Documents.

Design and technology 210 (JOT 210)

Module credits	20.00
NQF Level	06
Prerequisites	JOT 110 and JOT 120.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 1

Module content

This module aims to develop students’ design problem solving capabilities in the context of electrical systems and control: atom theory, concepts such as voltage, current and resistance, current theory, electrical components and symbols, basic electric circuits, logic gates.

Design and technology 220 (JOT 220)

Module credits	20.00
NQF Level	06
Prerequisites	JOT 110 and JOT 120.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 2

Module content

This module aims to develop students’ design problem solving capabilities in the context of mechanical systems and control: types of movement, mechanical advantage, mechanical components, pneumatic and hydraulic systems.

Design and technology 240 (JOT 240)

Module credits	12.00
NQF Level	06

Prerequisites	JWT 115 or JWT 125
Contact time	1 practical per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 2

Module content

This module develops an understanding of the interrelationship between technology, science, society and the environment. It will lead students to understanding the unique character of the design process. Two knowledge strands, namely structures and systems and control will be addressed.

Methodology of Sepedi 200 (JSP 200)

Module credits	6.00
NQF Level	06
Prerequisites	SEP 111, AFT 121
Contact time	1 lecture per week
Language of tuition	Module is presented in Sepedi
Department	Humanities Education
Period of presentation	Year

Module content

This module aims to develop students' skills which will enable learners to communicate as effectively as possible on a more academic level in Sepedi. Students learn to compare and contrast approaches to learning and teaching; identify and differentiate concepts used in OBE, NCS and CAPS; implement OBE by planning and preparing lessons using NCS and CAPS learning and teaching methodologies and techniques in an integrative manner; and assessing using NCS and CAPS assessment methods, tools and techniques.

Methodology of Setswana 200 (JSW 200)

Module credits	6.00
NQF Level	06
Prerequisites	STW 111, AFT 121
Contact time	1 lecture per week
Language of tuition	Module is presented in Setswana
Department	Humanities Education
Period of presentation	Year

Module content

This module aims to develop students' skills which will enable school learners to communicate as effectively as possible on a more academic level in Setswana. Students learn to compare and contrast approaches to learning and teaching; identify and differentiate concepts used in OBE, NCS and CAPS; implement OBE by planning and preparing lessons using NCS and CAPS learning and teaching methodologies and techniques in an integrative manner; and assessing using NCS and CAPS assessment methods, tools and techniques.

Engineering graphics and design 230 (JTT 230)

Module credits	12.00
NQF Level	06
Prerequisites	MGC 110, JTT 120, WTW 134 or WTW 114 or WTW 158
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 1

Module content

This module equips students to understand and teach Engineering graphics and design in the FET-Phase. The focus is on the role of visualization in the design process and visualization principles and instruments and free hand drawing and instrument drawing techniques contextualised for the Department of Education's curriculum requirements for Mechanical drawing.

Engineering graphics and design 240 (JTT 240)

Module credits	12.00
NQF Level	06
Prerequisites	MGC 110, JTT 120, WTW 134 or WTW 114 or WTW 158
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 2

Module content

This module equips students to understand and teach Engineering graphics and design in the FET-Phase. The focus is on intermediate free hand drawing and instrument drawing techniques contextualised for the Department of Education's curriculum requirements for Isometric drawing and Mechanical drawing conventions. Primary and secondary manufacturing processes including fixed bodies. Descriptive Geometry. Evaluation of drawings and error detection. Practical application of techniques.

Guidance and counselling 210 (JVB 210)

Module credits	12.00

NQF Level	06
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Educational Psychology
Period of presentation	Semester 1

Module content

This module gives and overview of guidance and counselling within the school context with the principles of positive psychology as the underlying foundation. The module strives to equip the student teacher with knowledge and skills to screen, identify, assess and support learners with physical and physiological impairment and learners who display challenging behaviour in the classroom. The student teacher will be exposed to how contextual psychosocial care and support as well as career guidance can be implemented in schools.

Guidance and counselling 220 (JVB 220)

Module credits	12.00
NQF Level	06
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Educational Psychology
Period of presentation	Semester 2

Module content

This module aims to provide student teachers with knowledge on learners who experience physical and/or physiological barriers, learners who display challenging behaviour in the classroom, together with a focus on risk factors that may cause physical and/or physiological barriers, as well as protective factors which might protect learners against any risks that may harm or impede their development and enhance their well-being. Student teachers will furthermore acquire the necessary knowledge, skills, attitudes and values of how educators can identify, assess, support and accommodate learners who experience physical and/or physiological difficulties, as well as learners who display challenging behaviour in the classroom. The main emphasis of this module is to teach student teachers skills on how to support learners with physical and/or physiological barriers, as well as learners who display challenging behaviour in the classroom and enhance their overall well-being by utilising and mobilising existing assets in the classroom, school and school-community.

Natural science 230 (JWT 230)

Module credits	12.00
NQF Level	06
Prerequisites	JWT 115, JWT 125
Contact time	2 practicals per week, 4 lectures per week

Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 1

Module content

Plate tectonics, rocks , minerals, the earth’s surface and oceans, the atmosphere, weather, climate, motions of the earth, the solar system, stars, galaxies and the universe.

Methodology of isiZulu 200 (JZL 200)

Module credits	6.00
NQF Level	06
Prerequisites	ZUL 110, AFT 121
Contact time	2 lectures per week
Language of tuition	Module is presented in isiZulu
Department	Humanities Education
Period of presentation	Year

Module content

This module aims to develop students' skills which will enable learners to communicate as effectively as possible on a more academic level in isiZulu. Students learn to compare and contrast approaches to learning and teaching; identify and differentiate concepts used in OBE, NCS and CAPS; implement OBE by planning and preparing lessons using CAPS learning and teaching methodologies and techniques in an integrative manner; and assessing using CAPS assessment methods, tools and techniques.

isiNdebele 210 (NDE 210)

Module credits	20.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	AFT 121 and NDE 110
Contact time	2 lectures per week
Language of tuition	Module is presented in IsiNdebele
Department	African Languages
Period of presentation	Semester 1

Module content

Aspects of the grammar of isiNdebele such as a continuation of the study of the word categories; grammatical analysis; the structure, meaning and use of the pronoun and the enumerative; an introduction to isiNdebele speech sounds/phonetics.

Business management 210 (OBS 210)

Module credits	16.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Natural and Agricultural Sciences
Prerequisites	OBS 114 or 124 with admission to the examination in the other
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Business Management
Period of presentation	Semester 1

Module content

Logistics management
The role of logistics in an enterprise; definition and scope of customer service; electronic and other logistics information systems; inventory management; materials management with special reference to Japanese systems; management of the supply chain. Methods of transport and transport costs; types and costs of warehousing; electronic aids in materials handling; cost and price determination of purchases; organising for logistics management; methods for improving logistics performance.

Business management 220 (OBS 220)

Module credits	16.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Natural and Agricultural Sciences
Prerequisites	OBS 114 or 124 with admission to the examination in the other. Students from other Faculties are required to have 50% for Mathematics in Grade 12.
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Business Management
Period of presentation	Semester 2

Module content

Project management and negotiations:
Introduction Project management concepts; needs identification; the project, the project manager and the project team; types of project organisations; project communication and documentation. Planning and control: planning, scheduling and schedule control of projects; resource considerations and allocations; cost planning and performance evaluation.
Negotiation and collective bargaining: The nature of negotiation; preparation for negotiation; negotiating for purposes of climate creation; persuasive communication; handling conflict and aggression; specialised negotiation and collective bargaining in the South African context.

Waves, thermodynamics and modern physics 255 (PHY 255)

Module credits	24.00
NQF Level	06
Service modules	Faculty of Education
Prerequisites	[PHY114 and PHY124] or [PHY171] or [PHY143 and PHY153 and PHY163] and [WTW211#] and [WTW218#]
Contact time	1 practical per week, 2 discussion classes per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Physics
Period of presentation	Semester 1

Module content

Vibrating systems and waves (14 lectures)
Simple harmonic motion (SHM). Superposition (different frequencies, equal frequencies). Perpendicular vibrations (Lissajous figures). Damped SHM. Forced oscillations. Resonance. Q-value. Transverse wave motion. Plane wave solution using method of separation of variables. Reflection and transmission at a boundary. Normal and eigenmodes. Wave packets. Group velocity.
Modern physics (30 lectures)
Special relativity: Galilean and Lorentz transformations. Postulates. Momentum and energy. 4 vectors and tensors. General relativity. Quantum physics. Failure of classical physics. Bohr model. Particle-wave duality. Schrödinger equation. Piece-wise constant potentials. Tunneling. X-rays. Laser. Nuclear physics: Fission. Fusion. Radioactivity.
Heat and thermodynamics (12 lectures)
Heat. First Law. Kinetic theory of gases. Mean free path. Ideal, Clausius, Van der Waals and virial gases. Entropy. Second Law. Engines and refrigerators. Third Law. Thermodynamic potentials: Enthalpy Helmholtz and Gibbs free energies, Chemical potential. Legendre transformations (Maxwell relations). Phase equilibrium. Gibbs phase rule.
Modelling and simulation (7 practical sessions)
Introduction to programming in a high level system: Concept of an algorithm and the basic logic of a computer programme. Symbolic manipulations, graphics, numerical computations. Applications: Selected illustrative examples.
Error Analysis (7 practical sessions)
Experimental uncertainties. Propagation of uncertainties. Statistical analysis of random uncertainties. Normal distribution. Rejection of data. Least-squares fitting. Covariance and correlation.

