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SOL PLAATJE UNIVERSITY

SCHOOL OF EDUCATION

UNDERGRADUATE PROGRAMME RULES AND INFORMATION

2019

SCHOOL OF EDUCATION

PROGRAMME RULES AND INFORMATION 2019

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The B.Ed. curricula was designed at the University of the Free State. Permission was granted by the University of the Free State to implement the B.Ed. (SP and FET Teaching) in 2014 and the B.Ed. (IP Teaching) in 2015.

TABLE OF CONTENTS

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1. GENERAL INFORMATION

This Rule-book contains rules relating to the Education programmes offered at this University.

1. GENERAL RULES AND B.Ed. PROGRAMME-SPECIFIC RULES

Various rules are applicable to this degree programme, namely General Rules (indicated by “G”) and programme-specific rules (indicated by “E”):

1.1 General rules

These rules apply to all programmes and hence to the degree programmes of the Faculty of Education and are set out in the Information Brochure and General Rules of the Sol Plaatje University.

These rules deal inter alia with the following issues:

- The University's admission requirements (G4);
- Registration as a student (G5);
- Attendance (G6);
- Curricula (G7);
- Results (G8);
- Academic progression (G9);
- Conferment of qualification (G10);
- Intellectual property (G11);
- Plagiarism and/or academic writing misconduct (G12).

1.2 Programme rules

The rules in this booklet relate specifically to the programmes offered in Education.

Take note:

It is the students’ responsibility to acquaint themselves with both the General University Rules and the Programme Rules relevant to their degree/diploma programme.

2. ASSESSMENT

2.1 Continuous assessment

A system of continuous assessment with a final examination is followed. In certain modules (see individual module guides) no final examination is written. The assessment in these modules is also continuous but it will include a final summative assessment.

2.2 Examinations

Consult the Examination Rules in the Information Brochure and General Rules 2019.

3. BACHELOR OF EDUCATION DEGREE

The following Bachelor of Education degrees may be awarded in the Department of Education:

	Minimum duration of study	Abbreviation	Programme Code
Senior and Further Education and Training Phases	4 years	B.Ed. (SP and FET Teaching)	
Intermediate Phase	4 years	B.Ed. (IP Teaching)	

Students enrol for one of the following programmes:

Qualification	Programme
B.Ed.(SP and FET Teaching)	Teaching of: Life Science (FET); Natural Science (SP) and Mathematics (SP)
	Teaching of: Geography (FET); Technology (SP); Mathematics (SP)
	*Teaching of: Engineering Graphics and Design (FET); Technology (SP); Mathematics (SP)
	Teaching of: Language (FET and SP) and Language (SP) OR 2xLanguages (FET) and Language (SP) OR Language (FET), Language (SP) and History (FET)
	Teaching of: History (FET), Social Science (SP), Language (SP)
	Teaching of: Physical Science (FET) plus Maths (SP and FET) OR Natural Science (SP); Maths (SP)
	Teaching two of: Accounting (FET)/Economics (FET)/Business Studies (FET) plus Economic and Management Science (SP)
	Teaching of: Mathematics (FET), Mathematics (SP), Mathematical Literacy (FET)
	*Teaching of: Information Technology (FET) plus Mathematics (SP and FET) OR CAT (FET), Mathematics (SP)

*Not offered in 2019

Qualification	Programme
B.Ed. (IP Teaching)	Teaching of: Languages, Mathematics, Natural Science and Technology
	Teaching of : Languages, Social Science, Life Skills

4. MODULE CODES

- **Module code structure**

Letter	Letter	Letter	Letter	Number	Number	Number	Number	Number
Faculty	Subject description	Subject description	Subject description	HEQF-Level	Year	1ST Semester – uneven number; 2nd Semester – even number; year – 0	Last two columns indicate the credits of the module	Last two columns indicate the credits of the module

- Example: The module code of Education in semester 1 of year 1 will be – EEDU61112

E	E	D	U	6	1	1	1	2
E – indicating "Education"	Subject description	Subject description	Subject description	HEQF-Level	Year	1ST Semester – uneven number; 2nd Semester – even number; year – 0	Last two columns indicate the credit value of the module	Last two columns indicate the credit value of the module

5. ACADEMIC INTEGRITY AND ACADEMIC HONESTY

It is the intention of this programme to install good academic practices by means of teaching, learning and research methodologies that will ensure that all role players participating in these academic practices do not plagiarize or transgress academic integrity/honesty. Concerns regarding possible plagiarism and/or academic writing misconduct will be addressed by means of formal and informal communication between academic staff and students.

It is important that students become knowledgeable on what plagiarism and academic writing misconduct entails. Students should seek answers to questions such as: What is plagiarism? What types of work must be cited? How can “common knowledge” be differentiated from “original work”?

There are many websites that deal with this matter and students ae advised to visit these sites.

See G12 in the *Information Brochure and General Rules* and also consult the policy on Plagiarism, available on the SPU website.

E6 RULES: BACHELOR OF EDUCATION (B.Ed.): NQF LEVEL 7

E6.1 CAREER OPPORTUNITIES

The Bachelor of Education (B.Ed.) is a qualification directed at initial teacher education. It is intended for students seeking a teaching degree which would qualify them as professional educators for the Intermediate Phase or the Senior and Further Education and Training Phases.

E6.2 ADMISSION REQUIREMENTS

The rules of the University in respect of admission to degree study are applicable for admission to this degree.

Students must be in possession of a National Senior Certificate and a minimum admission points (AP) score of 30. The language of instruction is English subject to the minimum achievement level 4 (50%).

Admission to the two B.Ed. degrees is, furthermore, subject to the minimum requirement requested to gain access to enrol for a specific subject in a programme and the space available in the various programmes in Education.

E6.3 ADDITIONAL RULES

In addition to the institutional Rules of the University for re-admission, the following requirements are applicable:

E6.3.1 Mathematics

A student may not enrol for Mathematics at university level with Mathematical Literacy

E6.3.2 Laboratory work

All students who are registered for subjects with a laboratory component must attend all scheduled laboratory sessions. Further guide lines and rules are specified in the relevant study guides.

E6.4 PREREQUISITES FOR SUBJECT TEACHING

Subject Teaching modules must be related to the elective subjects chosen in years 1 and/or 2 of the curriculum.

Students intending to follow subject teaching in:

- Life Science for the Further Education and Training Phase must have passed Biology at the first-year level and Botany or Zoology at the second-year level;
- Natural Science for the Senior Phase must have passed Biology at first year level and a subject combining Physics and Chemistry equivalent to first year level or must have passed Physics and Chemistry at first year level as well as Biology at first year level;

- Physical Science for the Further Education and Training Phase must have passed Physics or Chemistry at second-year level and the other (Physics or Chemistry) at least at first year level;
- Social Science for the Senior Phase must have passed both History and Geography at least at first year level;
- Economic and Management Science must have passed Accounting (16 credits minimum) and Economics or Business Studies at least at first year level.

E6.5 TEACHING PRACTICE

Teaching Practice is compulsory. Class attendance is compulsory, as this is factored into the final mark at the end of the year. Students who absent themselves from class should provide a valid reason to the office of the Teaching Practice Administrator and submit official documentation within 24 hours.

Students must submit evidence of successful participation with regard to the following activities, not later than the date for submission of marks for the examination opportunities:

E6.5.1 Practical Teaching

Students obtain a pass mark for modules ETPH51008/ETPI51008; ETPH62008/ETPI62008; EWLH63024/EWLI63024; EWLH74040/EWLI74040 by means of various forms of continuous assessment, according to the stipulations of the Education programmes.

No supplementary or second opportunity is allowed in any of Teaching Practice modules. Failure to secure a pass implies that the entire module will have to be repeated. Continuous assessment marks of the previous year are not transferrable in instances where students are repeating a Teaching Practice module.

E6.5.2 Sports and cultural activities

On the successful completion of the second academic year students must provide proof of the following:

2 x Level 1 Coaching Certificates for Extramural Activities in one of the following combinations:

i) 2 x sport coaching (level 1) OR
ii) 2 x cultural coaching (level 1) OR
iii) 1 x sport + 1 x cultural coaching (level 1)

E6.5.3 First aid

On the successful completion of the second academic year students must provide proof of a certificate in first aid.

Note: Certificates are provided by those institutions/bodies responsible for offering the relevant courses.

E6.6 LANGUAGE

E6.6.1 Intermediate Phase

All Intermediate Phase students must enrol for two languages and a Conversational Language (CL), except if English is the Home Language (HL) and IsiXhosa or Setswana is the First Additional Language (FAL). Students must choose one of the following language combinations.

Combi-nation	HL	HL	FAL	CL
1.	English	IsiXhosa OR Setswana	English	None
2.	English	None	English & IsiXhosa OR Setswana	None
3.	English	Afrikaans	English	IsiXhosa OR Setswana
4.	English		English & Afrikaans	IsiXhosa OR Setswana
5.	Afrikaans OR IsiXhosa OR Setswana		English	Afrikaans OR IsiXhosa OR Setswana (different from the chosen HL)

Note: English as First Additional Language is compulsory.

The competency to teach in the medium of the two chosen languages is developed in the teaching of the chosen language subjects in years 3 and 4 of the curriculum.

Students need to be assessed for their competence in the teaching of the non-language subjects in the medium of English and in the medium of the other chosen language. Students need to obtain at least a 60% pass in the assessment of the teaching of the non-language elective subjects in each of the two languages they have register for.

Endorsement: The following endorsements will be printed on the degree certificate:

- English as LoLT, and
- Afrikaans as LoLT or Setswana as LoLT or IsiXhosa as LoLT.

E6.6.2 Senior Phase and FET

E6.6.2.1 English as LoLT

The module *English as Medium of Learning and Teaching* (in year 4) is compulsory. Students who have included English 1 and/or English 2 as well as the Teaching of English (SP and/or FET) in years 3 and 4 are exempted from this module.

All other students in the BEd (SP & FET Teaching) programme must register for the module *English as Medium of Learning and Teaching* in year 4 of the curriculum. At the end of the first semester students can request to be assessed for their competence in teaching their related subjects in the medium of English. A mark of at least 60% is needed. If not, then the student has to continue with the module and be re-assessed at the end of the module.

Endorsement: The endorsement *English LoLT* will be printed on the degree certificate, if:

- a student was exempted from this module, or
- if a mark of at least 60% was obtained in the module *English as Medium of Learning and Teaching* in year 4.

E6.6.2.2 Afrikaans as LoLT

The module *Afrikaans as Medium of Learning and Teaching* (in year 3) is optional. Students who have included Afrikaans 1 and/or Afrikaans 2 as well

as the Teaching of Afrikaans (SP and/or FET) in years 3 and 4 are exempted from this module.

All other SP and FET students have the choice to register for the module *Afrikaans as Medium of Learning and Teaching* in year 3 of the curriculum. At the end of the first semester students can request to be assessed for their competence in teaching their related subjects in the medium of Afrikaans. A mark of at least 60% is needed. If not, then the student has to continue with the module and be re-assessed at the end of the module.

Endorsement: The endorsement *Afrikaans LoLT* will be printed on the degree certificate, if:

- a student was exempted from this module, or
- if a mark of at least 60% was obtained in the module *Afrikaans as Medium of Learning and Teaching* in year 4.

E6.7 ASSESSMENT

The institutional rules of the University in respect of assessment and examination are *mutatis mutandis* applicable to this degree study.

Module assessment implies the assessment of knowledge, skills and attitudes by means of continuous assessment (cumulating into a semester/year mark) as well as a final assessment (e.g. examination).

E6.7.1 Module assessment

Students must participate in at least two major summative assessment opportunities per 12/16-credit module which will contribute towards their semester/year mark. At least four major summative assessment opportunities will contribute towards the year mark of year modules with credit value more than 16 credits. Additional special assessment opportunities will be scheduled for students who - for valid reasons - could not participate in a test or tests.

Smaller continuous assessment activities as set out in the study guide may take place during contact sessions. These activities will contribute at most 20% to the semester/year mark. A module will be incomplete (see E6.7.3) if a student does not participate in the major assessment activities scheduled for the specific module.

A lecturer has the right not to accept late assignments, subsequent to liaising with the Head of Department where the module is located.

E6.7.2 Minimum semester/year mark

Students must note that, in terms of the Examination Rules a minimum semester/year mark of 40% must be obtained in order to be entitled to write the examinations. This semester/year mark must thus be obtained before the commencement of the examination.

E6.7.3 Incomplete participation

The performance of a student will be regarded as incomplete if a student did not suitably participate in all major scheduled assessment activities stipulated in E6.7.1.

"Incomplete" implies that a student will not be allowed to participate in the scheduled examination opportunities.

E6.7.4 Calculation of final mark

Students have to participate in the scheduled University examination in order to obtain a combined mark of at least 50% (a minimum examination mark of 40% is required) to pass a module. The average of the semester/ year mark and the examination mark will constitute the **final mark** (rounded up to a percentage integer) of the module in a ratio of 1:1.

The continuous assessment mark will be the final mark of modules without an examination opportunity.

E6.7.5 Examinations

The examinations scheduled in May/June and October/November are compulsory. See 2.2 in this document.

E6.7.6 Duration of examination papers

Assessment during the scheduled University examinations will usually take the form of a written examination of duration of at least three hours for each 12 or 16 credit module.

E6.7.7 Progression rules for the mainstream (4-year) curriculum

The General Rules of the University in respect of *progression rules* is *mutatis mutandis* applicable to the B.Ed. degree. The implication of these progression rules on the initial teacher programmes in Education is described below.

E6.7.7.1 Unsuccessful completion of first year modules

A student must register for the outstanding first year module(s) and with permission of the Head of the School of Education may register for a number of second year modules on condition that the total number of credits registered for do not exceed the prescribed credit value of the specific semester/year.

E6.7.7.2 Exclusion from the programme

A student, who has failed more than 50% (credit value of the modules) of the first or second year is excluded from the programme, but s/he may appeal to the Registrar to be readmitted. The final decision lies with the readmissions committee.

E6.7.7.3 Repeating modules of study

Students can register at most twice for a module in a programme in Education (G9.4).

E6.7.7.4 Third academic year of study in the programme

Students must complete all modules of the first and second academic year in the programme before they can progress to the third academic year of the programme.

E6.7.7.5 Fourth academic year of study in the programme

Students must complete all modules of the third academic year in the programme before they can progress to the fourth and final academic year of the programme.

E6.7.8 Awarding of qualification

The qualification will be awarded when **all** modules in the programme have been completed successfully in line with the progression rules and within the maximum allotted duration of the study.

E6.7.9 Qualification with distinction

The General Rules (G10.5) of the University in respect of *qualification* with distinction is *mutatis mutandis* applicable to the B.Ed. degrees.

E6.7.10 Examination irregularities

The Examination Rules of the University in respect of *examination* irregularities apply *mutatis mutandis* applicable to the B.Ed. degree.

E6.8 CURRICULUM: BACHELOR OF EDUCATION IN SENIOR PHASE AND FET TEACHING

E6.8.1 Study codes of programmes in the B.Ed. (SP & FET Teaching)

A student can enrol for one of the following programmes on condition that they were offered a place in the specific programme.

	Study codes
Programme	**4-year programme**
Teaching of: Life Science (FET); Natural Science (SP); Mathematics (SP)	EEDU731
Teaching of: Geography (FET); Technology (SP); Mathematics (SP) or Social Science (SP)	EEDU732

	Study codes
Programme	**4-year programme**
*Teaching of: Engineering Graphics and Design (FET); Technology (SP); Mathematics (SP)	EEDU733
Teaching of: two Languages (FET) and one Language (SP) OR one Language (FET), Language (SP), History (FET)	EEDU734
Teaching of: History (FET); Social Science (SP), Language (SP)	EEDU735
Teaching of: Physical Science (FET) plus Maths (SP and FET) OR Natural Science (SP); Maths (SP)	EEDU736
Teaching of: Mathematics (FET); Mathematics (SP); Mathematical Literacy (FET)	EEDU737
Teaching two of: Accounting (FET)/Economics (FET)/ Business Studies plus Economic and Management Science (SP)	EEDU738
*Teaching of: Information Technology (FET) plus Mathematics (SP and FET) OR CAT (FET), Mathematics (SP)	EEDU739

*These programmes are NOT implemented in 2019

E6.8.2 B.Ed. (SP and FET Teaching) curriculum

The curriculum comprises the following modules for the 4 years of study. Students exit the qualification on NQF Level 7 and obtain at least 520 credits upon the successful completion of the degree.

YEAR 1	**Year**	
Name of module	**Semester 1**	**Semester 2**
Subject Content 1	At least 16 credits	At least 16 credits
Subject Content 2	At least 16 credits	At least 16 credits
Core curriculum modules	SCOR51108	SCOR61208
Life-long learning Skills for Teachers	ELST51112	

YEAR 1	Year	
Name of module	**Semester 1**	**Semester 2**
Education Studies 1.1: The individual in education context	EEDU61112	
Education Studies 1.2: What it means to educate: theoretical perceptions and significance for SA education		EEDU61212
General Pedagogy I: Managing the curriculum		EPED61212
Teaching Practice 1	ETPH51008	
Total (Sem. 1; Sem. 2)	**Min 56**	**Min 56**
Total (Year)	**24**	
TOTAL CREDITS: YEAR 1	**Min136**	

YEAR 2	Year	
Name of module	**Semester 1**	**Semester 2**
Subject Content 1 continued	At least 16 credits	At least 16 credits
Subject Content 2 continued	At least 16 credits	At least 16 credits
OR	OR	
*Subject Content 3	At least 16 credits	At least 16 credits
Education Studies 2: 2.1: Teaching and learning in Education Context 2.2: Human Relationships In Education Context	EEDU72116	EEDU72216
General Pedagogy 2: 2-1: Inclusive teaching and learning	EPED62112	EPED62212
2-2: Instruction and assessment Teaching Practice 2	ETPH62008	
Total (Sem. 1; Sem. 2)	**60**	**60**
Total (Year)	**8**	
TOTAL CREDITS: YEAR 2	**128**	

*Not applicable in the case of EEDU734; EEDU735; EEDU737

YEAR 3	Year	
Name of module	**Semester 1**	**Semester 2**
Education Studies 3: 3.1: Systems in Education Context 3.2: Instructional Leadership and Classroom Management in Education Context	EEDU73116	EEDU73216
Subject Teaching module	20 credits	
Subject Teaching module	20 credits	
Subject Teaching module	20 credits	
*Setswana/IsiXhosa/Afrikaans conversational language or Sign conversational language	ETCL53008/EXCL53008/ EACL53008/ ESCL53008	
**Afrikaans as medium of learning and teaching	EALT53012	
Teaching Practice 3	EWLH63024	
Total (Sem. 1; Sem. 2)	**16**	**16**
Total (Year)	**104**	
TOTAL CREDITS: YEAR 3	**136**	

* A conversational language other than Setswana and Afrikaans is only presented if a suitable person can be contracted to teach the module in the specific year

** This module is optional

YEAR 4	Year	
Name of module	**Semester 1**	**Semester 2**
Subject Teaching module	20 credits	
Subject Teaching module	20 credits	
Subject Teaching module	20 credits	
*Setswana/IsiXhosa/Afrikaans conversational language/Sign conversational language	ETCL54008/EXCL54008/ EACL54008/ ESCL54008	
English as medium of learning and teaching	EELT54012	

YEAR 4	Year	
Name of module	**Semester 1**	**Semester 2**
Teaching Practice 4	EWLH74040	
Total (Sem. 1; Sem. 2)		
Total (Year)	**120**	
TOTAL CREDITS: YEAR 4	**120**	

* A conversational language other than Setswana and Afrikaans is only presented if a suitable person can be contracted to teach the module

E6.8.2.1 Elective subjects

Students can elect subjects from Natural Science or Human Science or Economic and Management Science in years 1 and 2. In years 3 and 4 the majors of this qualification will be the teaching of the subject (or cognate subject) chosen in years 1 and 2. The majors of this qualification must be the teaching of two Further Education and Training (FET) subjects and one Senior Phase (SP) subject or it must be the teaching of one Further Education and Training (FET) subject and two Senior Phase (SP) subjects.