General physics 263 (PHY 263)

Module credits	24.00
NQF Level	06
Service modules	Faculty of Education
Prerequisites	PHY 255 GS and WTW 218 GS and WTW 220# and WTW 248#
Contact time	1 practical per week, 2 discussion classes per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Physics
Period of presentation	Semester 2

Module content

Classical mechanics (28 lectures)
Fundamental concepts, energy and angular momentum, calculus of variations and Lagrangian mechanics, conservative central forces and two body problems, scattering, mechanics in rotating reference frames, many body systems.
Physical Optics (14 lectures)
Maxwell's equations, wave equation and plane wave solution, coherence, interference, diffraction, polarisation.
Physics of Materials (14 lectures)
Classification of materials. Atomic bonding. Crystallography. Defects. Material strength. Phase diagram's, Ceramics. Polymers. Composites. Fracture. Electrical and magnetic properties. Semiconductors. Smart materials Nanotechnology.
Experiments (14 sessions)

Dynamics of religion 210 (REL 210)

Module credits	20.00
NQF Level	06
Service modules	Faculty of Education Faculty of Humanities
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Religion Studies
Period of presentation	Semester 1

Module content

Investigating the method of Phenomenology as way of studying religions. Focussing on African Christianity and the phenomenon of African Independent Churches. Highlighting Prosperity Theology as phenomenon in Africa. Exploring the place of land, water and the city within religion in Africa

Ancient religions and health 220 (REL 220)

Module credits	20.00
NQF Level	06
Service modules	Faculty of Education Faculty of Humanities
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Religion Studies
Period of presentation	Semester 2

Module content

Ancient religions and Health:
Exploring ancient religions (Egyptian, Greek, Roman, Zoroastranism, Aztec, Inca and Mayan) and health.
Exploring the San religious treatment of health matters. The relationship magic and religion is investigated.

Sepedi grammar – Capita selecta 211 (SEP 211)

Module credits	20.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	SEP 111, AFT 121
Contact time	2 lectures per week
Language of tuition	Module is presented in Sepedi
Department	African Languages
Period of presentation	Semester 1

Module content

Aspects of the grammar of Sepedi such as a continuation of the study of the word categories; grammatical analysis; the structure, meaning and use of the pronoun and the enumerative; an introduction to Sepedi speech sounds/phonetics.

Setswana grammar – Capita selecta 211 (STW 211)

Module credits	20.00
NQF Level	06
Prerequisites	AFT 121, STW 111
Contact time	2 lectures per week
Language of tuition	Module is presented in Setswana
Department	African Languages
Period of presentation	Semester 1

Module content

Aspects of the grammar of Setswana such as a continuation of the study of the word categories; grammatical analysis; the structure, meaning and use of the pronoun and the enumerative; an introduction to Setswana speech sounds/phonetics.

Mathematics 124 (WTW 124)

Module credits	16.00
NQF Level	05

Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Economic and Management Sciences
Prerequisites	WTW 114
Contact time	1 tutorial per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Semester 2

Module content

*Students will not be credited for more than one of the following modules for their degree:
WTW 124, WTW 146, WTW 148 and WTW 164. This module serves as preparation for students majoring in Mathematics (including all students who intend to enrol for WTW 218, WTW 211 and WTW 220).

The vector space Rn, vector algebra with applications to lines and planes, matrix algebra, systems of linear equations, determinants. Complex numbers and factorisation of polynomials. Integration techniques and applications of integration. The formal definition of a limit. The fundamental theorem of Calculus and applications. Vector functions and quadratic curves.

Calculus 153 (WTW 153)

Module credits	8.00
NQF Level	05
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Economic and Management Sciences
Prerequisites	WTW 143
Contact time	1 tutorial per week, 3 lectures per week, Foundation Course
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Semester 1

Module content

Differential calculus of a single variable with proofs and applications. The mean value theorem, the rule of L'Hospital. Upper and lower sums, definite and indefinite integrals, the Fundamental theorem of Calculus, the mean value theorem for integrals, integration techniques, with some proofs.

Linear algebra 211 (WTW 211)

Module credits	12.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Economic and Management Sciences

Prerequisites	WTW 124
Contact time	1 tutorial per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Semester 1

Module content

This is an introduction to linear algebra on Rn. Matrices and linear equations, linear combinations and spans, linear independence, subspaces, basis and dimension, eigenvalues, eigenvectors, similarity and diagonalisation of matrices, linear transformations.

Calculus 218 (WTW 218)

Module credits	12.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Economic and Management Sciences
Prerequisites	WTW 114 and WTW 124
Contact time	1 tutorial per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Semester 1

Module content

Calculus of multivariable functions, directional derivatives. Extrema and Lagrange multipliers. Multiple integrals, polar, cylindrical and spherical coordinates.

Techniques of analysis 224 (WTW 224)

Module credits	12.00
NQF Level	06
Prerequisites	WTW 124 and WTW 211 GS and WTW 218 GS
Contact time	1 tutorial per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Semester 2

Module content

*This module does not lead to admission to WTW 310 or WTW 320. Students will not be credited for more than one of the following modules for their degree: WTW 220 and WTW 224.
Sequences of real numbers: convergence and monotone sequences. Series of real numbers: convergence, integral test, comparison tests, alternating series, absolute convergence, ratio and root tests. Power series: representation of functions as power series, Taylor and Maclaurin series. Application to series solutions of differential equations.

Vector analysis 248 (WTW 248)

Module credits	12.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	WTW 218
Contact time	1 tutorial per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Semester 2

Module content

Vectors and geometry. Calculus of vector functions with applications to differential geometry, kinematics and dynamics. Vector analysis, including vector fields, line integrals of scalar and vector fields, conservative vector fields, surfaces and surface integrals, the Theorems of Green, Gauss and Stokes with applications.

Animal diversity 161 (ZEN 161)

Module credits	8.00
NQF Level	05
Service modules	Faculty of Education Faculty of Veterinary Science
Prerequisites	No prerequisites.
Contact time	2 lectures per week, fortnightly practicals
Language of tuition	Module is presented in English
Department	Zoology and Entomology
Period of presentation	Semester 2

Module content

Animal classification, phylogeny organisation and terminology. Evolution of the various animal phyla, morphological characteristics and life cycles of parasitic and non-parasitic animals. Structure and function of reproductive,
respiratory, excretory, circulatory and digestive systems in various animal phyla. In-class discussion will address the sustainable development goals #3, 12, 13, 14 and 15 (Good Health and Well-being. Responsible Consumption and Production, Climate Action, Life Below Water, Life on Land).

IsiZulu grammar – Capita selecta 211 (ZUL 211)

Module credits	20.00
NQF Level	06
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	ZUL 111, AFT 121
Contact time	2 lectures per week
Language of tuition	Module is presented in isiZulu
Department	African Languages
Period of presentation	Semester 1

Module content

Aspects of the grammar of isiZulu such as a continuation of the study of the word categories; grammatical analysis; the structure, meaning and use of the pronoun and the enumerative; an introduction to isiZulu speech sounds/phonetics.

Curriculum: Year 3

Minimum credits: 170

Core modules

Classroom literacies 300 (JLZ 300)

Module credits	12.00
NQF Level	06
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Year

Module content

This module aims to equip students with the necessary communicative and classroom literacies to succeed as a professional in the domain of teaching. Students will show evidence of understanding and being able to implement the theories and strategies underpinning spoken and written communication required within an education context. The development of a critical awareness of language as a non-neutral (biased) conveyor of meaning will also be fostered. An overview of the linguistic diversity encountered in most South African classrooms provides the prospective teacher with strategies for dealing more effectively with multilingualism in a culturally diverse pedagogical context. Students will also acquire instructional skills and a functional knowledge of Classroom English i.e. oral skills required for facilitating learning and classroom management.