The teaching of a subject at first year level (at least 32 credits) is needed before enrolling for the teaching of that subject at SP level. A subject at second year level (at least 64 credits) is needed before enrolling for the teaching of that subject at FET level.

The information in the table below, E6.8.1 and the prerequisites in E6.10 may be of help when choosing elective subjects.

Study Code	Year 1 **Choose two subjects of which at least one proceeds to year 2**	Year 2 **Continue with the subjects chosen in year 1 OR replace one of those with another subject**	Year 3 **Choose two SP and one FET subjects OR choose two FET and one SP subject**	Year 4 **Continue with the subjects chosen in year 3**
EEDU731	See E6.8.3.5	See E6.8.3.5	See E6.8.3.1 and E6.8.3.3	See E6.8.3.2 and E6.8.3.4
EEDU732	**See E6.8.3.5	**See E6.8.3.5	See E6.8.3.1 and E6.8.3.3	See E6.8.3.2 and E6.8.3.4

Study Code	Year 1 Choose two subjects of which at least one proceeds to year 2	Year 2 Continue with the subjects chosen in year 1 OR replace one of those with another subject	Year 3 Choose two SP and one FET subjects OR choose two FET and one SP subject	Year 4 Continue with the subjects chosen in year 3
*EEDU733	See E6.8.3.5	See E6.8.3.5	See E6.8.3.1 and E6.8.3.3	See E6.8.3.2 and E6.8.3.4
EEDU734	See E6.8.4.5	See E6.8.4.5	See E6.8.4.1 and E6.8.4.3	See E6.8.4.2 and E6.8.4.4
EEDU735	See E6.8.4.5	See E6.8.4.5	See E6.8.4.1 and E6.8.4.3	See E6.8.4.2 and E6.8.4.4
EEDU736	See E6.8.3.5	See E6.8.3.5	See E6.8.3.1 and E6.8.3.3	See E6.8.3.2 and E6.8.3.4
EEDU737	#See E6.8.3.5	#See E6.8.3.5	See E6.8.3.1 and E6.8.3.3	See E6.8.3.2 and E6.8.3.4
EEDU738	See E6.8.5.5	See E6.8.5.5	See E6.8.5.1 and E6.8.5.3	See E6.8.5.2 and E6.8.5.4
*EEDU739	See E6.8.3.5	See E6.8.3.5	See E6.8.3.1 and E6.8.3.3	See E6.8.3.2 and E6.8.3.4

* These programmes are not implemented in 2019

** Students who offered Mathematics Literacy in Grade 12 or who have obtained less that Level 4 for Mathematics in Grade 12, must choose History (see E6.8.4.5) instead of Mathematics.

\# Enrol for Mathematics I and II and Statistics I and II.

Note:

1. Deviation of the curriculum will only be allowed if there are no clashes on the time table.
2. Years 3 and 4: Choose subjects from E6.8.3.1, E6.8.3.2 or E6.8.4.1, E6.8.4.2 or E6.8.5.1, E6.8.5.2 if the subject chosen in year 1 or 2 was at least a first year course (min 32 credits) of a subject.
3. Years 3 and 4: Choose subjects from E6.8.3.3, E6.8.3.4 or E6.8.4.3, E6.8.4.4 or E6.8.5.3, E6.8.5.4 if the subject chosen in year 1 and 2 progressed over two years (min 64 credits).

E6.8.3 Elective Subjects in Mathematics and Natural Science

E6.8.3.1 Year 3 - Senior Phase subject teaching modules

Mathematics, Natural Science and Technology Teaching	
Mathematics Teaching 1: Senior Phase	EMST63020
Natural Science Teaching 1: Senior Phase	ENST63020
Technology Teaching 1: Senior Phase	ETGT63020

E6.8.3.2 Year 4 – Senior Phase subject teaching modules

Mathematics, Natural Science and Technology Teaching	
Mathematics Teaching 2: Senior Phase	EMST74020
Natural Science Teaching 2: Senior Phase	ENST74020
Technology Teaching 2: Senior Phase	ETGT74020

E6.8.3.3 Year 3 – FET subject teaching modules

Mathematics, Natural Science and Technology Teaching	
CAT Teaching 1: FET	ECAT63020
Engineering Graphics and Design Teaching 1: FET	EEGT63020
Geography Teaching 1: FET	EGYT63020
Information Technology Teaching 1: FET	EITT63020
Life Science Teaching 1: FET	ELST63020
Mathematical Literacy Teaching 1: FET	EMLT63020
Mathematics Teaching 1: FET	EMFT63020
Physical Science Teaching 1: FET	EPST63020

E6.8.3.4 Year 4 – FET subject teaching modules

Mathematics, Natural Science and Technology Teaching	
CAT Teaching 2: FET	ECAT74020
Engineering Graphics and Design Teaching 2: FET	EEGT74020
Geography Teaching 2: FET	EGYT74020
Information Technology Teaching 2: FET	EITT74020
Life Science Teaching 2: FET	ELST74020
Mathematical Literacy Teaching 2: FET	EMLT74020
Mathematics Teaching 2: FET	EMFT74020
Physical Science Teaching 2: FET	EPST74020

E6.8.3.5 Subjects – Natural Science, Mathematics and Technology (Consult the prerequisites in E6.10):

SUBJECT / MODULE	FIRST YEAR		SECOND YEAR	
	Sem. 1	Sem. 2	Sem. 1	Sem. 2
BIOLOGY (Botany and Zoology)				
Molecular and Cell Biology	NBLG51316			
Biological Systems and Diversity		NBLG51216		
BOTANY				
Plant adaptations: morphology and ecology of survival			NBOT62320	
Whole Plant Physiology				NBOT62420
CHEMISTRY				
General Chemistry1A	NCHM51316			
General Chemistry 1B		NCHM51216		
Organic Chemistry II			NCHM62310	
Inorganic Chemistry II			NCHM62510	
Analytical Chemistry II				NCHM62410
Physical Chemistry II				NCHM62610

SUBJECT / MODULE	FIRST YEAR		SECOND YEAR	
	Sem. 1	Sem. 2	Sem. 1	Sem. 2
COMPUTER SCIENCE AND INFORMATICS				
Computer Science 1A	NCOS51116			
Computer Science 1B		NCOS51216		
Algorithm Analysis and Programming Design			NCOS62320	
Operating Systems and Computer Networks				NCOS62420
ENGINEERING GRAPHICS				
Engineering graphics	EEGD61116	EEGD61216	EEGD72116	EEGD72216
GEOGRAPHY				
Introduction to Physical Geography	NGEO51316			
Introduction to Human Geography		NGEO61416		
Urban Geography			NGEO62520	
Introduction to GIS				NGEO62420
MATHEMATICS				
Calculus	NMAT51516			
Algebra		NMAT51416		
OR	OR			
Calculus (SP)	NMAT51316			
Calculus and linear Algebra (SP)		NMAT61416		
Advanced Calculus			NMAT62320	
Linear Algebra				NMAT62410
Mathematical Analysis				NMAT62610
PHYSICS				
Mechanics, Thermal Physics and Waves	NPHY51316			
Electromagnetism, Modern Physics and Optics		NPHY51216		

SUBJECT / MODULE	FIRST YEAR		SECOND YEAR	
	Sem. 1	Sem. 2	Sem. 1	Sem. 2
Classical Mechanics			NPHY62310	
Special Relativity and Thermodynamics			NPHY62510	
Electromagnetism				NPHY62410
Quantum Physics & Computational Physics				NPHY62610
PHYSICAL SCIENCE				
Physical Science (Chemistry)			EPSC52116	
Physical Science (Physics)				EPSP52216
STATISTICS				
Introduction to Statistics	NSTA51516			
Probability Theory		NSTA51416		
Distribution Theory			NSTwA62320	
Statistical inference				NSTA62420
TECHNOLOGY				
Technology			ETEC62116	ETEC62216
ZOOLOGY				
Invertebrate life and evolution			NZOO62320	
Vertebrate life and evolution				NZOO62420

E6.8.4 Elective Subjects in the Human Science

E6.8.4.1 Year 3 - Senior Phase subject teaching modules

Languages and Social Science Teaching	
Afrikaans Teaching (Home Language) 1: Senior Phase	EAHS63020
English Teaching (Home Language) 1: Senior Phase	EEHS63020
Setswana Teaching (Home Language) 1: Senior Phase	ESHS63020
Afrikaans Teaching (Additional Language) 1: Senior Phase	EAAS63020

Languages and Social Science Teaching	
English Teaching (Additional Language) 1: Senior Phase	EEAS63020
Setswana Teaching (Additional Language) 1: Senior Phase	ESAS63020
Social Science Teaching 1: Senior Phase	ESTS63020

E6.8.4.2 Year 4 – Senior Phase subject teaching modules

Languages and Social Science Teaching	
Afrikaans Teaching (Home Language) 2: Senior Phase	EAHS74020
English Teaching (Home Language) 2: Senior Phase	EEHS74020
Setswana Teaching (Home Language) 2: Senior Phase	ESHS74020
Afrikaans Teaching (Additional Language) 2: Senior Phase	EAAS74020
English Teaching (Additional Language) 2: Senior Phase	EEAS74020
Setswana Teaching (Additional Language) 2: Senior Phase	ESAS74020
Social Science Teaching 2: Senior Phase	ESTS74020

E6.8.4.3 Year 3 – FET subject teaching modules

Languages and History Teaching	
Afrikaans Teaching (Home Language) 1: FET	EAHF63020
English Teaching (Home Language) 1: FET	EEHF63020
Setswana Teaching (Home Language) 1: FET	ESHF63020
Afrikaans Teaching (Additional Language) 1: FET	EAAF63020
English Teaching (Additional Language) 1: FET	EEAF63020
Setswana Teaching (Additional Language) 1: FET	ESAF63020
History Teaching 1: FET	EHIT63020

E6.8.4.4 Year 4 – FET subject teaching modules

Languages and History Teaching	
Afrikaans Teaching (Home Language) 2: FET	EAHF74020
English Teaching (Home Language) 2: FET	EEHF74020
Setswana Teaching (Home Language) 2: FET	ESHF74020
Afrikaans Teaching (Additional Language) 2: FET	EAAF74020
English Teaching (Additional Language) 2: FET	EEAF74020
Setswana Teaching (Additional Language) 2: FET	ESAF74020
History Teaching 2: FET	EHIT74020

E6.8.4.5 Subjects – Human Science (Consult the prerequisites in E6.10 as well as 6.8.3.5 to select Geography as elective):

SUBJECT / MODULE	FIRST YEAR		SECOND YEAR	
	Sem. 1	Sem. 2	Sem. 1	Sem. 2
AFRIKAANS (Mother tongue)				
Inleiding tot die Afrikaanse Taalkunde	HAFN51116			
Inleiding tot die Afrikaanse Letterkunde		HAFN61216		
Afrikaanse Morfologie en Sosiolinguistiek			HAFN62116	
Inleiding tot Nederlands en Nederlandse Literatuur				HAFN62216
ENGLISH				
Reading Literature: An Introduction to Reading, Writing and Critical Textual Analysis	HENG51116			
Reading Literature, Film and Culture		HENG61216		
Drama and Poetry in English			HENG62116	
Introduction to linguistics and Theories of Literature and Criticism				HENG62216

SUBJECT / MODULE	FIRST YEAR		SECOND YEAR	
	Sem. 1	Sem. 2	Sem. 1	Sem. 2
HISTORY				
Introduction to the twentieth century history of South Africa and Africa	HHIS51116			
Twentieth Century South Africa and Africa up to the Second World War		HHIS61216		
The World in Crisis			HHIS62116	
South Africa and Africa after the Second World War				HHIS62216
SETSWANA				
Introduction to Setswana Linguistics, Spelling and Orthography	HSTS51116			
Introduction to Setswana Literature and Oral Traditions		HSTS61216		
Sociolinguistics in Setswana			HSTS62116	
Role of Literature in Society				HSTS62216

E6.8.5 Elective Subjects in Economic and Management Science

E6.8.5.1 Year 3 - Senior Phase subject teaching modules

Economic and Management Science	
Economics and Management Science Teaching 1: Senior Phase	ETMS63020

E6.8.5.2 Year 4 – Senior Phase subject teaching modules

Economic and Management Science	
Economics and Management Science Teaching 2: Senior Phase	ETMS74020

E6.8.5.3 Year 3 – FET subject teaching modules

Economic and Management Science	
Accounting Teaching 1: FET	EACT63020
Economics Teaching 1: FET	EECT63020
Business Studies Teaching 1: FET	EBST63020

E6.8.5.4: Year 4 – FET subject teaching modules

Economic and Management Science	
Accounting Teaching 2: FET	EACT74020
Economic Teaching 2: FET	EECT74020
Business Studies Teaching 2: FET	EBST74020

E6.8.5.5 Subjects – Economic and Management Science (Consult the prerequisites at the back of this rule book when choosing a module):

SUBJECT / MODULE	FIRST YEAR		SECOND YEAR	
	Sem. 1	Sem. 2	Sem. 1	Sem. 2
ACCOUNTING				
Accounting 1A, 1B and 2A, 2B	MACC51116	MACC61216	MACC62116	MACC62216
BUSINESS MANAGEMENT				
Business Management 1A, 1B and 2A, 2B	MBMT51116	MBMT61216	MBMT62116	MBMT62216
ECONOMICS				
Economics 1A, 1B and 2A, 2B	MECO51116	MECO61216	MECO62116	MECO62216

E6.9 CURRICULUM: BACHELOR OF EDUCATION IN INTERMEDIATE PHASE TEACHING

E6.9.1 Study codes of programmes in the B.Ed. (IP Teaching) degree

Students can enrol for one of the following programmes on condition that they are offered a place in the specific programme.

	Study codes
Programme	**4-year programme**
Teaching of Languages, Mathematics, Natural Science and Technology	EEDU721
Teaching of Languages, Social Science and Life Skills	EEDU722

E6.9.2 B.Ed. (IP Teaching) curriculum

The curriculum comprises the following modules for the 4 years of study. Students exit the qualification on NQF Level 7 and obtain 516 credits minimum upon the successful completion of the degree.

YEAR 1	**Year**	
Name of module	**Semester 1**	**Semester 2**
English 1	EENG51112	EENG61212
Pre-Calculus 1 OR Life Skills 1	EMTH51012 OR ELSI51012	
Elementary Natural Science & Technology 1 OR Social Science (History)	ENST51012 OR ESSC51012	
Core curriculum modules	SCOR51108	SCOR61208
Education Studies 1: 1.1: The individual in education context 1.2: What it means to educate: theoretical perceptions and significance for SA education	EEDU61112	EEDU61212
Life- long learning skills for teachers General Pedagogy I: Managing the curriculum	ELST51112	EPED61212
Teaching Practice 1	ETPI51008	
Total (Sem. 1; Sem. 2)	**44**	**44**
Total (Year)	**32**	
TOTAL CREDITS: YEAR 1	**120**	

YEAR 2	Year	
Name of module	**Semester 1**	**Semester 2**
Basic Mathematics OR Technology	EBMA52012 OR *ETEC62116	 **ETEC62216
Education Studies 2 2.1 Teaching and learning in Education Context 2.2 Human Relationships in Education Context	EEDU72116	 EEDU72216
General Pedagogy 2 2.1 Inclusive Teaching and Learning 2.2 Instruction and Assessment	EPED62212	 EPED62212
Afrikaans Language Skills for Education OR Setswana OR IsiXhosa	EAFR52112 OR HSTH51116 OR HIXH51116	EAFR62212 OR HSTH61216 OR HIXH61216
***Pre-Calculus 2 OR ***Life Skills 2	EMTH62012 OR ELSI62012	
***Elementary Natural Science & Technology 2 OR ***Social Science (Geography)	ENST62012 OR ESSC62012	
Teaching Practice 2	ETPI62008	
Total (Sem. 1; Sem. 2)	**40(56)**	**40(56)**
Total (Year)	**44(32)**	
TOTAL CREDITS: YEAR 2	**124(144)**	

* Students who took Mathematics in year 1, must take Technology in year 2

** This module is optional, but students are advised to enrol for this module if they completed ETEC62116 successfully.

*** Continuation of the subject chosen in year 1

YEAR 3	Year	
Name of module	**Semester 1**	**Semester 2**
Education Studies 3: 3.1: Systems in Education Context 3.2: Instructional Leadership and Classroom Management in Education Context	EEDU73116	EEDU73216
#Intermediate Phase School Curriculum 1	EICN53008 OR EICS53008	
English Teaching 1 (Additional Language)	EEAI63016	
*English Teaching 1 (HL) OR Afrikaans Teaching 1 (HL) OR Setswana Teaching 1 (HL) OR IsiXhosa Teaching 1 (HL)	EEHI63016 OR EAHI63016 OR ESHI63016 OR EXHI63016	
*Afrikaans Teaching 1 (FAL) OR Setswana Teaching 1 (FAL) OR IsiXhosa Teaching 1 (FAL)	EAAI63016 OR ESAI63016 OR EXAI63016	
Natural Science and Technology Teaching 1 Mathematics Teaching 1 OR Life Skills Teaching 1 Social Science Teaching 1	ENTI63016 EMTI63016 OR ELSI63016 ESSI63016	
*Conversational Language: Setswana OR IsiXhosa OR Afrikaans OR Sign Language	ETCL53008/EXCL53008/ EACL53008/ ESCL53008	
Teaching Practice 3	EWLI63024	
Total (Sem. 1; Sem. 2)	**16**	**16**
Total (Year)	**104**	
TOTAL CREDITS: YEAR 3	**136**	

Two groups:

Students who selected Mathematics and Natural Science and Technology register for EICS53008 (focus on Social Science)

Students who selected Social Science and Life Skills register for EICN53008 (focus on Natural Science and Technology).

* Language electives (HL, FAL, CL). See E6.6.1

The choice of a language teaching module depends on the choice of language in year 2

YEAR 4	Year	
Name of module	**Semester 1**	**Semester 2**
Intermediate Phase School Curriculum 2	#EICM54008 OR EICL54008	
English Teaching 2 (Additional Language)	EEAI74020	
*English Teaching 2 (HL) OR Afrikaans Teaching 2 (HL) OR Setswana Teaching 2 (HL) OR IsiXhosa Teaching 2 (HL)	EEHI74020 OR EAHI74020 OR ESHI74020 OR EXHI74020	
*Afrikaans Teaching 2 (FAL) OR Setswana Teaching 2 (FAL) OR IsiXhosa Teaching 2 (FAL)	EAAI74020 OR ESAI74020 OR EXAI74020	
*Natural Science and Technology Teaching 2 * Mathematics Teaching 2 OR *Life Skills Teaching 2 *Social Science Teaching 2	ENTI74020 EMTI74020 OR ELSI74020 ESSI74020	
*Conversational Language: Setswana OR IsiXhosa OR Afrikaans OR Sign Language	ETCL54008/EXCL54008/ EACL54008/ ESCL54008	
Teaching Practice 4	EWLI74040	
Total (Sem. 1; Sem. 2)		
Total (Year)	**136**	
TOTAL CREDITS: YEAR 4	**136**	

* Continuation of Subject Teaching and Conversational Language choices in year 3

\# Students who selected Mathematics and Natural Science and Technology register for EICL54008 (focus on Life Skills)

Students who selected Social Science and Life Skills register for EICM54008 (focus on Mathematics).

E6.10 PREREQUISITES FOR MODULES OFFERED IN PROGRAMMES IN EDUCATION

For the preconditions of all the modules that are offered at the University, you are referred to the General Rules of the University.

Except if stated differently a student can only enrol for a subsequent module in a subject if the preceding module in that subject was passed.

Module Code	Pre-requisite
HAFN51116	Grade 12 Afrikaans (achievement level 5)
HENG51116	Grade 12 English (achievement level 5)
HSTS61116	Grade 12 Setswana (achievement level 5)
MECO51116	Grade 12 Mathematics (achievement level 4)
NBLG51316	Grade 12 Life Sciences (achievement level 5) or Physical Science (achievement level 5)
NBLG61216	Grade 12 Life Science (achievement level 5) or Physical Science (achievement level 5)
NCOS51116	Grade 12 Mathematics (achievement level 5)
NGEO51316	Grade 12 mathematics (achievement level 4)
NMAT51516	Grade 12 (achievement level 5)
NCHM51316	Grade 12 Physical Sciences (achievement level 4)
NPHY51316	Grade 12 Physical Sciences (achievement level 4)
NPHY62310	NPHY51316 and NPHY51216
NSTA51516	Grade 12 Mathematics (achievement level 4)
NSTA51416	Grade 12 Mathematics (achievement level 4)

Module Code	Pre-requisite
NSTA62320	NSTA51516 and, NSTA51416
NSTA62420	NSTA51516 and NSTA51416
NBOT62320	NBLG51216
NBOT62420	NBLG51216
NCHM62510	NCHM51312 and NCHM51216
NCHM62410	NCHM51312 and NCHM51216
NCHM62610	NCHM51312 and NCHM51216
NGEO62320	NGEO61316
NGEO62420	NONE
NMAT62320	NMAT51516 and NMAT51416
NMAT62410	NMAT51516 and NMAT51416
NMAT62610	NMAT51516 and NMAT51416
NZOO62320	NBLG51216
NZOO62420	NBLG51216

7. PRE-GRADUATE CURRICULUM CHOICES

Students who qualify to enrol for the B.Ed. (SP and FET Teaching) programme, must do so for one of the curricula in 7.1.

7.1 CURRICULA: B.Ed. (SP and FET Teaching)

7.1.1 EEDU731

Major in Life Sciences Teaching (FET), Mathematics Teaching (SP) and Natural Sciences Teaching (SP)

Year 1		Year 2		Year 3		Year 4	
Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2
NBLG51316	NBLG51216	NBOT62320 OR NZOO62320	NBOT62420 OR NZOO62420	EALT53012 (optional)		EELT54012	
NMAT51316	NMAT51416	EPSC52116	EPSP52216	ETCL53008/ EACL53008/	EXCL53008/ ESCL53008	ETCL54008/ EACL54008/	EXCL54008/ ESCL54008
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR51108	SCOR61208			ELST63020		ELST74020	
				ENST63020		ENST74020	
				EMST63020		EMST74020	
ETPH51008		ETPH62008		EWLH63024		EWLH74040	

7.1.2 EEDU732

a) Major in Geography Teaching (FET), Mathematics Teaching (SP) and Technology Teaching (SP)

Year 1		Year 2		Year 3		Year 4	
Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2
NGEO51316	NGEO51416	NGEO62520	NGEO62420	EALT53012 (optional)		EELT54012	
NMAT51516	NMAT51416	ETEC61116	ETEC61216	ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR51108	SCOR61208			EGYT63020		EGYT74020	
				EMST63020		EMST74020	
				ETGT63020		ETGT74020	
ETPH51008		ETPH62008		EWLH63024		EWLH74040	

b) Major in Geography Teaching (FET), Social Sciences Teaching (SP) and Technology Teaching (SP)

Year 1		Year 2		Year 3		Year 4	
Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2
NGEO51316	NGEO51416	NGEO62520	NGEO62420	EALT53012 (optional)		EELT54012	
HHIS51116	HHIS61216	ETEC62116	ETEC62216	ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR51108	SCOR61208			EGYT63020		EGYT74020	
				ESTS63020		ESTS74020	
				ETGT63020		ETGT74020	
ETPH51008		ETPH62008		EWLH63024		EWLH74040	

7.1.3 EEDU733

Major in Engineering Graphics and Design (FET); Technology (SP); Mathematics (SP) – *Not offered in 2019*

7.1.4 EEDU734

a) Major in Language Teaching (SP) and in Language Teaching (FET)

Year 1		Year 2		Year 3		Year 4	
Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2
*HAFN51116/ HENG51116/ HSTS51116	HAFN51216/ HENG61216/ HSTS61216	HAFN62116/ HENG62116/ HSTS62116	HAFN62216/ HENG62216/ HSTS622116	EALT53012 (optional)		EELT54012	
				ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR51108	SCOR61208						
				**EAHF63020/EEHF63020/ ESHF63020/ EAAF63020/ EEAF63020/ ESAF63020		EAHF74020/EEHF74020/ ESHF74020/EAAF74020/ EEAF74020/ESAF74020	
				***EAHS63020/EEHS63020/ ESHS63020/EAAS63020/ EEAS63020/ESAS63020		EAHS74020/EEHS74020/ ESHS74020/EAAS74020/ EEAS74020/ESAS74020	
ETPH51008		ETPH62008		EWLH63024		EWLH74040	

* Choose any two of the three languages and continue with those in year two

** Choose two based on the languages chosen in years 1 and 2. Both can be home language or one can be home language but then the other must be first additional language.

*** Must correspond with one of the chosen FET options.

b) EEDU734

Major in Language Teaching (FET), Language Teaching (SP) and History Teaching (FET)

Year 1		Year 2		Year 3		Year 4	
Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2
*HAFN51116/ HENG51116/ HSTS51116	HAFN61216/ HENG61216/ HSTS61216	HAFN62116/ HENG62116/ HSTS62116	HAFN62216/ HENG62216/ HSTS622116	EALT53012 (optional)		EELT54012	
HHIS51116	HHIS61216	HHIS62116	HHIS62216	ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR51108	SCOR61208			EHIT63020		EHIT74020	
				**EAHF63020/ EEHF63020/ ESHF63020/ EAAF63020/ EEAF63020/ ESAF63020		EAHF74020/ EEHF74020/ ESHF74020/ EAAF74020/ EEAF74020/ ESAF74020	
				***EAHS63020/ EEHS63020/ ESHS63020/ EAAS63020/ EEAS63020/ ESAS63020		EAHS74020/ EEHS74020/ ESHS74020/ EAAS74020/ EEAS74020/ ESAS74020	
ETPH51008		ETPH62008		EWLH63024		EWLH74040	

* Choose any one of the three languages.

** Choose one based on the language chosen in years 1 and 2. It can be home language or first additional language.

*** Must correspond with the language FET option.

7.1.5 EEDU735

Major in History (FET), Social Sciences (SP) and Language (SP)

Year 1		Year 2		Year 3		Year 4	
Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2
HHIS51116	HHIS61216	HHIS62116	HHIS62216	EALT53012 (optional)		EELT54012	
*HAFN51116/ HENG51116/ HSTS51116	HAFN61216/ HENG61216/ HSTS61216	NGEO51316	NGEO51416	ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR51108	SCOR61208			EHIT63020		EHIT74020	
				ESTS63020		ESTS74020	
				EAHS63020/ EEHS63020/ ESHS63020/ EAAS63020/ EEAS63020/ ESAS63020		EAHS74020/ EEHS74020/ ESHS74020/ EAAS74020/ EEAS74020/ ESAS74020	
ETPH51008		ETPH62008		EWLH63024		EWLH74040	

7.1.6 EEDU736

(a) Major in Physical Sciences (FET), Mathematics (FET) and Mathematics (SP)

Year 1		Year 2		Year 3		Year 4	
Sem. 1	**Sem. 2**	**Sem. 1**	**Sem. 2**	**Sem. 1**	**Sem. 2**	**Sem. 1**	**Sem. 2**
NPHY51316	NPHY51216	NPHY62310 NPHY62510	NPHY62410 NPHY62610	EALT53012 (optional)		EELT54012	
NMAT51516	NMAT51416	NMAT62320	NMAT62410/ NMAT62610	ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
NCHM51316	NCHM51216	NCHM62310 NCHM62510	NCHM62410 NCHM62610				
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR51108	SCOR61208			EPST63020		EPST74020	
				EMFT63020		EMFT74020	
				EMST63020		EMST74020	
ETPH51008		ETPH62008		EWLH63024		EWLH74040	

(b) Major in Physical Sciences (FET), Natural Sciences (SP) and Mathematics (SP)

Year 1		Year 2		Year 3		Year 4	
Sem. 1	**Sem. 2**	**Sem. 1**	**Sem. 2**	**Sem. 1**	**Sem. 2**	**Sem. 1**	**Sem. 2**
NPHY51316	NPHY51216	*NPHY62310 NPHY62510 OR NCHM62310/ NCHM62510	NPHY62410 NPHY62610 OR NCHM62610/ NCHM62410	EALT53012 (optional)		EELT54012	
NCHM51316	NCHM51216						
NMAT51516	NMAT51416	NBLG51316	NBLG51216	ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR51108	SCOR61208			EPST63020		EPST74020	
				ENST63020		ENST74020	
				EMST63020		EMST74020	
ETPH51008		ETPH62008		EWLH63024		EWLH74040	

7.1.7 EEDU737

Major in Mathematics (FET), Mathematics (SP) and Mathematical Literacy (FET)

Year 1		Year 2		Year 3		Year 4	
Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2
NMAT51516	NAMT51416	NMAT62320	NMAT62410/ NMAT62610	EALT53012 (optional)		EELT54012	
NSTA51516	NSTA51416	NSTA62320	NSTA62420	ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR51108	SCOR61208			EMST63020		EMST74020	
				EMFT63020		EMFT74020	
				EMLT63020		EMLT74020	
ETPH51008		ETPH62008		EWLH63024		EWLH74040	

7.1.8 EEDU738

Major in one of Accounting (FET)/Economics (FET)/ Business Studies (FET) and Economic and Management Sciences (SP)

Year 1		Year 2		Year 3		Year 4	
Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2
MACC51116	MACC61216	*MACC62116	*MACC62216	EALT53012 (optional)		EELT54012	
MECO51116	MECO61216	*MECO62116	*MECO62216	ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
MBMT5116	MBMT61216	*MBMT62116	*MBMT62216				
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR51108	SCOR61208			EMST63020		EMST74020	
				**EACT63020		**EACT74020	
				**EECT63020		**EECT74020	
				**EBST63020		**EBST74020	
ETPH51008		ETPH62008		EWLH63024		EWLH74040	

* Continue with your choice of two of Accounting, Economics and Business Management in year 2

** Choose the teaching of two of the subjects that relate to your choice in year 2

7.1.9 EEDU739

a) Major in Information Technology (FET), Mathematics (FET) and Mathematics (SP) - *Not offered in 2019*

b) Major in Information Technology (FET), CAT (FET) and Mathematics (SP) - *Not offered in 2019*

7.2 B.Ed. (IP Teaching)

7.2.1 EEDU721: Languages, Mathematics and Natural Sciences and Technology

<table>
<tr><th colspan="2">Year 1</th><th colspan="2">Year 2</th><th colspan="2">Year 3</th><th colspan="2">Year 4</th></tr>
<tr><th>Sem. 1</th><th>Sem. 2</th><th>Sem. 1</th><th>Sem. 2</th><th>Sem. 1</th><th>Sem. 2</th><th>Sem. 1</th><th>Sem. 2</th></tr>
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OR</td><td>EAFR61212
OR</td><td colspan="2"></td><td colspan="2"></td></tr>
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HIXH51116</td><td>HSTS61216
OR
HIXH61216</td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td>EMTH50112
ENST51012</td><td>EMTH620112
ENST62012</td><td></td><td></td><td colspan="2">*ETCL53008/ EXCL53008/
EACL53008/ ESCL53008</td><td colspan="2">ETCL54008/ EXCL54008/
EACL54008/ ESCL54008</td></tr>
<tr><td>EEDU61112</td><td>EEDU61212</td><td>EEDU72116</td><td>EEDU72216</td><td>EEDU73116</td><td>EEDU73216</td><td colspan="2"></td></tr>
<tr><td>ELST51112</td><td>EPED61212</td><td>EPED62112</td><td>EPED62212</td><td colspan="2"></td><td colspan="2"></td></tr>
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<tr><td colspan="4" rowspan="3"></td><td colspan="2">*EEHI63016
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EXAI63016</td><td colspan="2">EEHI74020
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EXAI63020</td></tr>
<tr><td colspan="2">ENTI63016</td><td colspan="2">ENTI4020</td></tr>
<tr><td colspan="2">EMTI63016</td><td colspan="2">EMTI74020</td></tr>
<tr><td colspan="2">ETPI51008</td><td colspan="2">ETPI62008</td><td colspan="2">EWLI63024</td><td colspan="2">EWLI74040</td></tr>
</table>

This is an optional module

* Language Teaching electives & Conversational Language: See E6.6.1

7.2.2 EEDU722: Languages, Social Sciences and Life Skills

Year 1		Year 2		Year 3		Year 4	
Sem. 1	**Sem. 2**	**Sem. 1**	**Sem. 2**	**Sem. 1**	**Sem. 2**	**Sem 1**	**Sem. 2**
		EBMA52012		EICN53008		EICM54008	
		EAFR52112 OR HSTH51116 OR HIXH51116	EAFR62212 OR HSTH61216 OR HIXH61216				
EENG51112	EENG61212						
ELSI51012 ESSC51012		ELSI62012 ESSC62012		*ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR51108	SCOR61208			EEAI63016		EEAI74020	
				*EEHI63016 OR EAHI63016 OR ESHI63016 OR EXHI63016 **AND** EAAI63016 OR ESAI63016 OR EXAI63016		EEHI74020 OR EAHI74020 OR ESHI74020 OR EXHI74020 **AND** #EAAI74020 OR ESAI74020 OR EXAI74020	
				ELSI63016		ELSI74020	
				ESSI63016		ESSI74020	
ETPI51008		ETPI62008		EWLI63024		EWLI74040	

*Continue with language electives of the third year.

8. SYLLABI

8.1 UNDERGRADUATE

8.1.1 EDUCATION

Note: a. Non-examination modules do not have a second opportunity such as a supplementary examination.

b. Marks obtained in a module are not transferable to a following year.

ACCOUNTING TEACHING

Module Code	EACT 63020
Name of Module	Accounting Teaching 1: FET Phase
Assessment	Continuous assessment (tests and assignments)–50%; 3-hour(s) examination (100 marks)–50%.
Module Outcome	On completion of this module students will be able to demonstrate fundamental knowledge of the "nature and structure" of Accounting for effective application of teaching and learning strategies and to address basic curriculum concepts of curriculum design on a micro level in a South African context.
Content	Nature and structure of Accounting; quality teaching and learning in Accounting; writing objectives for Accounting; analyse various contexts and address barriers to teaching and learning in Accounting classroom(s); select and apply teaching and learning strategies and media appropriate to the teaching of Accounting.

AFRIKAANS & AFRIKAANS TEACHING

Module Code:	EAFR52112 & EAFR62212
Module name:	Afrikaans language skills for Education 1 & 2
Assessment:	Continuous assessment (tests, assignments and portfolio) – 50%; Examination (3 hours) – 50%
Module outcome:	On completion of these modules students will be expected to: apply the different reading strategies to various text genres; expand on their grammatical and linguistic knowledge and vocabulary; improve on their writing, listening and speaking skills; and successfully read and analyse various texts across four literary genres: poetry, short stories, novels and dramas. Participation in *Afrikaans language skills for Education 2* (EAFR62212) is dependent on the successful completion of *Afrikaans language skills for Education 1* (EAFR51112), the submission of a reading portfolio and the attendence to a number of workshops offered before the commencement of EAFR62212. Entrance to *Intermediate Phase Afrikaans Home Language Teaching* (EAHI63016) is dependent on the successful completion of both modules.
Content:	Building blocks of language; reading skills; academic writing; genres; poetry; short stories; novels; dramas; authentic texts; literary reviews.

Module Code:	EACL 53008
Name of Module:	Afrikaans as a conversational language
Assessment:	Continuous assessment (50%) with an end oral assessment counting 50% of the final mark. No examination.
Module outcome:	On completion of this module the student should be able to critically analyse various learning scenario`s.
Content:	Forms of greetings; vocabulary; tenses; adjectives; adverbs; sentence structure; time; places.

Module Code:	EACL 54008
Name of Module:	Afrikaans as conversational language II
Assessment:	Continuous assessment (50%) with an end oral assessment counting 50% of the final mark. No examination.
Module Outcome:	On completion of this module and after thorough engagement with the course material, students will be able to comprehend spoken Afrikaans, as well as conduct a basic conversation. They will have acquired the relevant knowledge, skills, attitudes and values to demonstrate linguistic and cultural diversity awareness and sensitivity in order to enhance personal relations in day-to-day situations.
Content:	Negation; pronouns; active and passive forms; direct and indirect speech; people, languages and countries; the infinitive; participles; punctuation; prepositions; synonyms and antonyms, idiomatic expressions.
Module Code:	EAHI 63016
Module name:	Teaching of Afrikaans Home Language Intermediate Phase
Assessment:	Continuous assessment (tests, assignments and portfolio) – 50%; Examination (3 hours) – 50%
Module outcome:	On completion of this module students will be able to demonstrate fundamental knowledge and skills in constructing a positive environment for the teaching and learning of Afrikaans Home Language, which is aligned with the underlying nature, structure and philsophies thereof. Creation of a positive environment for the teaching and learning of Afrikaans Home Language
Content:	Nature and structure of Afrikaans; quality in Afrikaans teaching; the Afrikaans curriculum; the

context of the Afrikaans teacher; the identity of an Afrikaans teacher; strategies for teaching Afrikaans; application of media in the Afrikaans classroom.

Module Code:	EAHS 63020
Module name:	Teaching of Afrikaans Home Language Senior Phase
Assessment:	Continuous assessment (tests, assignments and portfolio) – 50%; Examination (3 hours) – 50%
Module outcome	On completion of this module students will be able to demonstrate fundamental knowledge and skills in constructing a positive environment for the teaching and learning of Afrikaans Home Language, which is aligned with the underlying nature, structure and philsophies thereof. Creation of a positive environment for the teaching and learning of Afrikaans Home Language
Content:	Nature and structure of Afrikaans; quality in Afrikaans teaching; the Afrikaans curriculum; the context of the Afrikaans teacher; the identity of an Afrikaans teacher; strategies for teaching Afrikaans; application of media in the Afrikaans classroom.