Education 312 (OPV 312)

Module credits	30.00
NQF Level	07
Service modules	Faculty of Humanities
Prerequisites	OPV 112 or OPV 122 passed with 40% (GS) in the other module
Contact time	4 lectures per week
Language of tuition	Separate classes for Afrikaans and English
Department	Education Management and Policy Studies
Period of presentation	Semester 1

Module content

To gain insight into the global context of the classroom, learners and ideas taught, as well as into the local world and country in which the classroom, learners and school are situated. Diversity and social justice and their importance in the local and global context, as well as their importance for teaching and learning are explored. Through individual and group learning tasks, students come to understand the overlapping themes of globalisation; understanding the nation state and its place in the regional and global world; and the role of technology and the media in globalisation and education. Significant social, political, historical and economic factors influencing the classroom are also investigated. Students collect, organise and critically evaluate information; appreciate the value of diversity in various social contexts; apply problem solving skills to learning tasks; and communicate ideas effectively in group tasks.

Education 322 (OPV 322)

Module credits	30.00
NQF Level	07
Service modules	Faculty of Humanities
Prerequisites	OPV 112 or OPV 122 passed with a 40% (GS) in the other module
Contact time	4 lectures per week
Language of tuition	Separate classes for Afrikaans and English
Department	Education Management and Policy Studies
Period of presentation	Semester 2

Module content

The module deals with the understanding and application of the Bill of Rights in creating a safe and disciplined classrooms. The second theme deals with managing a classroom through relationship building, participative decision-making, effective planning and monitoring, motivation and communication.

Teaching practice 380 (PRO 380)

Module credits	6.00
NQF Level	06
Prerequisites	No prerequisites.
Contact time	3 weeks, attendance only
Language of tuition	Separate classes for Afrikaans and English
Department	Humanities Education
Period of presentation	Quarter 1

Module content

This is a service learning module where students engage in teaching within the professional school environment under the supervision of an experienced mentor teacher for a period of three weeks (15 days) of the school year while in the first quarter of their third year. The main focus is on general classroom practice, school administration, extra - mural activities and to act as responsible citizens of the school environment. The students have to, demonstrate professional teaching competencies as they take part in the life of the school and classroom. As part of the Joint Learning Statement, students reflect and are formally assessed by the school. School placements may take place in any registered school in South Africa. International placements must be approved by the Head of WIL.

Elective modules

Afrikaans 311 (AFR 311)

Module credits	30.00
NQF Level	07
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	AFR 214 and AFR 220
Contact time	2 discussion classes per week, 2 lectures per week
Language of tuition	Module is presented in Afrikaans
Department	Afrikaans
Period of presentation	Semester 1

Module content

Taalkundekomponent: Historiese taalkunde

Inleiding tot die Afrikaanse historiese taalkunde.

Letterkundekomponent: Gevorderde literatuurstudie I

Afrikaanse literatuur in die konteks van resente literatuurteoretiese diskoerse.

Afrikaans 321 (AFR 321)

Module credits	30.00
NQF Level	07
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	AFR 214 and AFR 220
Contact time	2 discussion classes per week, 2 lectures per week
Language of tuition	Module is presented in Afrikaans
Department	Afrikaans
Period of presentation	Semester 2

Module content

Taalkundekomponent: Sintaksis

Inleiding tot die Afrikaanse sintaksis.

Letterkundekomponent: Gevorderde literatuurstudie II

Afrikaanse literatuur in die konteks van resente literatuurteoretiese diskoerse.

African languages literature: Capita selecta 320 (AFT 320)

Module credits	30.00
NQF Level	07
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	NDE 310/SEP 310/ZUL 310/STW 310
Contact time	1 discussion class per week, 2 lectures per week
Language of tuition	Module presented in English and African Language
Department	African Languages
Period of presentation	Semester 2

Module content

Aspects of the literature of isiNdebele/isiZulu/Sepedi/Setswana such as the critical analysis of a dramatic work and poetry (selected poems).

South African flora and vegetation 251 (BOT 251)

Module credits	12.00
NQF Level	06
Service modules	Faculty of Education
Prerequisites	BOT 161
Contact time	1 practical per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Department of Plant and Soil Sciences
Period of presentation	Semester 1

Module content

Origin and affinity of South African flora and vegetation types; principles of plant geography; plant diversity in southern Africa; characteristics, environments and vegetation of South African biomes and associated key ecological processes; centra of plant endemism; rare and threatened plant species; biodiversity conservation and ecosystem management; invasion biology; conservation status of South African vegetation types.

Plant physiology and biotechnology 261 (BOT 261)

Module credits	12.00

NQF Level	06
Service modules	Faculty of Education
Prerequisites	BOT 161 and CMY 127 GS.
Contact time	1 practical per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Department of Plant and Soil Sciences
Period of presentation	Semester 2

Module content

Nitrogen metabolism in plants; nitrogen fixation in Agriculture; plant secondary metabolism and natural products; photosynthesis and carbohydrate metabolism in plants; applications in solar energy; plant growth regulation and the Green Revolution; plant responses to the environment; developing abiotic stress tolerant and disease resistant plants. Practicals: Basic laboratory skills in plant physiology; techniques used to investigate nitrogen metabolism, carbohydrate metabolism, pigment analysis, water transport in plant tissue and response of plants to hormone treatments.

English 310 (ENG 310)

Module credits	30.00
NQF Level	07
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	ENG 210, ENG 220
Contact time	2 discussion classes per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	English
Period of presentation	Semester 1

Module content

Reading Medieval and Early Modern literature
In this module students study the works of writers such as Chaucer, Shakespeare, Milton and Pope. The general characteristics and techniques of these authors are discussed in relation to developments in aesthetic theory, generic conventions and socio-historical change.

English 320 (ENG 320)

Module credits	30.00
NQF Level	07
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	ENG 220

Contact time	2 discussion classes per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	English
Period of presentation	Semester 2

Module content

Reading the Nineteenth Century
In this module students read a selection of 19th-century texts in English. The general characteristics and techniques of these texts are discussed in relation to developments in aesthetic theory, generic conventions and socio-historical change.

Human geography project 383 (GGY 383)

Module credits	24.00
NQF Level	07
Prerequisites	GGY 201.
Contact time	1 practical per week
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 1

Module content

This module will require students to apply the geographic knowledge and skills they have acquired during their first three years of study in Geography. Based on an annually selected theme, e.g. related to spatial injustice within the City of Tshwane, students will be introduced to the basic principles of conducting research in the field of human geography. Guiding them through the process of proposal writing and then conducting a small-scale, in-depth qualitative/quantitative research project, students will be tasked to produce a detailed, reflective and evidence-based account of their 6-month research in the form of a digital portfolio.

Afrikaans education 361 (JAF 361)

Module credits	12.00
NQF Level	07
Contact time	4 lectures per week
Language of tuition	Module is presented in Afrikaans
Department	Education Dean's Office
Period of presentation	Quarter 2

Module content

*This module is only presented in Afrikaans.

In hierdie module maak die student kennis met die teorie en praktyk van Afrikaans. Inhoude word verbesonder vir die eise van die onderwysprofessie. Die manifestasies van.die taalwetenskap, taalkwessies en taalvariëteite in die onderwys vorm die taalgedeelte van die module. Op letterkundige vlak bestudeer die student teorieë, werkswyses en tekste met betrekking tot Afrikaanse drama, prosa en poësie.

English education 361 (JEN 361)

Module credits	12.00
NQF Level	07
Contact time	4 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 2

Module content

This module serves as an advanced study of a selection of English dramas, novels and poetry, as dealt with in their elective, and endeavours to enhance the students' skills in the critical reading of a variety of literary genres. Students are required to display critical reading and academic writing skills in English in order to understand and appreciate the complexity and value of the selected genres. The teaching and learning will have as its focus the specific application of the selected literary genres to the teaching thereof. How to approach a play, novel or poem, and how to teach the relevant components in the various phases and grades will be dealt with.

Art education 300 (JKG 300)

Module credits	6.00
NQF Level	07
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 3 and Quarter 4

Module content

History of art and theory of visual literacy is explored. Focus is placed on South African art by studying pioneers, including contemporary trends, styles and techniques. Theoretical frameworks used in the interpretation, analysis and evaluation of visual culture studies are investigated. Emphasis is placed on interaction of image and text evaluation and analysis of visual art.

Art education 301 (JKU 301)

Module credits	32.00
NQF Level	07
Contact time	5 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Year

Module content

A significantly higher level of understanding and mastery in terms of the intellectual, perceptual, aesthetic and technical aspects of art education is explored. The aim of this module is to extend the student's personal visual vocabulary and promote self-expression. Emphasis is placed on visualising and expressing ideas and conceptual development of the individual student. Opportunities for advanced technical and conceptual skills are provided, including the experimentation of two- and three-dimensional forms, problem solving and evaluation.

Life orientation 310 (JLO 310)

Module credits	20.00
NQF Level	07
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 1

Module content

The human being in the world: citizenship. Theoretical foundation of citizenship. Human rights and responsibilities. Political awareness and voluntary participation. Social and environmental concerns. Social responsibility. Service Learning: theory and practice. Service Learning project.

Life orientation 320 (JLO 320)

Module credits	20.00
NQF Level	07
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 2

Module content

The human being in interaction: lifelong learner. Strategies and learning domains. Perspectives on the future. Economic independence. Career development: theoretical approach to career orientation. Career guidance. Integration of careers and opportunities for training in the world of careers. Skills for obtaining employment. Work ethics.

Life sciences education 310 (JLS 310)

Module credits	12.00
NQF Level	07
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 1

Module content

This module helps develop an understanding of the scope and content of the Life Sciences school curriculum for the Further Education and Training Phase Grades 10 – 12. The module comprises knowledge on the nature of Life Sciences, the molecules of life, selected processes of life, including photosynthesis and respiration, eukaryotic tissues, eukaryotic organs and organ systems, biodiversity, evolution and ecology as it relates to the school curriculum.

Mathematics education 312 (JLW 312)

Module credits	12.00
NQF Level	07
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 1

Module content

Statistics, analytical geometry, trigonometry, Euclidian geometry and measurement, and the associated mathematical reasoning and technological skills.

Methodology of Afrikaans 300 (JMA 300)

Module credits	6.00
NQF Level	07
Prerequisites	No prerequisites.
Contact time	1 lecture per week, 2 practicals per week
Language of tuition	Module is presented in Afrikaans

Department	Humanities Education
Period of presentation	Semester 1

Module content

* This module is only presented in Afrikaans.

Die module bemagtig die student om die verskillende taalvaardighede in al die onderrigfases te kan beplan, aanbied en assesseer. Hierdie module gaan in detail op die onderrig van elk van die taalvaardighede in. Studente behoort ook na afloop van hierdie studie-eenheid in staat te wees om die verskillende taalvaardighede te kan integreer met die spesifieke genres (bv. Poësie, Prosa, Drama en Taal).

Human movement studies and sport management 312 (JMB 312)

Module credits	15.00
NQF Level	07
Prerequisites	JMB 212 and JMB 222
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 1

Module content

Effects of physical activities on the human body, energy sources, etc. Exercise and fitness factors, principles of gymnasium practice. Revision of general managerial principles (year 1-2). Specialisation in the legal principle of sport. Dealing with stress and conflict in the domain of Sport Management.

Human movement studies and sport management 313 (JMB 313)

Module credits	15.00
NQF Level	07
Prerequisites	JMB 213 and JMB 223
Contact time	2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 1

Module content

The student needs to master motor skills for softball, tennis, and other divided court (net/wall) games. The student is also required to master motor skills in rugby and other invasion games.

Human movement studies and sport management 322 (JMB 322)

Module credits	15.00
NQF Level	07

Prerequisites	JMB 212 and JMB 222
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 2

Module content

The nature and essence of this discipline; different biomechanical aspects in sport e.g. balance, centre of gravity, laws of nature. Measurement and evaluation: Techniques in obtaining variables: mean deviations, standard deviations, curve types. Anthropometric measurement and the processing of that data. The nature and character of marketing with special reference to sport. The sociological basis of sport, a description of its nature and character.

Human movement studies and sport management 323 (JMB 323)

Module credits	15.00
NQF Level	07
Prerequisites	JMB 213 and JMB 223
Contact time	2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 2

Module content

Motor skills in netball and basketball. The student will also need to understand, appreciate and master the skills in non-traditional sports.

Methodology of Design and technology 330 (JMC 330)

Module credits	12.00
NQF Level	07
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 2

Module content

Theoretical underpinnings of Design and technology, including concepts specific to Design and technology; teaching Design and technology in South Africa; assessment in Design and technology; reflective practice; analysis of curriculum and policy documents; instructional design.

Methodology of English 300 (JME 300)

Module credits	6.00
NQF Level	07
Prerequisites	No prerequisites.
Contact time	1 lecture per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 2

Module content

This module follows progressively on JME 200 and pays in-depth attention to the practical aspects of teaching and assessing expressive and receptive communicative skills in accordance with national policy documents. A sound understanding of lesson planning based on constructive alignment is evidenced by a comprehensive portfolio.

Methodology of Religion studies 300 (JMF 300)

Module credits	6.00
NQF Level	07
Prerequisites	No prerequisites.
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 1

Module content

As required by the National Curriculum.

Methodology of Geography 300 (JMG 300)

Module credits	6.00
NQF Level	07
Prerequisites	No prerequisites.
Contact time	1 lecture per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 1

Module content

An in-depth study of the effective use of teaching media, the construction of models, the explanation and teaching of problematic theoretical and practical Geographic concepts, practical work, the implementation of GIS in the teaching of Geography, the design of sensible class and homework activities, assessment, the art of lesson presentation and the preparation and presentation of 18 minute duration mini-lessons.

Methodology of History 300 (JMH 300)

Module credits	6.00
NQF Level	07
Prerequisites	No prerequisites.
Contact time	1 lecture per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 1

Module content

The module is aimed at equipping students to successfully present History as prescribed in the NCS and CAPS for History. Students will study the theoretical underpinning of historical writing, content of the syllabus and how to address it, as well as the requirements expected of learners qualifying for the FET-examinations in History. Students are expected to prepare teaching activities according to the requirements of the school syllabus to prepare them for their role as teachers of history. Students present lessons through micro-teaching and apply appropriate assessment and questioning; study the use of cartoons in questioning in this phase; apply cross-curriculation in lesson planning; set a Heritage assignment; plan and prepare for a History excursion and apply previously acquired communication skills in the teaching of History.

Methodology of Art education 301 (JMK 301)

Module credits	6.00
NQF Level	07
Prerequisites	No prerequisites.
Contact time	1 lecture per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 1

Module content

The focus of this module is on a deeper theoretical and practical understanding and knowledge of the subject matter relating to the visual art discipline. Emphasis is placed on effectively collecting, analysing, organising and critically evaluating contemporary visual culture, as well as the creative process as stipulated by the Curriculum and Assessment Policy Statement (CAPS).

Methodology of Life Orientation and Physical Education 301 (JML 301)

Module credits	6.00
NQF Level	07
Contact time	1 lecture per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 2

Module content

This module consists of theoretical as well as practical components. It strives to equip student teachers with knowledge, skills and attitude to maintain themselves in the practical execution of sport management, organization and control in a school environment as well as in classroom management and leadership in general. Managerial skills and the characteristics of the effective Life Orientation teacher are also addressed. In the second semester focus is on classroom practice, differentiation and assessment of physical education activities and learning activities for different ages.

Methodology of Music education 300 (JMM 300)

Module credits	6.00
NQF Level	07
Prerequisites	No prerequisites.
Contact time	1 lecture per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Semester 1

Module content

A study of the theoretical and practical aspects of choral conducting and stage productions. It builds on previously acquired knowledge and skills obtained. Music serves as primary focus, but the integration of other art forms is also included.

Methodology of Natural science 304 (JMN 304)

Module credits	6.00
NQF Level	07
Prerequisites	No prerequisites.
Contact time	1 lecture per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 1

Module content
Theoretical underpinnings and concepts specific to the field of Natural Science teaching in South Africa.. Best practices, instructional design, assessment and reflective practice in Natural Science teaching.

Methodology of Life sciences 308 (JMN 308)

Module credits	6.00
NQF Level	07
Prerequisites	No prerequisites.
Contact time	1 lecture per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 2

Module content
Theoretical underpinnings and concepts specific to the field of Life Sciences including conceptual change and concepts specific to the field of Life Sciences. Teaching Life Sciences in South Africa. Instructional design, assessment and reflective practice in teaching Life Sciences. Best practices.

Methodology of Physical sciences 309 (JMN 309)

Module credits	6.00
NQF Level	07
Prerequisites	CMY 117, CMY 127, PHY 114, PHY 124
Contact time	1 lecture per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 2

Module content
Theoretical underpinnings and concepts specific to the field of Physical science teaching in South Africa. Best practices, instructional design, assessment and reflective practice in Physical science teaching.