Module Code:	EAHF 63020
Module name:	Teaching of Afrikaans Home Language FET
Assessment:	Continuous assessment (tests, assignments and portfolio) – 50%; Examination (3 hours) – 50%
Module outcome:	On completion of this module students will be able to demonstrate fundamental knowledge and skills in constructing a positive environment for the teaching and learning of Afrikaans Home Language, which is aligned with the underlying nature, structure and philsophies thereof. Creation of a positive environment for the teaching and learning of Afrikaans Home Language

Content:	Nature and structure of Afrikaans; quality in Afrikaans teaching; the Afrikaans curriculum; the context of the Afrikaans teacher; the identity of an Afrikaans teacher; strategies for teaching Afrikaans; application of media in the Afrikaans classroom.
Module Code:	EALT 53012
Module name:	Afrikaans as medium of learning and teaching
Assessment:	Continuous assessment– 100%; Practical lessons: students present one lesson per language skill All four the language skills must be integrated in the final oral examination. Students must obtain an average of 60% (*big A)* to teach in the medium of Afrikaans. Students who obtain an average of 50% will pass the module, but will receive a *small an* indicating that he/she cannot teach in the medium of Afrikaans.
Module outcome:	On completion of this module, the student will have improved his/her ability to communicate and teach effectively in the medium of Afrikaans by means of the language skills speaking, listening, reading, and writing.
Content:	The focus is on language skills and how to integrate these skills to teach and learn non-language school subjects. This will give the student a theoretical understanding of how to teach in the Afrikaans language as medium. Students will also practice using the Afrikaans language skills in an integrated manner during contact sessions.

BUSINESS STUDIES TEACHING

Module Code: EBST63020

Name of Module: Business Studies Teaching

Assessment: The competence of the students in the Teaching of Business Studies will be assessed by making use of assignments, class tests, semester tests and the examination.

Module outcome: On completion of this module students should possess fundamental knowledge and skills to structure a conducive learning environment for the teaching and learning informed by the nature, structure and underlying philosophies of Business Studies.

Content: Nature and structure of Business Studies; Curriculum design; Aims, objectives; Lesson planning; Context analysis; Barriers to learning; Teaching strategies; Teaching methods; Teaching techniques; and the use of media in teaching Economics.

EDUCATION

Module Code: EEDU61112

Name of Module: The individual in the learning context

Assessment: Continuous assessment (50%) with an end assessment counting 50% of the final mark.

Module outcome: On completion of this module the student should be able to critically challenge his/her own identity in a diverse world by imagining the possibilities that exist for social responsiveness as an agent of change.

Content: Relating to knowledge from various areas and understanding the nature of identity; critique oppressive practices and trouble inequitable social relations; manage diversity in the learning context; and critically examine inclusive education.

Module Code:	EEDU61212
Name of Module:	What it means to educate: Theoretical perspectives and its significance for SA education.
Assessment:	Non examination module. Continuous assessment – 50%, with an end assessment counting 50% of the final mark.
Module outcome:	On completion of this module learners should be able to critically interact with and analyse various theoretical perspectives of what it means to educate.
Content:	The idea of justice and just education; South African education: the current state; Historical theories on what it means to educate; Contemporary theories on what it means to educate.

Module Code:	EEDU72116
Name of Module:	Teaching and learning in Education context
Assessment:	Continuous assessment (tests and assignments) – 50%; 3 hour examination (100 marks) – 50%.
Module outcome:	On completion of this module students will be able to demonstrate comprehensive knowledge on what a curriculum entails in order to interpret and critically analyse various approaches to and perspectives on a curriculum with the focus on the implications of curriculum implementation for effective teaching and learning.
Content:	Defining curriculum; organising of knowledge; development, enactment of a curriculum; teaching approaches; behaviourism; constructivism; learning styles; conceptualizing learning.

Module Code:	EEDU72216
Name of Module:	Human Relationships in Education
Assessment:	Continuous assessment – 50%; 3 hour exam(100 marks) – 50%
Module outcome:	Critically evaluate, initiate, maintain and draw upon human relationships - for social transformation - in an education context
Content:	General issues in Human Relations; Different types of relation-ships within classroom context; Different types of relationships within school community; Different types of relationships between the school and external stakeholders.

Module Code:	EEDU73116
Name of Module:	Education systems in global and national contexts
Assessment:	Continuous assessment (20%) plus two summative assessments which contribute 30% and 50% respectively to the final mark. No examination.
Module outcome:	On completion of this module, the student should be able to critically evaluate international and national education systems and be able to examine the policy framework within which South African education system operates.
Content:	Essence and nature of Comparative Education; general nature of education systems; Specific education systems; SA Constitution; Sa Education legislation; Education policies.

Module Code:	EEDU73216
Name of Module:	Instructional Leadership and Classroom Management in Education context.
Assessment:	Continuous assessment - 50%; Examination -3 hours (100 marks) - 50%

Module outcome:	On completion of this module students should be able to demonstrate the knowledge and skills as effective classroom managers and innovative instructional leaders that will enhance effective teaching and learning in a teaching and learning situation.
Content:	Value driven schools; situational leadership; instructional leadership; classroom management; management functions; managing the teaching and learning environment; managing learner participation; effective administration and teamwork.
Module Code:	EICN53008
Module Name:	Intermediate Phase School Curriculum 1
Assessment:	This is a non-examination module. Assessment in the module will thus be conducted in the form of continuous assessment that will include group assessment; peer assessment; individual performances and portfolio assessment.
Module outcome:	Upon completion of this module students will establish knowledge and skills in Natural Science and Technology that will enable them to follow a transdisciplinary approach in the teaching of intermediate phase subjects they have enrolled for.
Content:	Conceptualisation of the CAPS document and the identification of related themes from the subject Natural Sciences and Technology; conceptualisation of the content of the related themes within a true life context; development and application of problem solving-; creative thinking- and presentation skills to address the common theme that was identified.

Module Code:	EICS53008
Module Name:	Intermediate Phase School Curriculum 1
Assessment:	This is a non-examination module. Assessment in the module will thus be conducted in the form of continuous assessment that will include group assessment; peer assessment; individual performances and portfolio assessment.
Module outcome:	Upon completion of this module students will establish knowledge and skills in Social Science that will enable them to follow a transdisciplinary approach in the teaching of intermediate phase subjects they have enrolled for.
Content:	Conceptualisation of the CAPS document and the identification of related themes from the subject Social Science; conceptualisation of the content of the related theme within a true life context; development and application of problem solving-; creative thinking- and presentation skills to address the common theme that was identified.

Module Code:	EICM54008
Module Name:	Intermediate Phase School Curriculum 2
Assessment:	This is a non-examination module. Assessment in the module will thus be conducted in the form of continuous assessment that will include group assessment; peer assessment; individual performances and portfolio assessment.
Module outcome:	Upon completion of this module students will establish knowledge and skills in Mathematics that will enable them to follow a transdisciplinary approach in the teaching of intermediate phase subjects they have enrolled for.

Content:	Conceptualisation of the CAPS document and the identification of related themes from the subject Mathematics; conceptualisation of the content of the related theme within a true life context; development and application of problem solving-; creative thinking- and presentation skills to address the common theme that was identified.
Module Code:	EICL54008
Module Name:	Intermediate Phase School Curriculum 2
Assessment:	This is a non-examination module. Assessment in the module will thus be conducted in the form of continuous assessment that will include group assessment; peer assessment; individual performances and portfolio assessment.
Module outcome:	Upon completion of this module students will establish knowledge and skills in Life Skills that will enable them to follow a transdisciplinary approach in the teaching of intermediate phase subjects they have enrolled for.
Content:	Conceptualisation of the CAPS document and the identification of related themes from the subject Life Skills; conceptualisation of the content of the related the006De within a true life context; development and application of problem solving-; creative thinking- and presentation skills to address the common theme that was identified.

ECONOMICS TEACHING

Module Code:	EECT63020
Name of Module:	Economics Teaching
Assessment:	The competence of the students in the Teaching of Economics will be assessed by making use of assignments, class tests, semester tests and the examination.
Module outcome:	On completion of this module students should possess fundamental knowledge and skills to structure a conducive learning environment for the teaching and learning informed by the nature, structure and underlying philosophies of Economics.
Content:	Nature and structure of Economics; Curriculum design; Aims, objectives; Lesson planning; Context analysis; Barriers to learning; Teaching strategies; Teaching methods; Teaching techniques; and the use of media in teaching Economics.

ECONOMIC AND MANAGEMENT SCIENCES TEACHING

Module Code	ETMS 63020
Name of Module	Economic and Management Sciences Teaching 1: FET Phase
Assessment	Continuous assessment (tests and assignments)–50%; 3-hour(s) examination (100 marks) – 50%.
Module Outcome	On completion of this module students will be able to demonstrate fundamental knowledge of the “nature and structure” of Economic and Management Sciences for effective application of teaching and learning strategies and to address basic curriculum concepts of curriculum design on a micro level in a South African context.

Content Nature and structure of Economic and Management Sciences; quality teaching and learning in Economic and Management Sciences; writing objectives for Economic and Management Sciences; analyse various contexts and address barriers to learning in Economic and Management Sciences classroom(s); select and apply teaching and learning strategies and media appropriate to the teaching of Economic and Management Sciences.

ENGLISH & ENGLISH TEACHING

Module Code: EENG51112

Module Name: Language skills for Education 1

Assessment: Continuous assessment (tests and assignments) – 50%; 3 Hour Examination (100 marks) – 50%

Module outcome: Upon completion of this module, students will be expected to:

- demonstrate understanding of morphological and word formation processes in English language;
- explain the rules governing the use of different word classes in the English language and use them to detect errors in pieces of writing;
- explain the sentence formation, sentence types and structures and apply the different criteria that govern the construction of sentences e.g. parallelism; and
- describe the processes for the encoding of meaning in the English language.

Content: This module enriches the student's knowledge of the English language in a progressive manner from the morphological level (word formation), to sentence or syntactic level (analysis and construction of sentences), to the semantic level (encoding of meaning)

Module Code:	EENG61212
Module Name:	Language skills for Education 2
Assessment:	Continuous assessment (tests and assignments) – 50%; 3 Hour Examination (100 marks) – 50%
Module outcome:	Upon completion of this module, students will be expected to: • identify the characteristics of, and construct, different text genres; • discuss and apply the different types of reading and explain how the type of text determines the type of reading employed; • effectively read, analyse and create different types of texts including images, cartoons, newspapers, advertisements etc.
Content:	This module develops the student's knowledge of the English language at the discourse level beyond the sentence level where students manipulates diverse text genres in the form of textual reading, analysis and creation. While working with the texts, the language arts of listening and speaking, reading and viewing, writing and presenting, are infused.

Module Code:	EEHF63020
Module name:	English Teaching 1 (FET Phase)
Assessment:	Continuous assessment (tests and assignments) – 50%; 3 Hour Examination (100 marks) – 50%
Module outcome:	Upon completion of this module, students will be expected to explain the focus and goal of each language skill differentiate levels of language learning in South Africa as indicated in the CAPS document contrast language learning and language acquisition in English discuss the theories that influence English language learning and acquisition apply various approaches in teaching English Language; and evaluate the teaching of English according to how learners learn in the FET Phase

identify the characteristics of quality teaching in English at FET Phase; a “quality” English teacher at FET Phase; and quality learning in a FET English classroom;
structure a conducive learning environment for meaningful or effective learning for English;
explain the aims and objectives of the English curriculum; and distinguish between aims and objectives in relation to the curriculum and assessment policy statement (CAPS) for grades 10, 11 and 12 for the FET Phase for the subject English; analyse the content of the curriculum for English in grades 10, 11 and 12; and evaluate the selected content for English against criteria for selecting content; write objectives on the required cognitive levels of Bloom’s taxonomy for themes in the different grades in the FET Phase for the subject English; discuss the physical, socio-emotional and cognitive environment that lead to effective learning and teaching in a FET English class; and identify possible contextual factors that might play a role in the effective delivery of the planned activities in a FET English classroom; debate the implications of teaching English to FET learners experiencing barriers to learning; and address possible specific barriers to learning as a contextual factor in the FET English classroom.

Content:

This module bridges the gap between general pedagogy (theory) and the disclosure of the English content to the learner (practice). It guides the student in finding answers to the following questions:
What do I teach in English?
Who do I teach in English?
Why am I teaching English?
How can I teach English?
These questions are interconnected and interrelated. In this module four of the components of the curriculum design will be addressed in an integrated manner namely: aims and objectives,

contexts, content for the English and media and teaching strategies. The module was designed in two learning units, namely: the application of effective teaching and learning to guide the process within the current teaching and learning context for English; and secondly to address some of the basic curriculum concepts of curriculum design on micro level.

Module Code: EEHS63020

Module Name: English Teaching 1 (Senior Phase)

Assessment: Continuous assessment (tests and assignments) – 50%; 3 Hour Examination (100 marks) – 50%

Module outcome: Upon completion of this module, students will be expected to:
explain the focus and goal of each language skill; differentiate levels of language learning in South Africa as indicated in the CAPS document; contrast language learning and language acquisition in English; discuss the theories that influence English language learning and acquisition; apply various approaches in teaching English Language; and evaluate the teaching of English according to how learners learn in the SP Phase; identify the characteristics of quality teaching in English at SP Phase; a "quality" English teacher at SP Phase; and quality learning in a SP English classroom; structure a conducive learning environment for meaningful or effective learning for English; explain the aims and objectives of the English curriculum; and distinguish between aims and objectives in relation to the curriculum and assessment policy statement (CAPS) for the SP Phase for the subject English; analyse the content of the curriculum for English Senior Phase; and evaluate the selected content for English against criteria for selecting content; write objectives on the required cognitive levels of Bloom's taxonomy for themes in the different grades

	in the SP Phase for the subject English; discuss the physical, socio-emotional and cognitive environment that lead to effective learning and teaching in a SP English class; and identify possible contextual factors that might play a role in the effective delivery of the planned activities in a SP English classroom; debate the implications of teaching English to SP learners experiencing barriers to learning; and address possible specific barriers to learning as a contextual factor in the SP English classroom.
Content:	This module bridges the gap between general pedagogy (theory) and the disclosure of the English content to the learner (practice). It guides the student in finding answers to the following questions: What do I teach in English? Who do I teach in English? Why am I teaching English? How can I teach English? These questions are interconnected and interrelated. In this module four of the components of the curriculum design will be addressed in an integrated manner namely: aims and objectives, contexts, content for the English and media and teaching strategies. The module was designed in two learning units, namely: the application of effective teaching and learning to guide the process within the current teaching and learning context for English; and secondly to address some of the basic curriculum concepts of curriculum design on micro level.
Module Code:	EEHI63016
Module name:	English Teaching 1 (Intermediate Phase)
Assessment:	Continuous assessment (tests and assignments) – 50%; 3 Hour Examination (100 marks) – 50%
Module outcome:	Upon completion of this module, students will be expected to explain the focus and goal of each language skill; differentiate levels of language learning in South Africa as indicated in

the CAPS document; contrast language learning and language acquisition in English; discuss the theories that influence English language learning and acquisition; apply various approaches in teaching English Language; and evaluate the teaching of English according to how learners learn in the IP Phase; identify the characteristics of quality teaching in English at SP Phase; a "quality" English teacher at SP Phase; and quality learning in a IP English classroom; structure a conducive learning environment for meaningful or effective learning for English; explain the aims and objectives of the English curriculum; and distinguish between aims and objectives in relation to the curriculum and assessment policy statement (CAPS) for the IP Phase for the subject English; analyse the content of the curriculum for English Intermediate Phase; and evaluate the selected content for English against criteria for selecting content; write objectives on the required cognitive levels of Bloom's taxonomy for themes in the different grades in the IP Phase for the subject English; discuss the physical, socio-emotional and cognitive environment that lead to effective learning and teaching in the IP English class; and identify possible contextual factors that might play a role in the effective delivery of the planned activities in the IP English classroom; debate the implications of teaching English to IP learners experiencing barriers to learning; and address possible specific barriers to learning as a contextual factor in the IP English classroom.

Content:

This module bridges the gap between general pedagogy (theory) and the disclosure of the English content to the learner (practice). It guides the student in finding answers to the following questions: What do I teach in English? Who do I teach in English? Why am I teaching English? How can I teach English?
The module focuses on the nature and structure of English Language teaching and learning; and addresses the questions: What is language? How

is language acquisition different from language learning? How do theories and approaches support language learning and teaching in the IP? How are the four Language skills developed in the IP content in South Africa? How is English Language content sequenced in the IP? How are the three language levels in the South African school system reflected in the IP? How is quality teaching and learning achieved in an English Language IP class? How do you integrate contextual factors for effective teaching in the English IP classroom? It then considers the teaching of the six language arts namely; listening and speaking, reading and writing, viewing and representing. It further focuses on the contextual environment in which English Language takes place and the barriers to learning that should be surmounted.

GENERAL PEDAGOGY

Module Code: EPED61212

Name of Module: Managing the curriculum

Assessment: 3 hour end-examination; 100 marks; continuous assessment that includes various assessment instruments, class test, semester test, assignments.

Module outcome: On completion of this module students will possess fundamental knowledge and skills to manage the implemented curriculum that will enable them to apply the foundations for quality teaching and effective learning in diverse contexts.

Content: Aspects of quality teaching and learning and a conducive learning environment within a constructivist context is addressed; Objectives and context as elements of curriculum design within diverse South African contexts; development of the learner with specific reference to the cognitive, social cognitive and psychosocial aspects.

Module code:	EPED62112
Name of Module:	Inclusive teaching and learning.
Assessment:	3 hour end examination; 100 marks; continuous assessment that includes various assessment instruments, class test, semester test, assignments, reflections to relate theory and practice.
Module outcome:	On completion of this module students should be able to establish the knowledge and skills to identify the foundations of barriers to learning that will enable them to address these barriers in an inclusive education classroom context.
Content:	Aspects of inclusiveness was debated; issues that give rise to severe barriers and the provision of quality education; issues such as social economic factors; learning support; health impairment; addressing giftedness

Module code:	EPED62212
Name of module:	Teaching strategies and assessment
Assessment:	2x2 hour examinations; 75 marks each; continuous assessment that includes various assessment instruments, class test, semester test, assignments and authentic assessment relating theory and practice.
Module outcome:	On completion of this module students should possess fundamental knowledge and skills to implement appropriate teaching strategies to ensure quality teaching and learning and the integration of assessment in the teaching and learning context.
Content:	Implementation of a variety of teaching strategies within a constructivist learning environment; elements of classroom assessment; quality assessment practices; approaches to assessment; different questions types.

GEOGRAPHY & GEOGRAPHY TEACHING

Module code:	ESSC62012
Module name:	Social Sciences (Geography)
Assessment:	Five map work practical activities, one Assignment (Presentation) one map work test, two class tests (theory), two semester tests. All these constitute 50% CASS; 3-hour examination at the end of the semester (100 marks) – 50%.
Module outcomes:	Upon completion of this module students will be expected to: demonstrate critical understanding of social sciences (Geography) content by analyzing and applying map-work techniques, discuss weather phenomenon affecting South Africa, discuss population distribution, density, factors affect population growth (birth rate, death rate and migration) in South Africa and the rest of the world, display understanding of geomorphological processes, analyzing the structure of the earth, plate tectonics, earthquakes and impacts, discuss developmental issues and impacts on the environment.
Content:	The nature and scope of Social Sciences (Geography) covers, map work skills, direction, bearing, scales, distance and area calculations, gradient, cross-section, location of places on the map, climatology, synoptic chart interpretation, population studies, geomorphological studies, earth structure, weathering, plate tectonic, earthquakes and volcanism, Developmental issues in LEDCs and in MEDCs and impacts on the environment.