Methodology of Engineering graphics and design 304 (JMT 304)

Module credits	6.00
NQF Level	07
Prerequisites	No prerequisites.
Contact time	1 lecture per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education

Period of presentation	Semester 1

Module content

Theoretical underpinnings of Engineering Graphics and Design, including concepts specific to Engineering Graphics and Design will be addressed; teaching Engineering Graphics and Design in South Africa will be investigated; instructional design, assessment and reflective practice in Engineering Graphics and Design are dealt with; best practice in teaching Engineering Graphics and Design is investigated. Micro teaching will be addressed.

Methodology of Mathematics 300 (JMW 300)

Module credits	6.00
NQF Level	07
Prerequisites	No prerequisites.
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 1

Module content

Theoretical underpinnings and concepts in teaching of Mathematics for all phases and Mathematical Literacy in South Africa; instructional design, assessment and reflective practice.

Methodology of Mathematics Literacy 302 (JMW 302)

Module credits	6.00
NQF Level	07
Prerequisites	No prerequisites.
Contact time	1 lecture per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 2

Module content

Theoretical underpinnings and concepts in teaching of Mathematics Literacy in South Africa; instructional design, assessment and reflective practice.

Methodology of IsiNdebele 300 (JND 300)

Module credits	6.00
NQF Level	07
Contact time	1 lecture per week, 2 practicals per week
Language of tuition	Module is presented in IsiNdebele

Department	Humanities Education
Period of presentation	Semester 2

Module content

Following on JND 200, this module aims for students to further develop skills which will enable learners to communicate as effectively as possible on a more academic level in isiNdebele. Students learn to compare and contrast approaches to learning and teaching; identify and differentiate concepts used in OBE, NCS and CAPS; implement OBE by planning and preparing lessons using NCS and CAPS learning and teaching methodologies and techniques in an integrative manner; and assessing using NCS and CAPS assessment methods, tools and techniques.

Physical sciences education 310 (JPC 310)

Module credits	12.00
NQF Level	07
Contact time	2 lectures per week, 2 practicals per week
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 2

Module content

Application of vectors in one and two dimensions in motion and forces.Newton’s laws, Momentum, Work and Energy, Waves, Sound and Light Electrostatics, Electric circuits, Magnetism, Electromagnetism, Electrodynamics,Atomic structure, Chemical bonding, Chemical reactions, Stoichiometry, Energy and Chemical change, Reaction rate, Chemical equilibrium, Electrochemistry,Ideal gasses, Properties of materials

Methodology of Sepedi 300 (JSP 300)

Module credits	6.00
NQF Level	07
Contact time	1 lecture per week, 2 practicals per week
Language of tuition	Module is presented in Sepedi
Department	Humanities Education
Period of presentation	Semester 1

Module content

Following on JSP 200, this module aims for students to further develop skills which will enable learners to communicate as effectively as possible on a more academic level in Sepedi. Students learn to compare and contrast approaches to learning and teaching; identify and differentiate concepts used in OBE, NCS and CAPS; implement OBE by planning and preparing lessons using NCS and CAPS learning and teaching methodologies and techniques in an integrative manner; and assessing using NCS and CAPS assessment methods, tools and techniques.

Methodology of Setswana 300 (JSW 300)

Module credits	6.00
NQF Level	07
Contact time	1 lecture per week, 2 practicals per week
Language of tuition	Module is presented in Setswana
Department	Humanities Education
Period of presentation	Semester 2

Module content

Following on JSW 200, this module aims for students to further develop skills which will enable school learners to communicate as effectively as possible on a more academic level in Setswana. Students learn to compare and contrast approaches to learning and teaching; identify and differentiate concepts used in OBE, NCS and CAPS; implement OBE by planning and preparing lessons using NCS and CAPS learning and teaching methodologies and techniques in an integrative manner; and assessing using NCS and CAPS assessment methods, tools and techniques.

Engineering graphics and design 330 (JTT 330)

Module credits	20.00
NQF Level	07
Prerequisites	JTT 230
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 1

Module content

This module equips students to understand and teach Engineering graphics and design in the FET-Phase. The focus is on free hand drawing and CAD- drawing techniques contextualised for the Department of Education's curriculum requirements for Civil drawing conventions. Perspective drawings. Evaluation of drawings and error detection. Practical application of techniques.

Engineering graphics and design 340 (JTT 340)

Module credits	20.00
NQF Level	07
Prerequisites	JTT 240
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 2

Module content

This module equips students to understand and teach Engineering graphics and design in the FET-Phase. The focus is on free hand drawing and CAD- drawing techniques contextualised for the Department of Education's curriculum requirements for advanced Mechanical drawing techniques and application. Primary and secondary manufacturing processes. Evaluation of drawings and error detection. Practical application of techniques.

Mathematical Literacy 311 (JWG 311)

Module credits	20.00
NQF Level	07
Prerequisites	WTW 133, 144 OR 134 OR 114
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 1

Module content

Use the content and/or skills outlined in the Basic Skills Topics to understand situations and solve problems in scenarios of the physical world regarding Finance as one of the Application Topics: financial documents; tariff systems; budgets; cost- and selling prices; break-even analysis; interest; banking, loans and investments; inflation; taxation; exchange rates.

Mathematical Literacy 321 (JWG 321)

Module credits	20.00
NQF Level	07
Prerequisites	WTW 133, 144 OR 134 OR 114
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 2

Module content

Use the content and/or skills outlined in the Basic Skills Topics to understand situations and solve problems in scenarios of the physical world regarding Maps, plans and other representations as one of the Application Topics: scale, maps, plans, models.

Natural science 315 (JWT 315)

Module credits	20.00
NQF Level	07
Prerequisites	Both JWT 115 and 125 passed
Contact time	1 practical per week, 4 lectures per week

Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 1

Module content

Cytology; genetics; ecology; evolution.

Natural science 325 (JWT 325)

Module credits	20.00
NQF Level	07
Prerequisites	Both JWT 115 and 125 passed
Contact time	1 practical per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Semester 2

Module content

Biological diversity; human biology.

Methodology of isiZulu 300 (JZL 300)

Module credits	6.00
NQF Level	07
Contact time	1 lecture per week, 2 practicals per week
Language of tuition	Module is presented in isiZulu
Department	Humanities Education
Period of presentation	Semester 1

Module content

Following on JZL 200, this module aims to further develop students' skills which will enable learners to communicate as effectively as possible on a more academic level in isiZulu. Students learn to compare and contrast approaches to learning and teaching; identify and differentiate concepts used in OBE, NCS and CAPS; implement OBE by planning and preparing lessons using CAPS learning and teaching methodologies and techniques in an integrative manner; and assessing using CAPS assessment methods, tools and techniques.

isiNdebele 310 (NDE 310)

Module credits	30.00
NQF Level	07
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	NDE 210, AFT 220

Contact time	2 lectures per week
Language of tuition	Module is presented in IsiNdebele
Department	African Languages
Period of presentation	Semester 1

Module content

Aspects of the grammar of isiNdebele such as a continuation of the study of the word categories; grammatical analysis; more intensive study of the structure, meaning and use of the noun (specifically derived nouns) and verb (specifically moods and verbal extensions); an introduction to the sound changes/phonology of isiNdebele.

Material religion 310 (REL 310)

Module credits	30.00
NQF Level	07
Service modules	Faculty of Education Faculty of Humanities
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Religion Studies
Period of presentation	Semester 1

Module content

The function of myths and rites in current society is investigated. The relation between religion and art is explored. The place and function of music in religion is investigated. The way in which holy texts are interpreted (scriptural reasoning) within different religions is explored.

Sociology of religion 320 (REL 320)

Module credits	30.00
NQF Level	07
Service modules	Faculty of Education Faculty of Humanities
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Religion Studies
Period of presentation	Semester 2

Module content

The following social themes are addressed: Religion and Media; Religion and Ecology; Religion and Xenophobia; Religion and Homophobia; Religion and Violence; Religion and Gender equality; the possibility of Inter-religious dialogue.

Sepedi 310 (SEP 310)

Module credits	30.00
NQF Level	07
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	SEP 210, SEP 220 will be required for students who completed SEP 110, SEP 120 at year level 1 and SEP 211, AFT 220 will be required for students who completed SEP 111, AFT 121 at year level 1
Contact time	1 discussion class per week, 2 lectures per week
Language of tuition	Module is presented in English and Sepedi
Department	African Languages
Period of presentation	Semester 1

Module content

Sepedi grammar - Capita selecta
Aspects of the grammar of Sepedi such as a continuation of the study of the word categories; grammatical analysis; more intensive study of the structure, meaning and use of the noun (specifically derived nouns) and verb (specifically moods and verbal extensions); an introduction to the sound changes / phonology of Sepedi. The acquisition and inculcation of advanced communicative skills within a larger number of social, occupational and educational situations. Awareness of the nature and function of language structures is heightened further. Attention is also paid to cultural phenomena.

Setswana 310 (STW 310)

Module credits	30.00
NQF Level	07
Service modules	Faculty of Education
Prerequisites	STW 210, STW 220 will be required for students who completed STW 110, STW 120 at year level 1 and AFT 220, STW 211 will be required for students who completed AFT 121, STW 111 at year level 1.
Contact time	1 discussion class per week, 2 lectures per week
Language of tuition	Module is presented in English and Setswana
Department	African Languages
Period of presentation	Semester 1

Module content

Setswana grammar - Capita selecta
Aspects of the grammar of Setswana such as a continuation of the study of the word categories; grammatical analysis; more intensive study of the structure, meaning and use of the noun (specifically derived nouns) and verb (specifically moods and verbal extensions); an introduction to the sound changes / phonology of Setswana. The acquisition and inculcation of advanced communicative skills within a larger number of social, occupational and educational situations. Awareness of the nature and function of language structures is heightened further. Attention is also paid to cultural phenomena.

Geometry 389 (WTW 389)

Module credits	18.00
NQF Level	07
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Humanities
Prerequisites	WTW 211
Contact time	1 tutorial per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Semester 2

Module content

Axiomatic development of neutral, Euclidean and hyperbolic geometry. Using models of geometries to show that the parallel postulate is independent of the other postulates of Euclid.

Invertebrate biology 251 (ZEN 251)

Module credits	12.00
NQF Level	06
Service modules	Faculty of Education
Prerequisites	ZEN 161 GS
Contact time	1 practical every 2nd week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Zoology and Entomology
Period of presentation	Semester 1

Module content

Origin and extent of modern invertebrate diversity; parasites of man and domestic animals; biology and medical importance of arachnids and insects; insect life styles; the influence of the environment on insect life histories; insect herbivory; predation and parasitism; insect chemical, visual, and auditory communication. Examples used in the module are relevant to the sustainable development goals of Life on Land and Good Health and Well-being.

African vertebrates 261 (ZEN 261)

Module credits	12.00
NQF Level	06
Service modules	Faculty of Education
Prerequisites	ZEN 161 GS
Contact time	1 practical every 2nd week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Zoology and Entomology
Period of presentation	Semester 2

Module content

Introduction to general vertebrate diversity; African vertebrate diversity; vertebrate structure and function; vertebrate evolution; vertebrate relationships; aquatic vertebrates; terrestrial ectotherms; terrestrial endotherms; vertebrate characteristics; classification; structural adaptations; habits; habitats; conservation problems; impact of humans on other vertebrates. The module addresses the sustainable development goals of Life below Water and Life on Land.

isiZulu 310 (ZUL 310)

Module credits	30.00
NQF Level	07
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	ZUL 210, ZUL 220 will be required for students who completed ZUL 110, ZUL 120 at year level 1 and ZUL 211, AFT 220 will be required for students who completed ZUL 111, AFT 121 at year level 1
Contact time	1 discussion class per week, 2 lectures per week
Language of tuition	Module is presented in English and isiZulu
Department	African Languages
Period of presentation	Semester 1

Module content

isiZulu grammar - Capita selecta
Aspects of the grammar of isiZulu such as a continuation of the study of the word categories; grammatical analysis; more intensive study of the structure, meaning and use of the noun (specifically derived nouns) and verb (specifically moods and verbal extensions); an introduction to the sound changes/phonology of isiZulu. The acquisition and inculcation of advanced communicative skills within a larger number of social, occupational and educational situations. Awareness of the nature and function of language structures is heightened further. Attention is also paid to cultural phenomena.

Curriculum: Final year

Minimum credits: 170

Fundamental modules

Professional practice 471 (JFP 471)

Module credits	3.00
NQF Level	06
Prerequisites	Available to final year students only.
Contact time	2 four hour practicals for one week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 1

Module content

Themes that prepare students for professional practice. School expectations. Ethics, professional appearance, assessment frameworks; record keeping; discipline. Role and organising of extra-curricular activities. Dealing with emergencies.

Core modules

Research project 461 (JNM 461)

Module credits	12.00
NQF Level	07
Prerequisites	Available to final year students only
Contact time	2 lectures per week
Language of tuition	Separate classes for Afrikaans and English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 1

Module content

The module helps develop a theoretical and practical frame of reference of the field of research and introduces students to the collection of information and identification and formulation of a research problem. Research ethics as well as qualitative and quantitative approaches including principles of action research are addressed. A research proposal and plan is created and assessed.

Research project 464 (JNM 464)

Module credits	12.00
NQF Level	08
Prerequisites	Available to final year students only

Contact time	2 lectures per week
Language of tuition	Separate classes for Afrikaans and English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 4

Module content

The module comprises the practical implementation of theory in a research project. Research contexts may include the work-integrated learning or community focus. Research according to the proposal of JNM 461 is performed, and a research report is provided by the student under the direction of a supervisor. The report is assessed.

Teaching practice 452 (PRO 452)

Module credits	28.00
NQF Level	07
Prerequisites	PRO 280 and PRO 380 passed. Available to final year students only.
Contact time	8 weeks, attendance only
Language of tuition	Separate classes for Afrikaans and English
Department	Humanities Education
Period of presentation	Quarter 2

Module content

This is a service learning module where students engage in teaching within the professional school environment under the mentorship of an experienced teacher and lecturer for a period of 7 weeks (35 days) in the second term of the school year parallel to the second quarter in the fourth year. The main focus is on general classroom practice, school administration, extra-mural activities and to act as responsible citizens of the school environment. The students have to demonstrate professional teaching competencies as they take part in the life of the school, classroom practice, and the facilitation of learning. Students are formally assessed by the school as well as an experienced designated mentor lecturer. Students' content knowledge, pedagogical content knowledge, general pedagogical knowledge and digital competencies are assessed.

Teaching practice 453 (PRO 453)

Module credits	28.00
NQF Level	07
Prerequisites	PRO 280 and PRO 380 passed. Available to final year students only.
Contact time	8 weeks, attendance only
Language of tuition	Separate classes for Afrikaans and English
Department	Humanities Education
Period of presentation	Quarter 3

Module content
This is a service learning module where students fully engage in teaching within the professional school environment under the mentorship of an experienced teacher and lecturer for a period of 7 weeks (35 days) in the third term of the school year parallel to the second quarter in the fourth year. The main focus is on general classroom practice, school administration, extra - mural activities and to act as responsible citizens of the school environment. The students have to demonstrate competencies as they take part in the professional life of the school, classroom practice, and the facilitation of learning. Students are formally assessed by the school as well as a designated mentor lecturer. Students' content knowledge, pedagogical content knowledge, general pedagogical knowledge and digital competencies are assessed.

Elective modules

Methodology of Afrikaans 451 (JMA 451)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in Afrikaans
Department	Humanities Education
Period of presentation	Quarter 1

Module content

* This module is only presented in Afrikaans.

Klem word gelê op die bereiking van die voorgeskrewe leeruitkomste in die Nasionale Kurrikulumverklaringsdokumente . Afrikaansonderrig as huis- en addisionele taal soos in die nasionale kurrikulum vervat, word uitgelig. 'n Teoretiese grondslag word vasgelê vir die ontwerp en aanbied van lesse.

Methodology of Afrikaans 454 (JMA 454)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in Afrikaans
Department	Humanities Education
Period of presentation	Quarter 4

Module content

* This module is only presented in Afrikaans.

Klem word gelê op die bereiking van die voorgeskrewe leeruitkomste in die Nasionale Kurrikulumverklaringsdokumente. Afrikaansonderrig as huis- en addisionele taal soos in die nasionale kurrikulum vervat, word uitgelig. 'n Teoretiese grondslag word vasgelê vir die ontwerp en aanbied van lesse.

Methodology of Design and technology 451 (JMC 451)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 1

Module content

Innovative and creative teaching skills in Design and Technology are dealt with. The following are also addressed: thematic planning; selection and use of multiple resources; assessment practices in Design and Technology; communication skills and classroom management in Design and Technology; and teaching philosophy in Design and Technology.

Methodology of Design and technology 454 (JMC 454)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 4

Module content

Reflection on teaching practice will be done as well as optimising of instruction. Technological pedagogical content knowledge (TPACK) will be dealt with.