Module name:	Geography Teaching 1
Module code:	EGYT63020
Assessment:	Continuous assessment (tests and assignments) – 50%; 3 hour examination (100 marks) – 50%.
Module outcomes:	Upon completion of this outcome students will be expected to: apply principles of effective teaching and learning to guide their teaching and planning within the current teaching and learning context for Geography in schools in South Africa; demonstrate that they possess fundamental knowledge and comprehension of basic curriculum concepts and curriculum design to apply in specific phases in the GEOGRAPHY; demonstrate that they possess fundamental knowledge and comprehension of curriculum design to analyse the curriculum component "context" or "situation analyses" to accommodate all learners in the GEOGRAPHY classroom; demonstrate that they possess fundamental knowledge and comprehension of curriculum design to select and implement appropriate teaching strategies and media in the GEOGRAPHY classroom
Content:	The nature and scope of school Geography; Towards effective Geography teaching; Learning environments; Teaching the essential facts; Note-taking and note-making; The worksheet: an important teaching tool; Teaching with maps and air photographs; Teaching and learning aids; The outdoor experience.
Module Code:	EGYT74020
Name of Module:	Geography Teaching 2 (FET Phase)
Assessment:	A final end-assessment and continuous assessment activities

Module outcome: Upon completion of this outcome students will be expected to apply diagnostic-, formative, summative, authentic and performance assessment appropriately; demonstrate that you have the knowledge to structure teaching and learning activities; select and apply assessment- methods, instruments and tools appropriately and to understand, identify and apply the principles of quality assessment.

Content: Various forms of assessment, namely: diagnostic-, formative, summative, authentic and performance assessment; Assessment of learning (AoL); Assessment for learning (AfL) and Assessment as learning (AaL); assessment-methods, instruments and tools; principles of quality assessment.

HISTORY & HISTORY TEACHING

Module Code: ESSC51012

Assessment: Five map work practical activities, one Assignment (Presentation) one map work test, two class tests (theory), two semester tests. All these constitute 50% CASS; 3-hour examination at the end of the semester (100 marks) – 50%.

Module outcomes: Upon completion of this module students will be expected to: demonstrate critical understanding of social sciences (Geography) content by analyzing and applying map-work techniques, discuss weather phenomenon affecting South Africa, discuss population distribution, density, factors affect population growth (birth rate, death rate and migration) in South Africa and the rest of the world, display understanding of geomorphological processes, analyzing the structure of the earth, plate tectonics, earthquakes and impacts, discuss developmental issues and impacts on the environment.

Content:	The nature and scope of Social Sciences (Geography) covers, map work skills, direction, bearing, scales, distance and area calculations, gradient, cross-section, location of places on the map, climatology, synoptic chart interpretation, population studies, geomorphological studies, earth structure, weathering, plate tectonic, earthquakes and volcanism, Developmental issues in LEDCs and in MEDCs and impacts on the environment.
Module Code:	EHIT63020
Module name:	History Teaching 1 (FET phase)
Assessment:	50 % CASS + 50% Examination
Module outcome:	Upon completion of this outcome students will be expected to: apply principles of effective teaching and learning to guide their teaching and planning, demonstrate that they possess fundamental knowledge and comprehension of curriculum design to analyse curriculum components and demonstrate fundamental knowledge to select and implement appropriate teaching strategies and media in in the History classroom in schools;
Content:	The definition of History and its impact on teaching and learning, Inquiry and knowledge construction in history teaching, CAPS, skills-based teaching, sources and resources in History, Teaching approaches applicable to history teaching.
Module Code:	EHIT 74020
Module Name:	History Teaching 2 (FET Phase)
Assessment:	A final end-assessment and continuous assessment activities

Module outcome: Upon completion of this outcome students will be expected to apply diagnostic-, formative, summative, authentic and performance assessment appropriately; demonstrate that you have the knowledge to structure teaching and learning activities; select and apply assessment- methods, instruments and tools appropriately and to understand, identify and apply the principles of quality assessment.

Content: Various forms of assessment in subject, namely: diagnostic-, formative, summative, authentic and performance assessment; Assessment of learning (AoL); Assessment for learning (AfL) and Assessment as learning (AaL); assessment-methods, instruments and tools; principles of quality assessment.

LIFE SCIENCES TEACHING

Module Code: ELST63020

Name of Module: Life Sciences Teaching 1: FET Phase

Assessment: Continuous assessment (tests and assignments) – 50%; 3 hour examination (100 marks) – 50%.

Module outcome: On completion of this module students will be able to demonstrate fundamental knowledge of the "nature and structure" of Life Sciences for effective application of teaching and learning strategies and to address basic curriculum concepts of curriculum design on a micro level in a South African context.

Content: Nature and structure of Life Sciences; quality teaching and learning in Life Sciences; writing objectives for the Life Sciences; addressing various contexts in the Life Sciences classroom; selecting and applying effective teaching strategies and media to inform the teaching of Life Sciences.

Module Code:	ELST74020
Name of Module:	Life Sciences Teaching
Assessment:	A final end-assessment and continuous assessment activities
Module Outcome:	On completion of this module students will demonstrate within an authentic learning environment that they are able to act as an assessor for the Life Sciences.
Content:	The following aspects will be addressed: dedicated operational forms of assessment that includes diagnostic, formative, summative and authentic assessment; assessment methodologies within an authentic Life Sciences classroom context that includes variation of assessment methods, assessment instruments and assessment tools to assess learners in an informal and or a formal way; evaluation of an assessment practice to determine if marks obtained are reliable, valid and fair before a judgement is made.

LIFE SKILLS & LIFE SKILLS TEACHING

Module Code:	ELST51112
Name of Module:	Lifelong learning skills for teachers
Assessment:	Continuous assessment (50%) and an integrated end assessment (50%)
Module outcome:	On completion of this module students will be able to demonstrate knowledge, skills and attitudes that will not only enhance the likelihood of success in their post-schooling study, but last throughout their career and well into the world of work.
Content:	Lifelong learning; know the self; manage the self; listening skills; reflection skills; collaboration skills; reading selectively with understanding; academic writing skills; information literate; computer skills.

Module Code:	ELSI61116
Name of Module:	Life Skills 1
Assessment:	Continuous assessments (tests and assignments) – 50% (Fine arts – 25%; Education part of Life Skills – 75%); 3 hour examination (100 marks) – 50%.
Module outcome:	On completion of this module students should have enhanced their knowledge on holistic well-being and be able to evaluate holistic well-being against the seven dimensions of holistic well-being
Content:	Emotional well-being; social well-being; intellectual well-being; physical well-being; environmental well-being; career well-being; spiritual well-being and fine art.

Module Code:	ELSI61216
Name of Module:	Life Skills 2
Assessment:	Continuous assessment (tests and assignments) – 50%; One 3 hour examination (100 marks) – 50%. Final Mark – 100%: 50% - Physical Education; 25% - Music; 25% - Drama.
Module outcome:	On completion of this module students will be able to demonstrate comprehensive knowledge and skills to perform in a range of leisure activities in order to interpret and critically analyse appropriate healthy lifestyle management programmes incorporating the elements of physical activity, nutrition, music and drama.
Content:	Movement and fitness activities; Activity vs. Inactivity; Physical activity; Movement; Developmental games; Indigenous Games; Rhythmic movement; Track and field athletics; Basic warming up and cooling down; Fundamental athletic skills; Specific skills; Basic nutrition and wellbeing; Sports injury prevention and –treatment

Module Code: ELST63016

Name of Module: Life Skills Teaching 1

Assessment: Continuous assessment (tests and assignments) –50%; 3-hour examination (100 marks) – 50%.

Module outcome: On completion of this module, students should be able to apply the appropriate knowledge and skills to guide their planning and teaching within the current teaching and learning context for Life Skills in schools in South Africa. Students should be able to demonstrate a fundamental knowledge and understanding of basic curriculum concepts and curriculum design in the intermediate phase for Life Skills.

Content: Nature and structure of Life Skills; quality teaching and learning in Life Skills; writing objectives for Life Skills; analyse various contexts and address barriers to learning in the Life Skills classroom; select and apply teaching and learning strategies and media appropriate to the teaching of Life Skills.

MATHEMATICS & MATHEMATICS TEACHING

Module code: EBMA52012

Name of module: Basic Mathematics

Assessment: Continuous assessment - 50%; Examination (100 marks) – 50%

Module outcome: On completion of this module the student should have gained the necessary knowledge, skills and competencies in basic Mathematics that will enable them to have a holistic view on the integration of Mathematics with other subjects.

Content: Number systems and basic number and calculator skills; Solving equations; Geometric transformations.

Module code:	EMTH61116
Name of module:	Pre-Calculus 1
Assessment:	Continuous assessment – 50%; 3-hour examination – 50%
Module outcome:	On completion of this module the student should have gained the necessary knowledge, skills and competencies to allow them to interact with Mathematics at a higher cognitive level and to promote a level of confidence in their ability to teach Intermediate Phase Mathematics by their engagement in much more complex mathematical procedures and problem solving.
Content:	Number Systems, Sequences and Series, Simple and Compound Interest, Ratio and Proportion, Exponential Laws and Logarithmic laws, Graphs, Factorisation of algebraic expressions, Principals of Trigonometry and Geometry.

Module code:	EMTH61216
Name of module:	Pre-Calculus 2
Assessment:	Continuous assessment – 50%; 3-hour examination – 50%
Module outcome:	On completion of this module the student should have gained the necessary knowledge, skills and competencies to interact with mathematics at a higher cognitive level and to promote a level of confidence in their ability to do mathematics, especially mathematics in context.
Content:	Functions, Trigonometric identities, Limits and continuity, Basic Statistics, Elementary Probability.

Module Code:	EMTI63016
Name of module:	Mathematics Teaching I (Intermediate Phase)
Assessment:	Continuous assessment – 50%; 3 hour examination – 50%
Module outcome:	On completion of this module students should possess fundamental knowledge and skills to structure a conducive learning environment for the teaching and learning of Mathematics informed by the nature, structure and underlying philosophies of the subject.
Content:	The current teaching and learning context for Mathematics in schools in South Africa; The basic curriculum concepts and curriculum design on micro level in the Intermediate phase for Mathematics; Using curriculum design to analyse the curriculum content of Mathematics and write objectives for the different grades in the Intermediate phase in Mathematics; Using the curriculum component "context" or "situation analyses" to accommodate all learners in the Mathematics classroom; The use of appropriate teaching strategies and media to inform the teaching and learning in the Mathematics classroom.

Module code:	EMST63020
Name of module:	Mathematics Teaching I (Senior Phase)
Assessment:	Assessment in this module will be addressed in terms of an integrated approach to assessment that entails interpreting and communicating knowledge from diverse aspects of the curriculum in such a way that that your competence can be assessed from a synoptic perspective. After completion of the module, a formal examination (50%: 100 marks) will be written at the *year-end examination* to determine whether you have met the expectations set for each learning unit.

Module outcome:	On completion of this module students should possess fundamental knowledge and skills to structure a conducive learning environment for the teaching and learning of Mathematics informed by the nature, structure and underlying philosophies of the subject
Content:	The current teaching and learning context for Mathematics in schools in South Africa; The basic curriculum concepts and curriculum design on micro level in the FET/SENIOR phase for Mathematics; Using curriculum design to analyse the curriculum content of Mathematics and write objectives for the different grades in the FET/SENIOR phase in the Mathematics; Using the curriculum component "context" or "situation analyses" to accommodate all learners in the Mathematics classroom; The use of appropriate teaching strategies and media to inform the teaching and learning in the Mathematics classroom.
Module Code:	EMST74020
Name of Module:	Mathematics Teaching 2 (Senior Phase)
Assessment:	A final end-assessment and continuous assessment activities
Module Outcome:	On completion of this module students should possess the necessary knowledge and skills to apply assessment in an integrated manner over diverse authentic assessment opportunities in such a way that their applied competencies can be assessed using Product-oriented and Process-oriented approaches within the context of Performance Based Assessment. The student will experience different roles associated with the assessment opportunities in terms of the operational purposes that will serve specific forms of assessment: an examiner, an assessor, a moderator, a data-capturer, an analyser,

a diagnostician and a reflector for purposes of feedback on performances and achievements.

Content: The forms of assessment and its operational purposes for Senior Phase Mathematics. The design and use of authentic assessment tasks that will relate mathematical knowledge and skills to real-life situations in both summative and formative assessment. Diagnostic and baseline testing. The use of norm and criterion referenced assessment. Apply the different components of the assessment methodology (methods, instruments and tools) in an integrated manner for different assessment opportunities. Investigate constructive alignment in terms of the construction of knowledge and the synchronisation and the alignment of teaching, learning and assessment activities. Measure and analyse the quality of the assessment opportunities in terms of selected taxonomies and the principles for quality assessment. Examine *Assessment and Learning* in terms of its operational purposes, intended outcomes and its applications to Senior Phase Mathematics. Recording and reporting of School Based Assessment data using South African-School Administration and Management System (SA-SAMS).

Module code: EMLT63020

Name of module: Mathematics Literacy Teaching I (FET Phase)

Assessment: Assessment in this module will be addressed in terms of an integrated approach to assessment that entails interpreting and communicating knowledge from diverse aspects of the curriculum in such a way that that your competence can be assessed from a teaching and learning perspective. After completion of the module, a formal examination will be written at the year-end examination to determine whether you have met the expectations set for each learning unit.

Module outcome:	On completion of this module students should possess fundamental knowledge and skills to structure a conducive learning environment for the teaching and learning of Mathematics informed by the nature, structure and underlying philosophies of the subject.
Content:	The current teaching and learning context for Mathematics Literacy in schools in South Africa. The basic curriculum concepts and curriculum design on micro level in the FET phase for Mathematics Literacy. Using curriculum design to analyse the curriculum content of Mathematics Literacy and write objectives for the different grades in the FET phase of Mathematics Literacy. Using the curriculum component "context" or "situation analyses" to accommodate all learners in the Mathematics Literacy classroom. The use of appropriate teaching strategies and media to inform the teaching and learning in the Mathematics Literacy classroom.
Module code:	EMFT63020
Name of module:	Mathematics Teaching I (FET Phase)
Assessment:	Assessment in this module will be addressed in terms of an integrated approach to assessment that entails interpreting and communicating knowledge from diverse aspects of the curriculum in such a way that that your competence can be assessed from a teaching and learning perspective. After completion of the module, a formal examination will be written at the *year-end examinatio*n to determine whether you have met the expectations set for each learning unit.
Module outcome:	On completion of this module students should possess fundamental knowledge and skills to structure a conducive learning environment for the teaching and learning of Mathematics informed by the nature, structure and underlying philosophies of the subject.

Content:	The current teaching and learning context for FET Mathematics in schools in South Africa. The basic curriculum concepts and curriculum design on micro level in the FET phase for Mathematics. Using curriculum design to analyse the curriculum content of Mathematics and write objectives for the different grades in the FET phase in the Mathematics. Using the curriculum component "context" or "situation analyses" to accommodate all learners in the Mathematics classroom. The use of appropriate teaching strategies and media to inform the teaching and learning in the Mathematics classroom.

NATURAL SCIENCE & NATURAL SCIENCE TEACHING

Module code	ENST51012
Module name	Elementary Natural Science and Technology 1
Assessment:	Continuous assessment (tests, practicals and projects) – 50%; 3 hour examination - 50%.
Module outcome	On completion of this module, you will be able to explain various phenomenon occurring in the physical world by analysing and integrating elementary knowledge of Physics, Chemistry, Earth sciences and Astronomy. The application of Technology in these fields will also be discussed.
Content	Physics: Basic mechanics, Electricity and magnetism, Thermodynamics, Waves. Chemistry: Elements, Atoms, Chemical bonds, Chemical reactions, States of matter, Nucleus of the atom. Earth Sciences: Our solar system, formation of the Earth, the water cycle, the rock cycle, tectonic plates.

Module code	ENST62012
Module name	Elementary Natural Science and Technology 2
Assessment	Continuous assessment (tests, practicals and projects) – 50%; 3 hour examination - 50%
Module outcome	On completion of this module, you will be able to integrate the various aspects of nature by analysing the ability of organisms to adapt to living on earth in an ever-changing universe. Life Sciences, Physical Sciences and Earth Sciences are all disciplines of Natural Science that are inter-connected within nature.
Content	Science a way of knowing, Characteristics of living things, Molecules of life, The cell and cell division, Genetics, Specialised cells and organization of specialised cells, Natural and Artificial selection, Evolutionary adaptations for Life on Earth (Plants and Animals), Energy and life.

Module Code:	ENST63020
Name of Module:	Natural Science Teaching 1: Senior Phase
Assessment:	Continuous assessment (tests and assignments) – 50%; 3 hour examination (100 marks) – 50%.
Module outcome:	On completion of this module students will be able to demonstrate fundamental knowledge of the application of effective teaching and learning to guide teaching and learning for Natural Sciences and to address some of the basic curriculum concepts of curriculum design on micro level.
Content:	Nature and structure of Natural Sciences; Quality teaching and learning in Natural Sciences; Writing objectives for the Natural Sciences; Addressing context in the Natural Sciences classroom; Selecting and applying effective teaching strategies and media to inform the teaching of Natural Sciences.

Module Code:	ENST74020
Name of Module:	Natural Sciences Teaching 2: Senior Phase.
Assessment:	A final end-assessment and continuous assessment activities
Module outcome:	On completion of this module students will be able to demonstrate fundamental knowledge of the application of effective assessment in Natural Sciences.
Content:	Reflecting on the content to be assessed; Constructing an assessment plan; Constructing a variety of formative and summative assessment instruments and tools, Evaluating the quality of an assessment task.

Module Code:	ENTI63016
Name of Module:	Natural Sciences and Technology Teaching 1. Intermediate Phase
Assessment:	Continuous assessment (tests and assignments) –50%; 3 hour examination (100 marks) – 50%.
Module outcome:	On completion of this module students will be able to demonstrate fundamental knowledge of the application of effective teaching and learning to guide teaching and learning for Natural Sciences and Technology and to address some of the basic curriculum concepts of curriculum design on micro level.
Content:	Nature and structure of Natural Sciences; Quality teaching and learning in Natural Sciences; Writing objectives for the Natural Sciences; Addressing and applying effective teaching strategies and media to inform the teaching of Natural Sciences.

Module Code: ENTI74020

Name of Module: Natural Science and Technology Teaching 2. Intermediate Phase

Assessment: A final end-assessment and continuous assessment activities

Module outcome: On completion of this module students will be able to demonstrate fundamental knowledge of the application of effective assessment in Natural Sciences and Technology.

Content: Reflecting on the content to be assessed; Constructing an assessment plan; Constructing a variety of formative and summative assessment instruments and tools, Evaluating the quality of an assessment task.