Methodology of English 451 (JME 451)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 1

Module content

This module builds progressively on previously acquired knowledge and skills obtained in JPS 121, JME 200 and JME 300. This knowledge and skills are progressively applied in the methodologies (JME 200, 300 and 451/454). The module offers a thorough overview of the learning content with specific focus on practical application as prescribed by the National Curriculum Statement Documents. It focuses on developing learning experiences for the four language skills, namely listening, speaking, reading and writing, as well as language structure and grammar. Designing of lessons and learning and teaching support materials (LTSM) are developed. Various teaching styles and paradigmatic orientations relevant to the learning experience are dealt with.

Methodology of English 454 (JME 454)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 4

Module content

The module is a continuation of the principles and practices of teaching and learning in the English classroom. Further development of planning learning experiences for the four language skills, namely listening, speaking, reading and writing, as well as language structure and grammar is focused on, based on the principles of inquiry-led learning, blended learning and constructive alignment. Designing of lessons and learning and teaching support materials (LTSM) are developed, with a strong focus on technology and e-learning. Various teaching styles relevant to the learning experience are dealt with.

Methodology of Religion studies 451 (JMF 451)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 1

Module content

A thorough overview of the learning content with specific focus on practical application as prescribed by the National Curriculum Statement documents. Emphasis is placed on reaching the prescribed learning outcomes.

Methodology of Religion studies 454 (JMF 454)

Module credits	6.00

NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 4

Module content

This module aims to equip students to successfully present Religion Studies in the Senior and/or Further Education and Training Phase. The theoretical underpinning of the content of the syllabus as well as the requirements expected to guide learners studying Religion Studies as subject are studied. Students are expected to prepare phase specific teaching activities according to the requirements of the school syllabus for the phase in which they are enrolled to prepare them for their role as teachers of Religion Studies. Students present lessons through micro-teaching and apply appropriate assessment and questioning; present an assignment and apply previously acquired communication skills in the teaching of Religion Studies.

Methodology of Geography 451 (JMG 451)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 1

Module content

The art of lesson presentation and the preparation and presentation of 18 minute duration mini-lessons (to be continued from the end of the Third Year of study).

Methodology of Geography 454 (JMG 454)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 4

Module content

After the Internship during the Second Semester: Reflection on Internship, school textbook evaluation, applied project work and fieldwork.

Methodology of History 451 (JMH 451)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 1

Module content

This module aims to equip students to successfully present History in the Senior and/or Further Education and Training Phase. The theoretical underpinning of historical writing, content of the syllabus as well as the requirements expected to guide learners studying History as subject are studied. Students are expected to prepare phase specific teaching activities according to the requirements of the school syllabus for the phase in which they are enrolled to prepare them for their role as teachers of history. Students present lessons through micro-teaching and apply appropriate assessment and questioning; present an oral history assignment and apply previously acquired communication skills in the teaching of History.

Methodology of History 454 (JMH 454)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 4

Module content

This module aims to equip students to successfully present History in the Senior and/or Further Education and Training Phase. The theoretical underpinning of historical writing, content of the syllabus as well as the requirements expected to guide learners studying History as subject are studied. Students are expected to prepare phase specific teaching activities according to the requirements of the school syllabus for the phase in which they are enrolled to prepare them for their role as teachers of history. Students present lessons through micro-teaching and apply appropriate assessment and questioning; present an oral history assignment and apply previously acquired communication skills in the teaching of History.

Methodology of Computer application technology 451 (JMI 451)

Module credits	6.00
NQF Level	07
Prerequisites	JMI 200 and JMI 300. Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 1

Module content

The module builds progressively on previous acquired knowledge and skills obtained in JMI 200 and 300. Students are guided in the theory of instructional design as they practise planning, designing and presenting optimal learning opportunities. Students are familiarised with the principles contained in the NCS and CAPS. Students analyse the content of the CAT grade 12 curriculum and learn how to use teacher-directed and learner-centred methods to improve learning, they create teaching media, and apply all forms of assessment as prescribed in the CAPS.

Methodology of Computer application technology 454 (JMI 454)

Module credits	6.00
NQF Level	07
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 4

Module content

The module builds progressively on previous acquired knowledge and skills obtained in JMI 200 and 300. Students are guided in the theory of instructional design as they practise planning, designing and presenting optimal learning opportunities. Students are familiarised with the principles contained in the NCS and CAPS. Students analyse the content of the CAT grade 12 curriculum and learn how to use teacher-directed and learner-centred methods to improve learning, they create teaching media, and apply all forms of assessment as prescribed in the CAPS.

Methodology of Art education 451 (JMK 451)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English

Department	Humanities Education
Period of presentation	Quarter 1

Module content

This module provides an advanced understanding of the visual arts discipline in the different phases as stipulated by the Curriculum and Assessment Policy Statement (CAPS). Furthermore, these modules enable students to teach the visual art subject matter responsibly and effectively as successful art educators. Students are expected to identify a problem, plan and present their research, as well as explore art classroom management and learner needs. Community Engagement / Service Learning.

Methodology of Art education 454 (JMK 454)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 4

Module content

This module provides an advanced understanding of the visual arts discipline in the different phases as stipulated in the Curriculum and Assessment Policy Statement (CAPS). Furthermore, these modules enable students to teach the visual art subject matter responsibly and effectively as successful art educators. Students are expected to identify a problem, plan and present their research, as well as explore art classroom management and learner needs.

Methodology of Life Orientation and Physical Education 461 (JML 461)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 1

Module content

This module addresses the practical application of teaching skills, planning and presenting of Physical Education lessons as topic of Life Orientation (presentation of micro-lessons).
Themes include:

- Exploring a meta-cognitive approach in teaching and learning
- The LO teacher as educator (including overcoming challenges innovatively)
- The LO teacher as counsellor (including eco-systemic approaches)
- Development of the self in society
- Health, social and environmental responsibility
- Constitutional rights and responsibilities
- Physical education
- Study skills

Methodology of Life Orientation and Physical Education 464 (JML 464)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 4

Module content

On attainment of the learning outcomes students demonstrates their knowledge and understanding of the theory to be applied in all practical sport and movement development situations as prescribed by the National Curriculum and Assessment policy statement in a school environment. Particular attention is given to metacognitive skills development of the students in order to empower them for their teaching tasks, as well as to enable them to engender these metacognitive skills in their learners.

Methodology of Music education 451 (JMM 451)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 1

Module content

Students are equipped with the necessary knowledge, skills, values and attitude needed to apply in practice and to develop and enhance the inherent musicality of all learners. This module builds on previously acquired knowledge and skills which are progressively applied in the methodologies. Music serves as primary focus, but the integration of other art forms is also included.

Methodology of Music education 454 (JMM 454)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Humanities Education
Period of presentation	Quarter 4

Module content

An application of previous academic knowledge and practical skills towards a stage production. The focus is on a community based project.

Methodology of Natural science 451 (JMN 451)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 1

Module content

Innovative teaching methods and teaching skills in Natural Science. Thematic planning, selection and use of multiple resources in Natural Science. Assessment practices; communication skills and classroom management in Natural Science. Teaching philosophy and reflective practices in Natural Science.

Methodology of Life sciences 452 (JMN 452)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English

Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 1

Module content

Innovative and creative teaching and teaching skills. Thematic planning, selection and use of multiple resources in Life Sciences. Assessment practices.

Methodology of Physical sciences 453 (JMN 453)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 1

Module content

Innovative and creative teaching methods and teaching skills in Physical sciences; thematic planning; selection and use of multiple resources in Physical sciences; assessment practices; communication skills and classroom management in Physical sciences teaching. Pedagogical content knowledge.

Methodology of Natural science 454 (JMN 454)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 4

Module content

Innovative teaching methods and teaching skills in Natural Science. Thematic planning, selection and use of multiple resources in Natural Science. Assessment practices; communication skills and classroom management in Natural Science. Teaching philosophy and reflective practices in Natural Science.

Methodology of Physical sciences 456 (JMN 456)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.

Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 4

Module content

Reflective practices and misconceptions in Physical sciences. Pedagogical content knowledge.

Methodology of Life sciences 458 (JMN 458)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 4

Module content

A thorough overview of the learning content with specific focus on practical application as prescribed by the National Curriculum documents. Emphasis is placed on reaching the prescribed learning outcomes.

Methodology of Information technology 451 (JMR 451)

Module credits	6.00
NQF Level	07
Prerequisites	No prerequisites.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 1

Module content

Innovative and creative teaching methods and teaching skills in IT. Thematic planning, selection and use of multiple resources in IT. Assessment practices, communication skills and classroom management in IT.

Methodology of Information technology 454 (JMR 454)

Module credits	6.00
NQF Level	07
Contact time	2 lectures per week, 2 practicals per week

Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 4

Module content

Development of a teaching philosophy and reflective practice in IT teaching.

Methodology of Engineering Graphics and Design 451 (JMT 451)

Module credits	6.00
NQF Level	07
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 1

Module content

Innovative and creative teaching and teaching skills in Engineering Graphics and Design are dealt with. The following are also addressed: thematic planning; selection and use of multiple resources; assessment practices in Engineering Graphics and Design; communication skills and classroom management in Engineering Graphics and Design; and teaching philosophy in Engineering Graphics and Design.

Methodology of Engineering graphics and design 454 (JMT 454)

Module credits	6.00
NQF Level	07
Prerequisites	No prerequisites.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 4

Module content

Reflection on teaching practice will be done as well as optimising of instruction. Technological pedagogical content knowledge (TPACK) will be dealt with.

Methodology of Mathematics 451 (JMW 451)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week

Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 1

Module content

Innovative and creative teaching methods and teaching skills in mathematics. Thematic planning. Selection and use of multiple resources in mathematics. Assessment practices. Communication skills. Classroom management. Pedagogical content knowledge of Mathematics in all phases and Mathematical Literacy.

Methodology of Mathematical literacy 452 (JMW 452)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 1

Module content

Innovative and creative teaching and teaching skills in Mathematical literacy; thematic planning; selection and use of multiple resources; assessment practices in Mathematical literacy; communication skills and classroom management in Mathematical literacy, teaching philosophy in Mathematical literacy and reflective practice.

Methodology of Mathematics 454 (JMW 454)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 4

Module content

Reflective practices and misconceptions in mathematics. Pedagogical content knowledge in Mathematics for all phases and Mathematical Literacy.

Methodology of Mathematics Literacy 455 (JMW 455)

Module credits	6.00
NQF Level	07

Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Science, Mathematics and Technology Education
Period of presentation	Quarter 4

Module content

Reflective practices and misconceptions in Mathematics Literacy. Pedagogical content knowledge in Mathematics Literacy.

Methodology of IsiNdebele 451 (JND 451)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in IsiNdebele
Department	Humanities Education
Period of presentation	Quarter 1

Module content

The module comprises the following themes: history of the different phases of education in South Africa and different teaching methods used in each phase; NCS and CAPS processing (scheme of work, schedule and assessment); multiple intelligences; facilitating grammar lessons; facilitating literature lessons; facilitating creative writing lessons and marking of letters and compositions; questioning skills for facilitating assessment (methods, techniques and tools); and using technology in teaching.

Methodology of IsiNdebele 454 (JND 454)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in IsiNdebele
Department	Humanities Education
Period of presentation	Quarter 4

Module content

Lesson design and application of design (continuing and applying second and third year methodology content); phase specific application; application, adaptation and integration of outcomes so that straddling can take place; subject specific principles of assessment and application; innovative teaching; thematic planning; finding, using and adapting resources for teaching; selection and assessment of authentic texts as well as textbooks; facilitating and mediating learning; multi-level teaching (adapting the curriculum to meet the needs of diverse learners); differentiation (learning styles and individual differences, multiple intelligences) and inclusive education; co-operative learning; electronic resource training, e-learning and micro teaching.

Methodology of Sepedi 451 (JSP 451)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in Sepedi
Department	Humanities Education
Period of presentation	Quarter 1

Module content

This module aims to equip students with the necessary knowledge and skills regarding the following components of teaching Sepedi at schools: education policies and teaching methods; grammar; literature; creative writing; assessment; and e-learning. The module comprises the following themes: history of the different phases of education in South Africa and different teaching methods used in each phase; NCS and CAPS processing (scheme of work, schedule and assessment); multiple intelligences; facilitating grammar lessons; facilitating literature lessons; facilitating creative writing lesson and marking of letters and compositions; questioning skills for facilitating assessment (methods, techniques and tools); and using technology in teaching.

Methodology of Sepedi 454 (JSP 454)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in Sepedi
Department	Humanities Education
Period of presentation	Quarter 4

Module content

Lesson design and application of design (continuing and applying second and third year methodology content); phase specific application; application, adaptation and integration of outcomes so that straddling can take place; subject specific principles of assessment and application; innovative teaching; thematic planning; finding, using and adapting resources for teaching; selection and assessment of authentic texts as well as textbooks; facilitating and mediating learning; multi-level teaching (adapting the curriculum to meet the needs of diverse learners); differentiation (learning styles and individual differences, multiple intelligences) and inclusive education; co-operative learning; electronic resource training, e-learning and micro teaching.

Methodology of Setswana 451 (JSW 451)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in Setswana
Department	Humanities Education
Period of presentation	Quarter 1

Module content

This module aims to equip students with the necessary knowledge and skills regarding the following components of teaching Setswana at schools: education policies and teaching methods; grammar; literature; creative and composition writing; assessment; and e-learning. The module comprises the following themes: history of the different phases of education in South Africa and different teaching methods used in each phase; The NCS and CAPS processing (scheme of work; schedule and assessment); multiple Intelligences; facilitating grammar lessons; facilitating literature lessons; facilitating creative writing lessons and marking of letters and compositions; questioning skills for facilitating assessment (methods, techniques and tools); and using technology in teaching.

Methodology of Setswana 454 (JSW 454)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in Setswana
Department	Humanities Education
Period of presentation	Quarter 4

Module content

Lesson design and application of design (continuing and applying second and third year methodology content); phase specific application; application, adaptation and integration of outcome so that straddling can take place; subject specific principles of assessment and application; innovative teaching; thematic planning; finding, using and adapting resources for teaching; selection and assessment of authentic texts as well as textbooks; facilitating and mediating learning; multi-level teaching (adapting the curriculum to meet the needs of diverse learners); differentiation (learning styles and individual differences, multiple intelligences) and inclusive education; co-operative learning; electronic resource training, e-learning and micro teaching.

Methodology of isiZulu 451 (JZL 451)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in isiZulu
Department	Humanities Education
Period of presentation	Quarter 1

Module content

The module comprises the following themes: The NCS and CAPS processing (scheme of work, schedule and assessment); multiple Intelligences; facilitating grammar lessons; facilitating literature lessons; facilitating creative writing lessons and the marking of letters and compositions; questioning skills for facilitating assessment (methods, techniques and tools); and using technology in teaching.

Methodology of isiZulu 454 (JZL 454)

Module credits	6.00
NQF Level	07
Prerequisites	Available to final year students only.
Contact time	2 lectures per week, 2 practicals per week
Language of tuition	Module is presented in isiZulu
Department	Humanities Education
Period of presentation	Quarter 4

Module content

Lesson design and application of design (continuing and applying second and third year methodology content); phase specific application; application, adaptation and integration of outcomes so that straddling can take place; subject specific principles of assessment and application; innovative teaching; thematic planning; finding, using and adapting resources for teaching; selection and assessment of authentic texts as well as textbooks; facilitating and mediating learning; multi-level teaching (adapting the curriculum to meet the needs of diverse learners); differentiation (learning styles and individual differences, multiple intelligences) and inclusive education; co-operative learning; electronic resource training, e-learning and micro teaching.

General Academic Regulations and Student Rules

The General Academic Regulations (G Regulations) and General Student Rules apply to all faculties and registered students of the University, as well as all prospective students who have accepted an offer of a place at the University of Pretoria. On registering for a programme, the student bears the responsibility of ensuring that they familiarise themselves with the General Academic Regulations applicable to their registration, as well as the relevant faculty-specific and programme-specific regulations and information as stipulated in the relevant yearbook. Ignorance concerning these regulations will not be accepted as an excuse for any transgression, or basis for an exception to any of the aforementioned regulations. The G Regulations are updated annually and may be amended after the publication of this information.

Regulations, degree requirements and information

The faculty regulations, information on and requirements for the degrees published here are subject to change and may be amended after the publication of this information.

University of Pretoria Programme Qualification Mix (PQM) verification project

The higher education sector has undergone an extensive alignment to the Higher Education Qualification Sub-Framework (HEQSF) across all institutions in South Africa. In order to comply with the HEQSF, all institutions are legally required to participate in a national initiative led by regulatory bodies such as the Department of Higher Education and Training (DHET), the Council on Higher Education (CHE), and the South African Qualifications Authority (SAQA). The University of Pretoria is presently engaged in an ongoing effort to align its qualifications and programmes with the HEQSF criteria. Current and prospective students should take note that changes to UP qualification and programme names, may occur as a result of the HEQSF initiative. Students are advised to contact their faculties if they have any questions.