PHYSICAL SCIENCE & PHYSICAL SCIENCE TEACHING

Module Code: EPSC52116

Name of Module: Chemistry.

Assessment: Continuous Assessment- 50%
Examination – 50 %

Module outcome: By the successful completion of the module, students should possess the fundamental knowledge of the development of the atomic model and demonstrate comprehension of basic concepts of atomic structures and the periodic properties, to apply knowledge of electron structure to conceptualise and analyse qualitative aspects different chemical bonding, apply knowledge of atomic mass, chemical symbols, formulas and chemical equations to analyse quantitative aspects of different chemical compounds and reactions, to identify and explain combination reactions, decomposition reactions, replacement reactions and ion-exchange reactions as well as redox reactions, to apply knowledge of

structure, bonding and properties water and solutions of water to explain and predict their properties, to classify basic organic compounds, apply IUPAC system of naming for organic molecules

Content: Atoms and periodic properties
Chemical bonds
Chemical reactions
Water and solutions
Organic chemistry.

Module code: EPSP52216

Module name: Physics

Assessment: Continuous assessment - 50%; Examination – 50%

Module outcome: By the successful completion of the module, students should possess the fundamental knowledge about motion in one dimension and demonstrate comprehension of basic concepts, facts and principles of motion in one dimension and apply it to solve problems, apply knowledge of the basic concepts and principles of different types of forces, Newton's laws of motion, work, energy and power to solve problems, knowledge of magnetic field and properties and able to communicate concepts of magnetism, basic knowledge of charges and static electricity, state the principles, explain and apply them to solve problems, apply knowledge of electric circuits, solve problems, analyze, interpret and communicate information on electric circuits, fundamental knowledge of waves, demonstrate and explain different types of waves, state laws and conceptualize the different wave phenomenon.

Content: Motion in one dimension; Work, power and energy; Magnetism; Electrostatics; Electricity; Waves,

Module Code:	EPST63020
Name of Module:	Physical Science Teaching 1: FET
Assessment:	Continuous assessment (tests and assignments)-50%; 3 hour examination (100 marks)-50%
Module outcome:	Upon completion of this module, students should be able to apply aspects of the nature of Physical sciences as a subject for effective teaching and learning according to the context and demonstrate fundamental knowledge and comprehension of the basic curriculum and design on micro level to plan, present and reflect on a Physical sciences lesson
Content:	Structure and nature of physical sciences; skills for quality teaching and learning- writing objectives, acquiring skills in planning and presenting theoretical and practical lessons, selecting and applying effective teaching strategies and media in addressing the diverse context in a classroom.

Module Code:	EPST74020
Name of Module:	Physical Science Teaching 2: FET
Assessment:	A final end-assessment and continuous assessment activities
Module outcome:	Upon completion of this module, students should be able to apply knowledge and skills as an assessor in Physical sciences in an authentic learning environment
Content:	Application of the dedicated operational forms of assessment- baseline, diagnostic, formative, summative and authentic; making use of assessment methodologies- assessment methods, instruments and tools to assess learners in a formal and informal way and evaluating the quality of an assessment practice for validity, reliability and fairness.

SOCIAL SCIENCE TEACHING

Module code:	ESSI63016
Module name:	Social Science Teaching 1 (Intermediate Phase)
Assessment:	Continuous assessment (tests and assignments) – 50%; 3 Hour Examination (100 marks) – 50%
Module outcome:	Upon completion of this outcome students will be expected to apply principles of effective teaching and learning to guide their teaching and planning, demonstrate that they possess fundamental knowledge and comprehension of curriculum design to analyse curriculum components and demonstrate fundamental knowledge to select and implement appropriate teaching strategies and media in in the Social Science classroom in primary schools in South Africa;
Content:	Nature and structure of the subject, characteristics of quality teaching and learning, learning environments, writing aims and objectives, contextual factors, resources, barriers to learning, difference between method, technique and teaching strategy, appropriate media.

Module Code:	ESSI74020
Name of Module:	Social Science Teaching 2 (Intermediate Phase)
Assessment:	A final end-assessment and continuous assessment activities
Module outcome:	Upon completion of this outcome students will be expected to apply diagnostic-, formative, summative, authentic and performance assessment appropriately; demonstrate that you have the knowledge to structure teaching and learning activities; select and apply assessment- methods, instruments and tools appropriately and to understand, identify and apply the principles of quality assessment

Content:	Various forms of assessment, namely: diagnostic-, formative, summative, authentic and performance assessment; Assessment of learning (AoL); Assessment for learning (AfL) and Assessment as learning (AaL); assessment-methods, instruments and tools; principles of quality assessment.
Module code:	ESTS63020
Module name:	Social Science Teaching 1 (Senior Phase)
Assessment:	Continuous assessment (tests and assignments) – 50%; 3 Hour Examination (100 marks) – 50%.
Module outcome:	Upon completion of this outcome students will be expected to apply principles of effective teaching and learning to guide their teaching and planning, demonstrate that they possess fundamental knowledge and comprehension of curriculum design to analyse curriculum components and demonstrate fundamental knowledge to select and implement appropriate teaching strategies and media in in the Social Science classroom in primary and secondary schools in South Africa;
Content:	Nature and structure of the subject, characteristics of quality teaching and learning, learning environments, writing aims and objectives, contextual factors, resources, barriers to learning, difference between method, technique and teaching strategy, appropriate media.
Module Code:	ESTS74020
Name of Module:	Social Science Teaching 2 (Senior Phase)
Assessment:	A final end-assessment and continuous assessment activities

Module outcome: Upon completion of this outcome students will be expected to apply diagnostic-, formative, summative, authentic and performance assessment appropriately; demonstrate that you have the knowledge to structure teaching and learning activities; select and apply assessment- methods, instruments and tools appropriately and to understand, identify and apply the principles of quality assessment

Content: Various forms of assessment, namely: diagnostic-, formative, summative, authentic and performance assessment; Assessment of learning (AoL); Assessment for learning (AfL) and Assessment as learning (AaL); assessment-methods, instruments and tools; principles of quality assessment.

TECHNOLOGY & TECHNOLOGY TEACHING

Module Code: ETEC62116

Name of module: Technology

Assessment: Continuous assessment - 50%; 3 hour theory examination – 50%.

Module Outcomes: On completion of this module, the student should be able to contribute towards technological literacy by: Developing and applying specific design skills to solve practical and technological problems using the CDIO (Conceive, Design, Implement, Operate) framework; Understanding the concepts and knowledge used in Technology and use them responsibly and purposefully; Appreciating the interaction between people's values and attitudes, technology, society and the environment.

Content: Processing: Engineering materials, Textiles and Food Processing; Ergonomics; Structures; Graphical Communication

Module Code:	ETEC 62216
Name of module:	Technology
Assessment:	Continuous assessment (tests, assignments and projects) – 50%; 3 hour theory examination – 50%.
Module Outcomes:	On completion of this module, the student should be able to contribute towards technological literacy by: Developing and applying specific design skills to solve practical and technological problems using the CDIO (Conceive, Design, Implement, Operate) framework; Understanding the concepts and knowledge used in Technology and use them responsibly and purposefully; Appreciating the interaction between people's values and attitudes, technology, society and the environment.
Content:	Mechanical Systems and Control; Electrical Systems and Control; Textiles; Food Processing; Graphical Communication

Module Code:	ETGT 63020
Name of Module:	Technology Teaching 1
Assessment:	Continuous assessment (tests, assignments and projects) – 50%; 3 hour examination (100 marks) – 50%.
Module Outcomes:	On completion of this module students should possess fundamental knowledge and skills to structure a conducive learning environment for the teaching and learning of Technology informed by the nature, structure and underlying philosophies of the subject.
Content:	Effective teaching and learning of Technology; Curriculum concepts and curriculum design; Contextual Analysis and Instructional Media in Technology.

Module code:	ETGT 74020
Name of module:	Technology Teaching 2
Assessment:	A final end-assessment and continuous assessment activities
Module outcomes:	On completion of this module students should be able to apply and measure the effectiveness of appropriate assessment instruments in Technology Education.
Content:	Nature/Methodology of Assessment in Technology; Types of Assessment in Technology; Assessment Planning and Constructive Alignment in Technology; Assessment Instruments in Technology; Measurement of Assessment in Technology

SETSWANA & SETSWANA TEACHING

Module Code:	ETCL53008
Name of Module:	Puo-Tlhaeletsano ya Setswana (Setswana Conversational Language)
Assessment:	Continuous Assessment (50%) with an end oral assessment counting 50% of the final mark. No examination.
Module Outcome:	At the end of this module and after thorough engagement with the course material, a student will be to demonstrate the basic knowledge of Setswana as a RSA language, use a minimum of 1000 SETSWANA lexical ítems in conversations, apply concordance in SETSWANA, construct meaningful phrases/short sentences and use them in appropriate contexts.
Content:	Forms of greetings, vocabulary, sentence structures, tense, negation of sentences.

Module Code:	ETCL54008
Name of Module:	Puo-Tlhaeletsano ya Setswana (Setswana Conversational Language)
Assessment:	Continuous Assessment (50%) with an end oral assessment counting 50% of the final mark. No examination.
Module Outcome:	At the end of this module and after thorough engagement with the course material, a student will be to demonstrate the basic language proficiency of Setswana by satisfactorily mastering the listening, speaking, Reading and writing skills and use Setswana in different contexts in and out of school.
Content:	Read stories in Setswana in appropriate intonation and tone, ask questions / make requests / give instructions in class and at extra-mural activities in Setswana, forms and use loan words in Setswana.

Module Code:	ESHI63016
Name of Module:	Teaching of Setswana 1 – Intermediate Phase
Assessment:	Continuous assessment (tests and assignments 50%); Examination 50%.
Module Outcome:	On completion of this module students will possess fundamental knowledge of teaching and learning of Setswana in the Senior Phase (SP) informed by the nature, structure, underlying philosophies, theories, strategies and approaches of the subject and the way they influence how it is taught and conceptualized.
Content:	What is Language, language skills and its Levels in the South African School system; Theories of Language acquisition and Language learning; Approaches and Strategies that support Language learning and teaching; Contextual factors, Barriers and Inclusiveness to language learning and teaching

Setswana; Characteristics of quality learning and teaching in the Senior Phase; Aims, objectives and design of the SP language curriculum; multiple intelligencies of language learning and types of media suitable for language teaching in the Senior Phase. **Medium of Instruction:** Setswana

Module Code:	ESHS63020
Name of Module:	Teaching of Setswana 1 – Senior Phase
Assessment:	Continuous assessment (tests and assignments 50%); Examination 50%.
Module Outcome:	On completion of this module students will possess fundamental knowledge of teaching and learning of Setswana in the Senior Phase (SP) informed by the nature, structure, underlying philosophies, theories, strategies and approaches of the subject and the way they influence how it is taught and conceptualized.
Content:	What is Language, language skills and its Levels in the South African School system; Theories of Language acquisition and Language learning; Approaches and Strategies that support Language learning and teaching; Contextual factors, Barriers and Inclusiveness to language learning and teaching Setswana; Characteristics of quality learning and teaching in the Senior Phase; Aims, objectives and design of the SP language curriculum; multiple intelligencies of language learning and types of media suitable for language teaching in the Senior Phase. **Medium of Instruction:** Setswana

Module Code:	ESHF63020
Name of Module:	Teaching of Setswana 1 – FET Phase
Assessment:	Continuous assessment (tests and assignments 50%); Examination 50%.

Module Outcome: On completion of this module students will possess fundamental knowledge of teaching and learning of Setswana in the FET Phase informed by the nature, structure, underlying philosophies, theories, strategies and approaches of the subject and the way they influence how it is taught and conceptualized.

Content: What is Language, language skills and its Levels in the South African School system; Theories of Language acquisition and Language learning; Approaches and Strategies that support Language learning and teaching; Contextual factors, Barriers and Inclusiveness to language learning and teaching Setswana; Characteristics of quality learning and teaching in the FET Phase; Aims, objectives and design of the FET language curriculum; multiple intelligences of language learning and types of media suitable for language teaching in the FET Phase. **Medium of Instruction:** Setswana.

ISIXHOSA & ISIXHOSA TEACHING

Module Code: EXHI63016

Name of Module: Ukufundiswa KwesiXhosa Ulwimi Lweenkobe: Isigaba Esiphakathi (Teaching of IsiXhosa Home Language: Intermediate Phase).

Assessment: Continuous Assessment (50% of tests and assignments) with an end of year examination counting 50% of the final mark.

Module Outcome: After completion of the module, a formal examination will be written at the year-end examination to that will cover various aspects of the isiXhosa teaching work done during the two semesters. A B.Ed student will be expected to be able to evaluate and link language teaching theories with the work that happens in the isiXhosa classroom. It will also be expected of the student to use various teaching strategies guided by the context of the learning environment.

Content:	The module consists of various areas aspects such as Language skills, language levels, language learning vs language acquisition, theories of language learning, approaches to isiXhosa language & literature teaching, aims and objectives of the isiXhosa Language curriculum, understanding inclusive education in Language teaching, language policies, home language based education/ bilingualism and multilingualism/ translanguaging in the classroom for effective learning.
Module Code:	EXCL53008
Name of Module:	IsiXhosa Ulwimi Lokuncokola (IsiXhosa Conversational Language)
Assessment:	Continuous Assessment (50%) with an end oral assessment counting 50% of the final mark. No examination.
Module Outcome:	At the end of this module the student will be expected to show an ability to effectively communicate in isiXhosa, especially in the classroom.
Content:	Listening, talking, reading, singing and writing in isiXhosa.
Module Code:	EXCL54008
Name of Module:	IsiXhosa Ulwimi Lokuncokola (IsiXhosa Conversational Language)
Assessment:	Continuous Assessment (50%) with an end oral assessment counting 50% of the final mark. No examination.
Module Outcome:	At the end of this module the student will be expected to show an ability to effectively communicate in isiXhosa, especially in the classroom. Student should be able to use the isiXhosa correct tone.

Content:	Listening, talking, reading, writing, singing and reciting poetry in isiXhosa, preparing and delivering lessons in isiXhosa.

8.1.2 ECONOMIC MANAGEMENT SCIENCES

Modules in the Economic and Management Sciences for which B.Ed. students can enrol for according to their chosen curriculum.

ACCOUNTING

Module Code:	MACC51116
Name of Module:	Accounting 1A
Assessment:	Continuous assessment – 50%; Examination – 50%
Module outcome:	On completion of this module students should be able to understand and apply the fundamental concepts and principles of accounting.
Content:	The nature and function of Accounting; The double entry system; The Accounting process

Module Code:	MACC61216
Name of Module:	Accounting 1B
Assessment:	Continuous assessment – 50%; Examination – 50%
Module outcome:	On completion of this module students should be able to classify and interpret financial data for a business.
Content:	Accounting for inventory; Trade payables and receivables; Accounting for property, plant and equipment; Companies; Statement of cash flows.

Module Code:	MACC62116
Name of Module:	Accounting 2 A
Assessment:	Continuous assessment – 50%; Examination – 50%
Module outcome:	After completing this module, students should be able to understand IFRS for SMEs including companies Act, develop of accounting policies for transactions using only CFSME and analyse transaction flow.
Content:	The scope of IFRS for SMEs including companies Act; Development of accounting policies for transactions using only CFSME; Analysis of transaction flow; Cost allocation methods

Module Code:	MACC62216
Name of Module:	Accounting 2 B
Assessment:	Continuous assessment – 50%; Examination – 50%
Module outcome:	At the end of this unit, you will be able to explain why there is a need for both financial and managerial accounting. This unit will also introduce you to the manufacturing process and related financial accounting transactions.
Content:	Financial vs Managerial Accounting, Cost Classification and terminology, Overheads and job costing, Cost Volume Profit, Budgetary control, Time value of money, Just-in-time inventory management, Balanced scorecard.

BUSINESS MANAGEMENT

Module Code:	MBMT51116
Name of Module:	Business Management
Assessment:	Continuous assessment – 50%; Examination – 50%
Module outcome:	On completion of this module students should have gained an understanding of the fundamental principles and theories of business management.

Content:	Introduction of Business Management; Evolution of Management Theory; Management environment; The Management Process.
Module Code:	MBMT61216
Name of Module:	Business Management
Assessment:	Continuous assessment – 50%; Examination – 50%
Module outcome:	On completion of this module students should be able to apply the fundamental principles, theories, types and functions of business management in several scenarios of a business organisation and organisational structures.
Content:	What is Management?; Management Activities organisation; Management Structures; Marketing Management; Financial Management; Human Resource Management; Opera
Module Code:	MBMT62116
Name of Module:	BUSINESS MANAGEMENT 2 A
Assessment:	Continuous assessment – 50%; Examination – 50%
Module outcome:	Students would be able to demonstrate understand the principles of business management and how they apply in organisational context. Also, at the end of the course, students would have developed critical thinking abilities to be able to reflect on the core primary and secondary functions of management.
Content:	Major themes include: The nature of management; managing in a changing environment; planning, organizing, leading and control in organisational context Specific commercial contract; the effect of relevant provisions in: Consumer Protection Act; Electronic Communications and Transactions Act; National Credit Act; Forms of Business Undertakings.

Module Code:	MBMT62216
Name of Module:	BUSINESS MANAGEMENT 2 B
Assessment:	Continuous assessment – 50%; Examination – 50%
Module outcome:	At the end of this course, students would be able do the following: • Compile a business plan for a business. • Co-ordination of the business functions through tactical management practices an understanding the interrelationship of all the business functions. • Developing ways of thinking for evaluating and applying a variety of concepts and techniques in managerial decision-making situations. • Understand and analyse the nature of managerial work and the determining factors of managerial success.
Content:	Major themes include: Developing a business plan; integration and co-ordination of all the functions in a wholesale / retail business; Ethics, corporate social responsibility and corporate governance; Challenges for management.

ECONOMICS

Module Code:	MECO51116
Name of Module:	Economics 1A
Assessment:	Continuous assessment – 50%; Examination – 50%
Module outcome:	On completion of this module students should be able to understand and apply the fundamental principles and theories of microeconomics.
Content:	Introduction to Microeconomics; Demand, supply, elasticity and market equilibrium; Perfect competition; Imperfect competition and monopoly

Module Code:	MECO61216
Name of Module:	Economics 1B
Assessment:	Continuous assessment – 50%; Examination – 50%
Module outcome:	On completion of this module students should be able to understand and apply the fundamental principles and theories of macroeconomics.
Content:	Introduction to Macroeconomics; Macroeconomics variables; Monetary sector; Inflation; Unemployment.

Module Code:	MECO21116
Name of Module:	ECONOMICS 2 A
Assessment:	Continuous assessment – 50%; Examination – 50%
Module outcome:	At the end of the gained an understanding of the fundamental principles and theories of macroeconomics. Understand the concepts of output, unemployment, inflation, consumption, and investment to study the dynamics of an economy at a more advanced level, and to gain a better appreciation for how policy shifts and changes in one sector impact on the rest of the macro-economy.
Content:	Introduction to microeconomics, Macroeconomic variables, Monetary Sector, Public Sector, Inflation, Unemployment

Module Code:	MECO62216
Name of Module:	ECONOMICS 2 B
Assessment:	Continuous assessment – 50%; Examination – 50%
Module outcome:	Student should have gained a good understanding of microeconomic principles that will provide the foundation for future work in economics and insight into how economic models can help us think about

important real world phenomena. Topics include supply and demand interaction, utility demand maximization, elasticity, perfect competition, and game theory.

Content: Trade and externalities, Producer Theory and Investment, Consumer Theory and Equilibrium, Competition.

8.1.3 HUMANITIES

Modules in the Humanities for which B.Ed. students can enrol for according to their chosen curriculum

AFRIKAANS

Module code: HAFN51116:

Name of module: Inleiding tot die Afrikaanse Taalkunde

Assessment: Continuous Assessment – 50%; Examinations (100 marks) – 50%

Module outcome: Die doel van die module is om die student ‘n blik te gee op die ontstaans- en wordingsgeskiedenis van die Afrikaanse Taalkunde.

Content: Die module ondersoek die oorsprong en wording van Afrikaans binne ‘n Europese en Afrikakonteks. Dit ondersoek verder ook die lang ontwikkelingsproses wat Afrikaans moes ondergaan om as volwaardige kultuurtaal erken te word. Aspekte soos taalverandering en taalvariasie word derhalwe ondersoek. Taal- en spelreëls word bestudeer om goeie en korrekte taalgebruik te verseker. Die bestudering van die beginsels van woordbou, semantiek, morfologie en sintaksis verseker verder dat die student ‘n deeglike grammatiese grondslag van Afrikaans het.

Module code:	HAFN61216
Name of module:	Inleiding tot die Afrikaanse Letterkunde
Assessment:	Continuous Assessment – 50%; Examinations (100 marks) – 50%
Module outcome:	Die doel van hierdie module is om die student ‘n oorsig te gee van die emansipasie van die Afrikaanse letterkunde vanaf die begin van die Eerste Taalbeweging (1875) tot en met die jare sestig van die twintigste eeu.
Content:	Aan die hand van verteenwoordigende tekste wat dateer vanaf die ontstaan van die Eerste Taalbeweging (1875) tot en met die sestigjare van die twintigste eeu word bepaalde prosa-, drama- en poësieteorieë ondersoek. Die student kry die geleentheid om tekste histories en teoreties te bestudeer ter bereiking van bepaalde leeruitkomste.

Module code:	HAFN62116
Name of module:	Afrikaanse Morfologie en Sosiolinguistiek
Assessment:	Continuous Assessment – 50%; Examinations (100 marks) – 50%
Module outcome:	Die doel van hierdie module is tweërlei van aard: in die eerste instansie word die student bekend gestel aan woordgeledings- en woordvormingsprosesse binne die konteks van die Afrikaanse morfologie. In die tweede plek word taal as sosiale en kulturele bousel binne die konteks van die sosiolinguistiek bestudeer.
Content:	Die module bestaan uit twee dele, naamlik morfologie en sosiolinguistiek. In die morfologie word benewens `n historiese oorsig van die morfologie ook woordvormingsprosesse in Afrikaans ondersoek. Fleksie- en afleiding as woordvormingsmiddele

word derhalwe bestudeer. In die sosiolinguistiek word taalvariasie, intertaalteorie asook faktore wat ‘n bydrae lewer tot taalverskeidenheid, bestudeer.

Module code:	HAFN62216
Name of module:	Inleiding tot Nederlands en Nederlandse Letterkunde
Assessment:	Continuous Assessment – 50%; Examinations (100 marks) – 50%
Module outcome:	Aan die hand van verteenwoordigende Nederlandse tekste word die ontstaan en ontwikkeling van die Nederlandse taal- en letterkunde vanaf die vroeë Middeleeue tot en met die negentiende eeu ondersoek. Daar word ook ‘n vergelyking getref tussen Nederlandse en Afrikaanse tekste om sodoende die invloed van eersgenoemde op laasgenoemde te bepaal.
Content:	Die module bestaan uit twee dele. In deel een word Nederlands en die Nederlande bestudeer. Daar word ook `n vergelyking tussen Standaard-Afrikaans en Standaard-Nederlands getref. In deel twee word vergelykings tussen Nederlandse en Afrikaanse tekste getref om sodoende die invloed van eersgenoemde op laasgenoemde te bepaal. Die module bevat ook heelwat tekste aan die hand waarvan bepaalde kulturele aspekte, grammatikale verskynsels en letterkundige beginsels verduidelik sal word.

ENGLISH

Module code:	HENG51116
Name of module:	Reading Literature: An introduction
Assessment:	Continuous Assessment – 50%; Examinations (100 marks) – 50%

Module outcomes:	At the end of this module students should be able to critically analyze literary texts such as the novel, short story, drama and poetry, using the elements of the particular literary genres.
Content:	This module introduces students to the basic elements of fiction, namely plot, character, setting, the point of view, and theme. It focuses primarily on South African literature, African literature and Shakespearean literature. The range of genres the module covers at an introductory level is the novel, short story, drama and poetry. The module introduces the student to the basic skills needed for an understanding and critical analysis of literary texts.
Module code:	HENG61216
Name of module:	Reading Literature, Film and Culture
Assessment:	Continuous Assessment – 50%; Examinations (100 marks) – 50%
Module outcomes:	At the end of this module students will be able to critically read and analyze a wide range of literature by reading closely for detail and nuance, identifying patterns that cut across a range of representational forms, distinguishing and evaluating critical perspectives, situating texts within their historical and ideological contexts, and formulating their arguments and evidence in accurately written and spoken language.
Content:	HENG61216 builds on the material covered in HENG51116 but expands the range of texts analyzed and methods used. Whereas the former module focused specifically on literary texts in the field of English literary studies, HENG51216 draws additionally on models of analysis developed in the fields of cultural studies and film studies. The module comprises three parts namely:

a) Young adult literature and literacy
b) Introduction to Film Studies
c) Ecocriticism in Literature and Culture

Each of these three parts is introductory in nature and aims to introduce students to the basics of much larger fields of study in which they might choose to specialize at later levels. The texts covered are meant to induct students into the exciting field of critical cultural analysis by way of concrete examples from literature, film and everyday life. The module aims at equipping the student with a variety of skills fundamental to the analysis of literature, film and culture. Students will be offered frequent opportunity to practice their interpretative, analytical, reading, writing and oral communication skills both in the form of written assignments and participation in class

Module code: HENG62116

Name of module: English pragmatics; Drama and Poetry in English

Assessment: Continuous Assessment – 50%; Examinations (100 marks) – 50%

Module outcomes: At the end of this module students should be able to critically analyze romantic poetry by identifying the parts that make it up; by describing the mood and tone created by this particular blend of words, images, visual shapes and sound effects, and by commenting on what it reveals about social dynamics. Students should be able to analyze Elizabethan drama and romantic poetry by applying pragmatic aspects such as Text Pragmatics, Discourse analysis and Speech act theory.

Content: HENG62116 seeks to fuse two essential components of English, namely the linguistic and the literary. It introduces the student to the study of English pragmatics and the analysis of meaning in social contexts. It exposes the student to the uses

and effects of language particularly through implied meaning in concrete situations. It covers aspects of Conversational Analysis; Text Pragmatics and Conversational Discourse Analysis; Non-verbal communication; Types of utterances and Speech acts; among others. Meaning is studied within the interactional context. The module continues with the study of the components of the genres of drama and poetry, with a thematic focus and reference to a broader range of texts. In the study and analysis of the dramatic and poetic texts, an attempt is made to apply the pragmatic aspects covered in the first component of the module.

Module code:	HENG62216
Name of module:	Introduction to Linguistics, and Theories of Literature and Criticism
Assessment:	Continuous Assessment – 50%; Examinations (100 marks) – 50%
Module outcomes:	At the end of this module students should be able to critically analyze written and spoken English using the relevant criteria for answering questions such as: 'How can one identify words?', 'What is a word?', 'Can a word be split into smaller segments?', 'How is it possible to identify the basic sounds in any language?' Students should also be able to discuss the major tenets or characteristic features of the major theories of literature and criticism and analyze literary texts from different perspectives.
Content:	Like the first semester module, HENG62216 fuses the linguistic and the literary components of English. In the first component of this module, the student is introduced to English linguistics (the scientific study of human language), particularly at the morphological, syntactic and semantic levels. The other component of the module covers theories of literature and criticism. These are interpretative

tools or lenses, developed over time, that help students to think more deeply and insightfully about the literature that they read.
Each approaches the analysis of literary texts in its own unique ways, which means our understanding of a literary text from one literary perspective will differ radically to our understanding from a different perspective.

HISTORY

Module Code: HHIS51116

Module Name: Introduction to History

Assessment: Continuous assessment – 50%; Examination – 50%

Module outcome: At the end of this module, students should be able to comprehend and apply certain historical concepts as background to evaluating the early history of Kimberley, the Northern Cape Province and 19th Century South Africa in general.

Content: The aim of this module is to introduce students to History as university subject and aspects of late 19th century South African History. The first section of the course will develop the students' ability to better understand and implement various Historical skills and concepts. Learning to think critically and be objective in evaluating facts is an essential part of achieving this objective. The second part of the module focusses on the early history of Kimberley, the Northern Cape Province and 19th Century South Africa in general.

Module Code: HHIS61216

Module Name: Twentieth Century South Africa and Africa up to the Second World War

Assessment: Continuous assessment – 50%; Examination – 50%

Module outcome:	At the end of this module, students should be able to comprehend, adequately evaluate and compare different forms of colonial rule and analyse the growing resistance towards it within the African context
Content:	The aim of this module is to construct awareness among students about nationalism as focal point in the development of Africa and South Africa during the first half of the twentieth century. Learning to evaluate the contrasting principles towards nationalism is integral to understanding the dilemma facing South Africa and the continent during this period in history. Students will be exposed to various forms of colonial rule, imperialist ideas and minority rulings that formed the norm in governance throughout Africa.
Module Code:	HHIS62116
Module Name:	The World in Crisis
Assessment:	Continuous assessment – 50%; Examination – 50%
Module outcome:	At the end of this module, students should be able to deliberate, analyse and assess different global problems the world faced during the twentieth century and to appreciate the cause and effect it had on the global society.
Content:	The aim of this module is to introduce the students to the complex nature of international politics, history and the severity of war. The topics will assist the students to develop a conviction regarding critical thinking, objective reasoning and debating regarding global occurrences, issues and trends. In order to master this, students will have to understand the different ideologies and worldviews of the 20th century world.

Module Code:	HHIS62216
Module Name:	South Africa and Africa after the Second World War
Assessment:	Continuous assessment – 50%; Examination – 50%
Module outcome:	At the end of this module, students should feel comfortable debating issues on apartheid and the resistance against it, as well challenging issues on decolonisation, nationalism and different ideologies in Africa.
Content:	The aim of this module is to challenge the students to comprehending the rapidly changing historical environment of South Africa and Africa after the Second World War. Learning to understand the complex nature of problems facing both the South African and African society respectively is an essential part of achieving this objective. The basic principles of apartheid, nationalism, Pan-Africanism and different ideologies will be addressed in order to evaluate the changing situation caused by changing political scenarios in South Africa and the continent.

ISIXHOSA

Module Code:	HIXH51116
Name of Module:	Introduction to isiXhosa Language
Assessment:	Continuous Assessment (50% of tests and assignments) with an end of year examination counting 50% of the final mark.
Module outcome:	After completion of the module, students will be aware of the history and origin of isiXhosa as well as the changes and developments in the language. Students will be able to understand the importance of terminology development as a strategy to maximise the use of isiXhosa.
Content:	History of isiXhosa as a Nguni language (before the clicks), the influence of English and Afrikaans in isiXhosa (borrowed & loan words), the influence

of isiXhosa in English and Afrikaans (English and Afrikaans words borrowed from isiXhosa), the development of isiXhosa orthography, isiXhosa Human Language technology as well as isiXhosa as an academic language.

Module Code: HIXH51216

Name of Module: Introduction to isiXhosa Oral & Written Literature

Assessment: Continuous Assessment (50% of tests and assignments) with an end of year examination counting 50% of the final mark.

Module Outcome: Students will be able to understand the influence of the missionaries in the writing and pronunciation of isiXhosa, the influence of the missionaries in the publication of isiXhosa literary works as well as the state of isiXhosa literature in the present day due to that influence. Students will also be able to critic and analyse isiXhosa literature. Lastly, students should also know the importance of isiXhosa Literature as a tool to develop/ encourage academic writing.

Content: IsiXhosa as the first African language to be written in South Africa, IsiXhosa literature from Oral Literature to written Literature and from Oral Literature to Technauriture (Analysing, digitizing and technologizing the oral word), early writers in isiXhosa literature as well as an introduction to isiXhosa creative writing.

SETSWANA

Module Code: HSTS51116

Module Name: Introduction to Setswana Linguistics, Spelling and Orthography

Assessment: Continuous assessment – 50%; Examination – 50%

Module outcome: On completion of this module students should be able to demonstrate their knowledge independently and in groups on language activities of their own and

provided in which they will apply their knowledge to aspects of Setswana

Content: This module consists of three interrelated theme / topics which are; the early studies of Setswana; Introduction to Setswana Linguistics and Setswana Spelling and Orthography. Students will engage with the different types of language components; the theories of the origins and properties of language; language as a system of signs; the sounds and the sound patterns of language; the word level and the sentence level of a language; semantics and the pragmatics.

Module Code: HSTS61216

Module Name: Introduction to Setswana literature and Oral traditions

Assessment: Continuous assessment – 50%; Examination – 50%

Module outcome: The aim of this module is to improve the students' abilities of literary analysis.

Content: This course deals with literary theory with respect to Setswana literature. The students are introduced to various literary genres and their related terms whose knowledge will be useful for them in their literature course. This module also introduces the students to the different kinds of oral literature in African Languages with specific focus on Setswana.

Module Code: HSTS62116

Module Name: Sociolinguistics in Setswana

Assessment: Continuous assessment – 50%; Examination – 50%

Module outcome: The aim of this course is to develop the skill to identify how culture and society affect the way language is used and to recognize how language is used in different contexts for different meaning.

Content:	The course seeks to provide insight into the why's and the how's of the way people speak and write. As an interdisciplinary field it links with a diverse of disciplines like linguistics, sociology, anthropology, psychology and education. Analysis of the intricate links between language and society by using the knowledge of sociolinguistic theory, research methods, main concepts and terminology along with developing relevant application skills. Exploration of language change and death, development and standardization, regional and social variation as well as the dependence of language use on a range of social variables such as gender, age, status, etc. Analysis of study materials, publications and participate in discussions.
Module Code:	HSTS62216
Module Name:	Role of Literature in Society
Assessment:	Continuous assessment – 50%; Examination – 50%
Module outcome:	On completion of this module the student should be able to identify and analyse the purpose of the author and realise that the author is the voice of the voiceless in exposing their plight, frustrations, of the society.
Content:	Literature hold an important place in our societies and has the ability to bring about change. Development of the student's critical awareness of how the society's values, struggles and successes are embedded in literature. Development of the skill to analyse the texts (oral, written and audio-visual) in relation to the themes. Students must be able to identify, explain and give an opinion on the theme that the writer portrays in the text and analyse and evaluate how it affects the society. From different literary texts, students will extrapolate the values, beliefs, cultures, etc. that are embedded in those texts and evaluate how they affect the society.

8.1.4 NATURAL AND APPLIED SCIENCES

Modules in the School for Natural and Applied Sciences for which B.Ed students can enrol for according to their chosen curriculum.

BIOLOGY

Module code: NBLG51316

Name of module: Molecular and Cell Biology

Assessment: Continuous assessment - 50%; Examination – 50%

Module outcome: At the end of the module the learner is expected to be able to understand, explore, discuss and analyse: Basic chemistry and organic macromolecules; Basic cell structure and function; Membrane structure and function; The molecular biology of the gene; Mitosis and meiosis; Mendelian patterns of inheritance and Punnet squares ; Photosynthesis; Cellular respiration.

Content: Basic Chemistry, Organic Macromolecules, Cell Structure and Function, Membrane Structure and Function, Molecular Biology of the Gene, Cell cycle, Mitosis & Meiosis, Mendelian Patterns of Inheritance, Photosynthesis, Cellular respiration

Module code: NBLG51216

Name of module: Biological Systems and Diversity

Assessment: Continuous assessment - 50%; Examination – 50%

Module outcome: At the end of the module the learner is expected to be able to understand, explore, discuss and analyse: Basic anatomy of plants; Nutrition and transport of materials in plants; Classification of land plants; Circulation and Cardiovascular System in animals; Nervous and Respiratory Systems in animals; Excretory Systems in animals; Locomotion

	and Support Systems in animals; Theories around the origin and history of life; Darwin, evolution and natural selection; Evolutionary relationships of organisms; Taxonomy and systematics;
Content:	Land plant diversity (Brief introduction to vascular and non-vascular plants), Plant Organisation, Animal Organisation, Origin and History of Life, Darwin and Evolution, Taxonomy, Systematics and Phylogeny

BOTANY

Module code:	NBOT62320
Module name:	Plant adaptations: morphology and ecology of survival
Assessment:	Continuous assessment - 50%; Examination – 50%
Module outcome:	At the end of the module the learner is expected to be able to understand, explore, discuss and analyse: Structure of cell wall, seed and fruits; Morphology of stems, leaves and roots; Floral modifications for sexual reproduction; Pollination syndromes; General ecological principles; Ecological and evolutionary factors affecting plant survival.
Content:	Structure & development of the cell wall; Ergastic substances in plants; Morphology of stems, foliage and roots; morphological modifications for sexual reproduction (flowers, inflorescences and pollinator adaptations); Seed, fruit and their dispersal; fertilization & development of the embryo; Plant life on land; challenges and adaptation to land; biotic and abiotic factors affecting plant evolution; Coevolution of plant with pollinators, herbivores and animal dispersal agents. Vegetation/biomes of southern Africa with a special focus on the Northern Cape.

Module code: NBOT62420

Module name: Whole Plant Physiology

Assessment: Continuous assessment - 50%; Examination – 50%

Module outcome: At the end of the module the learner is expected to be able to understand, explore, discuss and analyse: Plant cells and water, Whole plant water relations. Roots, soils and nutrient uptake; the soil as a nutrient reservoir, Nutrient uptake, Plants and Inorganic nutrients. Harvesting Sunlight, Unlocking the Energy Stored in photo assimilates, Nitrogen assimilation; Regulating growth and development by hormones: auxins, gibberellins, cytokinins; Regulating growth and development by endogenous clocks.

Content: Plant water balance; Plant nutrition; Energy conservation in Photosynthesis; Cellular Respiration; Plant growth and development,

CHEMISTRY

Module code: NCHM51316

Module name: General Chemistry 1A

Assessment: Continuous assessment - 50%; Examination – 50%

Module outcome: This module is an introduction to the basic principles of chemistry which will serve as a foundation for all subsequent chemistry courses. Firstly, metric system, scientific notation, significant figures and basics of the atom and its behavior will be covered. Thereafter the module will focus on chemical properties of matter (i.e. elements and compounds) and the changes and chemical reactions that take place in all types of matter.

Content: Introduction: Matter and measurements; Atoms, molecules and ions; Chemical reactions and reaction stoichiometry; Reactions in aqueous solution; Electronic structure of atoms; Periodic

properties of elements; Basic concepts of chemical bonding; Molecular geometry and Bonding Theories; Chemical Equilibrium; Acid-base equilibrium & aspects of aqueous equilibrium.

Module code:	NCHM51216
Module name:	General Chemistry 1B
Assessment:	Continuous assessment - 50%; Examination – 50%
Module outcome:	This module builds mainly upon the first year physical chemistry module, as well as upon chemical and mathematical concepts/tools covered in other first year modules. It continues to introduce the foundations of Physical Chemistry, which studies the principles that drive properties and behavior of chemical systems at macroscopic and microscopic levels. These systems and applications will be used throughout the course to illustrate fundamental concepts and theories. The module also introduces principles in organic chemistry: functional groups, IUPAC nomenclature and structural formulae, isomers, drawing organic structures, chemical reactions and mechanism.
Content:	Gases; Liquid and Intermolecular Forces; Properties of solutions; Thermochemistry; Chemical thermodynamics; Electrochemistry; Chemical kinetics; Introductory Principles in Organic chemistry.

Module code:	NCHM62310
Module name:	Organic Chemistry II
Assessment:	Continuous assessment - 50%; Examination – 50%
Module outcome:	At the end of the module the student is expected to be able to: Describe, explain and apply in a logical manner the principles, concepts and facts related to stereochemistry; Identify conjugated compounds

and predict the product of their reactions; Give IUPAC names, draw acceptable structures of aromatic compounds, describe aromatic reactions, and distinguish the directing effect of substituent on the benzene ring to synthesize numerous benzene derivatives; Solve organic reaction problems by making use of Sandmeyer reaction; Classify and compare basicity of amines, describe their preparation, reactions and reaction mechanisms; Prepare epoxides and illustrate all reactions of epoxides.

Content: Stereochemistry, Conjugation and Aromaticity; Substitution reactions of aromatic compounds; Carboxylic acids and their derivatives; Amines: Preparation and reactions; Epoxides: Preparation and reactions; Introduction to spectroscopic techniques (IR, UV-Vis and NMR)

Module code: NCHM62510

Module name: Inorganic Chemistry II

Assessment: Continuous assessment - 50%; Examination – 50%

Module outcome The module will introduce theories and concepts that will enable students to understand how electronic properties can influence reactivity, atomic size and other physical and chemical properties an element and its associated compounds. The main focus will be on elements within group 1 to group 8 of the periodic table and first period of transition metals. Furthermore, an introduction to coordination chemistry of transition metals will be covered.

Module content Chemistry of the main-group elements: Atomic size and electron configuration; General properties of the main-group elements; Acid and base theories; Redox-reactions; The transition elements and coordination compounds: Periodic trends and the general properties related to electronic structure; Introduction to coordination chemistry of transition metals.

Module code:	NCHM62410
Module name:	Analytical Chemistry II
Assessment:	Continuous assessment - 50%; Examination – 50%
Module outcome:	This module provides students with knowledge and understanding of the fundamental concepts of analytical chemistry which include analytical measurement, statistical evaluation of data and quantitative analysis. Students accredited with this module should be able to relate theoretical concepts to practical aspects of the module, apply quantitative analysis to generate data and use statistical tools to evaluate the quality of data. Principles of quantitative analytical chemistry such as gravimetric, volumetric and electrochemical methods of analysis, specifically potentiometry and coulometric techniques, are covered. Statistical tools are also employed in the evaluation of data and spectrochemical methods are introduced. Quantitative analysis is demonstrated through experimental work.
Content:	Sampling and sample preparation; Statistical treatment of random errors; Application of statistics to data treatment and evaluation, Gravimetric Analysis; Volumetric Analysis; Electrochemical Methods.

Module code:	NCHM62610
Module name:	Physical Chemistry II
Assessment:	Continuous assessment - 50%; Examination – 50%
Module outcome:	Physical chemistry is the study of the physical principals underpinning the properties and behaviour of chemical systems. These systems range from individual atoms to complex molecules, at many levels of organisation and in many different environments. From a simple gas to the atmosphere

of a planet, from a single molecule to a biological cell, the same principles apply. In this module, you will gain a working knowledge of the principles and applications of physical chemistry that you will be able to employ across all of science fields.

Module Content: Laws of Thermodynamics and applications; Physical properties of pure matter and mixtures; Phase diagrams; Properties of colloids and surface films; Electrolytic Chemistry

GEOGRAPHY

Module code: NGEO51316

Module name: Introduction to Physical Geography

Assessment: Continuous assessment - 50%; Examination – 50%

Module outcome: The module introduces students to a broad range of concepts and approaches in physical geography. The module draws on basic concepts in physical Geography and the functioning of environmental systems. The focus is on integrated, process-related, systems approach to studying the earth and its spatial variability. The module encompasses cartographic theory and the map skills as integral components of enquiry.

Content: Atmosphere-the structure and composition of the atmosphere; Biosphere- ecological concepts pertinent to populations and communities; Lithosphere-broad-scale lithospheric processes; the composition and dynamics of the earth's crustal system.

Module code:	NGEO51416
Module name:	Introduction to Human Geography
Assessment:	Continuous assessment - 50%; Examination – 50%
Module outcome:	The module provides a broad overview of human Geography as a discipline and introduce core concepts used by human geographers, particularly the notion of “space” scale, and the relationships between society’s and space and between people and the natural environment on which it depends for survival. In this regard, understanding population dynamics and related environmental impacts are crucial. The module introduces students to key population concepts and theories and systems models to understanding population changes and related impacts. Critically examining population data and trends, such as migration and mobility is also an important focus. Additionally, the module will examine the linkages between population growth and environmental issues, including climate change. Building sustainable human environments, for ourselves and future generations, is a key challenge in the world today. Sustainability themes interrogate key issues such as the definition and measurement of sustainability, the history of the current environmental cries and society’s responses to it.
Content:	This module examines the relationship of other fields to geography, such as economics, health, tourism and politics; Other elements include: Development geography: quality of life across the world; Urban geography: cities and built-up areas.

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Module code:	NGEO62320
Module name:	Geomorphology
Assessment:	Formative (50%): Tests, Tutorials, Quizzes and/or Assignments. Summative (50%): 1 × 3 h written examination.
Module outcome:	At the end of the module the student is expected to be able to: Examine the history of landform study and the key individuals in the history of geomorphology; Explain the physical processes that produce landforms; Examine a physical landscape and describe why it looks the way it doe; Describe how human settlement and recreation patterns are influenced by landforms.
Content:	Geormorphological principles including balance and transfer equations, and the frequency and magnitude of geomorphological events; Climate, tectonic (geological) processes, and human activity; Topics include: Rock weathering, Mass wasting, Fluvial processes and landforms.

Module code:	NGEO62420
Module name:	Introduction to GIS
Assessment:	Formative (50%): Tests, Tutorials, Quizzes and/or Assignments. Summative (50%): 1 × 3 h written examination.
Module outcome:	At the end of the module the student is expected to be able to: Define geography and GIS; Describe scale, projection, and coordinate systems and explain importance of each in GIS; Differentiate between vector, raster, and object-oriented data structures and explain the appropriate use of each

	of these data structures; Describe various types of GIS data capture; Explain the basics of GIS data storage; Differentiate between attribute analysis and spatial analysis and describe the appropriate use of each type of analysis; Produce effective maps of analytical results which adhere to established cartographic standards; Demonstrate proficiency with GIS software.
Content:	Geographic Information Systems, Science and Mapping; Introduction to GIS; Layers, Scales of measurement, Map design; Inside a GIS; Earth measurements, Coordinate systems and Projections; GIS editing, Geoprocessing and Programming; GIS Data and Analysis.

MATHEMATICS

Module code:	NMAT51316
Module name:	Calculus
Assessment:	Continuous assessment – 50%; Examination - 50%
Module outcome:	The aim of this module is to enable students to demonstrate their skill and understanding with basic calculus by solving problems and by application of the theory.
Content:	Different types of Functions. Continuity at a point and over an interval. Evaluation and application of Limits. Differentiability. Differentiation rules. Differential application to context. Optimisation and modeling. The Anti-derivative. The Fundamental Theorem of Calculus. Integration by substitution. Integration by parts. Integral applications to context.

Module code:	NMAT61416
Module name:	Calculus and Linear Algebra
Assessment:	Continuous assessment – 50%; Examination - 50%
Module outcome:	The aim of this module is to enable students to demonstrate their skill and understanding of Calculus and Linear Algebra. To develop the necessary skills and competencies to solve different systems of equations using a variety of algebraic techniques and the interpretation in terms of graphical representations.
Content:	Integration by trigonometric substitution. Elementary differential equations. Complex numbers. Vector Algebra. Matrix Algebra. System of linear equations: application to context. Gaussian Elimination. Gauss-Jordan method in determining the matrix inverse. Solving a matrix equation. Determinants and its properties. Application of determinants using Cramer's Rule

Module code:	NMAT51516
Name of module:	Calculus
Assessment:	Continuous assessment - 50%; Examination – 50%
Module outcome:	The module blends traditional exercises with more challenging enrichment problems and enables students to develop an understanding of algebraic concepts, algorithms, and procedures while exploring core concepts such as graphing, models and statistics. In this course, students learn to make sense of and solve complex problems, to reason abstractly, and to synthesize multiple mathematical concepts.
Content:	Radian measure; Proofs of the trigonometric identities; The Cartesian-plane; the concept of distance; the triangle inequality; circles in the plane; Line in the plane; parametric and implicit

representations; inequalities. The absolute value function; The concept of a function, domains and ranges of functions; the graph of a function; odd and even functions; one-to-one and onto functions; inverses of functions; composite functions; Inverse trigonometric functions. Polar coordinates and sketching curves specified in polar coordinates. Mathematical induction.
Sigma notation and telescoping series; the factorial function and the Binomial theorem; Conic Sections. Limits and continuity. Differentiation; Applications of differentiation. Hyperbolic functions. Partial derivatives.

Module code: NMAT51416

Name of module: Algebra

Assessment: Continuous assessment - 50%; Examination – 50%

Module outcome: The module blends traditional exercises with more challenging enrichment problems and enables students to develop an understanding of algebraic concepts, algorithms, and procedures while exploring core concepts such as graphing, models and statistics. In this course, students learn to make sense of and solve complex problems, to reason abstractly, and to synthesize multiple mathematical concepts.

Content: Vectors in R2; Addition, subtraction and scalar multiplication of matrices. Products of matrices and its interpretation; the transpose operation; Matrix powers and polynomials; Invertible matrices; Elementary matrices. Construction of inverses. Solution of AX=B for a general matrix A. Determinants and their properties. The adjoint and Cramer's rule. Rank of a matrix; Vectors in R3. Complex numbers. Integration. Transcendental functions. Applications of integration. Integration techniques. Sequences and series. Differential Equations.

Module code	NMAT62320
Module name:	Advanced Calculus
Assessment:	Formative (50%): Tests, Tutorials, Quizzes and/or Assignments. Summative (50%): 1 × 3 h written examination.
Module outline:	At the end of the module the learner is expected to be able to: Perform convergence or divergence tests for sequences and series; Find the limits and partial derivatives for multiple variable functions; Apply derivative concepts to find tangent lines to level curves and to solve optimization problems; Find the optimum points for multivariable functions; Evaluate double and triple integrals for area and volume; Change the order of integration and evaluate double and triple integrals over general regions; Set up integrals in terms of cylindrical and spherical coordinates; Differentiate vector fields; Determine gradient vector fields and find potential functions; Evaluate line integrals directly and by the fundamental theorem.
Module content:	Sequences and Series: Basic terminology and convergence of Sequences. Basic terminology of Series. Partial Derivatives. Limits and continuity. Multiple Integrals. Vector Calculus: Integration in vector fields Line integrals. Vector fields. Work, circulation, and flux. Path independence, potential functions, and conservative fields. Green's theorem. Surface area and surface integrals. Stokes' theorem. Divergence theorem. High Order linear ordinary differential equations, homogeneous and nonhomogeneous equations.

Module code:	NMAT62410
Module name:	Linear Algebra
Assessment:	Formative (50%): Tests, Tutorials, Quizzes and/or Assignments. Summative (50%): 1 × 3 h written examination.
Module outcome:	At the end of the module the learner is expected to be able to: Use basic mathematical proof techniques to prove or disprove certain claims (e.g. prove or disprove whether a given set of objects constitutes a vector space); Find the kernel, range, rank, and nullity of a linear transformation; Calculate eigenvalues and their corresponding eigenspaces; Define an inner product space and state its properties; Use the Gram-Schmidt process to produce an orthonormal basis; Understand the concept of a linear transformation as a mapping from one vector space to another and be able to calculate its matrix representation with respect to standard and nonstandard bases; Determine if a matrix is diagonalizable, and if it is, how to diagonalize it.
Content:	General vector spaces: real vector spaces, subspaces, basis and dimension, row space, column space and null space, rank and nullity, matrix transformations. Eigenvalues and eigenvectors: eigenvalues, eigenvectors, diagonalization, applications to ordinary differential equations. Inner product spaces: inner products, angle and orthogonality in inner product spaces, Gram-Schimdt process. Diagonalization and quadratic forms: orthogonal matrices, orthogonal diagonalization, quadratic forms. Linear transformations: general linear transformations, isomorphism, compositions and inverse transformations.

Module code: NMAT62610

Module name: Mathematical Analysis

Assessment: Formative (50%): Tests, Tutorials, Quizzes and/or Assignments. Summative (50%): 1 × 3 h written examination.

Module outcome: At the end of the module the learner is expected to be able to: Use set notation and quantifiers correctly in mathematical statements and proofs; Formalize first-order properties with formulas of predicate logic; Write propositions in symbolic form; Create truth tables for propositional forms; Write negation of statements; Determine whether a statement is a tautology or a contradiction; Use the methods of proofs to prove statements; Reproduce the formal definitions of predicates and operations on sets (set comprehension, subset, intersection, union, complement, set difference, empty set, power set, Cartesian product); Perform set operations; Find products of sets; Describe fundamental properties of the real numbers that lead to the formal development of real analysis; Demonstrate an understanding of limits and how they are used in sequences and series; Present an overview of the basic properties of metric spaces; Construct rigorous mathematical proofs of basic results in real analysis; Appreciate how abstract ideas and rigorous methods in mathematical analysis can be applied to important practical problems.

Content: Sets and relations: set description, set axioms, set operations, set products via ordered pairs: relations, relation types (reflexive, symmetric, anti-symmetric, transitive), equivalence relations. Logic and proofs: propositions and connectives, conditionals and biconditionals, quantifiers, basic proof methods and proofs involving quantifiers. Mathematical induction. Number systems: ordered fields, rational, real and complex numbers, the Archimedean property, supremum, infimum and completeness. Sequences and series of real numbers: limits of sequences, Bolzano-Weierstrass theorem, Cauchy sequences, liminf, limsup, limits of series, convergence tests, absolute and conditional convergence, power series. Metric spaces: convergence, completeness, completion, open sets, compact sets, Heine Borel theorem, connected sets.

PHYSICS

Module code: NPHY51316

Module name: Mechanics, Thermal Physics and Waves

Assessment: Continuous assessment - 50%; Examination – 50%

Module outcome: At the end of the module the student is expected to be able to: Define, formulate, discuss and explain the fundamental physical quantities, basic principles and laws encountered in elementary mechanics, fluid mechanics, heat and temperature and waves, Derive equations in, explain, interpret and evaluate elementary theoretical models in basic mechanics, fluid mechanics, heat and temperature and waves, Integrate basic concepts and theories to solve elementary mechanics, fluid mechanics, heat and temperature and waves, Apply elementary mechanics, fluid mechanics, heat and temperature and waves concepts in everyday life.

Content:	Mechanics: Scalars, vectors kinematics, particle dynamics, energy, work, momentum, equilibrium of rigid bodies. Waves: transverse, longitudinal, travelling, standing, beats, Doppler effect. Thermal Physics: temperature, heat, calorimetry, thermal expansion, conduction, radiation, ideal gases, thermodynamics.
Module code:	NPHY51216
Module name:	ELECTROMAGNETISM, MODERN PHYSICS AND OPTICS
Assessment:	Continuous assessment - 50%; Examination – 50%
Module outcome:	At the end of the module the student is expected to be able to: Formulate and explain the basic definitions of physical quantities, the basic principles and the laws encountered in elementary electricity and magnetism, optics and special relativity, Discuss the basic concepts of electric field as a vector, forces on charges, scalar potential function, and potential energy, Determine the electric field from a distribution of charges, and/or a given potential gradient.
Content:	Electricity and Magnetism: charge, Coulomb's law, electric field, Gauss' law, electric potential, capacitance, resistance, Ohm's law, DC circuits, Kirchhoff's rules, ammeters, voltmeters, Ampère's law, Faraday's law, inductance, Electromagnetism. Geometrical Optics: reflection, refraction, thin lenses, mirrors, prisms, optical instruments. Physical Optics: interference, diffraction, polarization. Modern physics: Special relativity, Particles and Waves, Nature of the atom..

Module code:	NPHY62310
Module name:	Classical Mechanics
Assessment:	Continuous assessment - 50%; Examination – 50%
Module outcome:	In this module we will encounter more advanced techniques and solve a wider variety of problems. For example, we will encounter a reformulation of classical mechanics by Lagrange (and Hamilton) which makes it easier to deal with complicated situations such as more general coordinates or constraints on the motion. We will study the phenomenon of chaos, fully solve two-body orbit problems and derive Kepler's Laws, and develop the theory of effective forces that arise in non-inertial frames..
Content:	Mechanics: Newton's laws, conservation laws, angular momentum, central forces, planetary motion, rotating frames, multi-particle systems, rigid bodies, moment of inertia; Oscillations – damped and forced harmonic oscillator, resonance, coupled oscillators; Introductory Lagrangian and Hamilton mechanics.
Module code:	NPHY62510
Module name:	Special Relativity and Thermodynamics
Module outline:	This is a second year module that aims to give students an intermediate level understanding of special relativity, thermal physics and materials science including equilibrium thermodynamics and its applications, a simple introduction to non-equilibrium thermodynamics and the structure, properties and phase behavior of materials.
Module Content	Special Relativity – inertial frames, postulates, Lorentz transformation, velocity addition, relativistic mass, energy, and four-vectors; Thermal Physics: macroscopic vs. microscopic physics, zeroth, 1st, 2nd and 3rd laws, reversible and irreversible

processes, thermodynamic cycles, entropy, thermodynamic potentials and relations.

Module code: NPHY62410

Module name: Electromagnetism

Assessment: Continuous assessment - 50%; Examination – 50%

Module outcome: At the end of the module the student is expected to be able to: Analyse and solve physical problems in electromagnetism; Define various fields in electrostatics, magneto-static, electrodynamics, and to understand these fields are related; Apply Maxwell's equations to selected problems; Execute experiments in electromagnetism.

Content: Electromagnetism: AC theory - LRC circuits, reactance, impedance, transients, resonance; Electrostatics - charge distributions, electric fields; Magneto-statics - magnetic fields and forces.

Module code: NPHY62610

Module name: Quantum Physics & Computational Physics

Assessment: Continuous assessment - 50%; Examination – 50%

Module outline: At the end of the module the student is expected to: Have a basic understanding of the Standard Model; Be familiar with main theoretical concepts and experimental techniques use in elementary particle physics; Have a deep understanding of the mathematical foundations of quantum mechanics; Be able to solve the Schrödinger equation for simple configurations; Understand the effect of symmetries in quantum mechanics; Adequately use standard programming constructs: repetition, selection, functions, composition, modules, aggregated data (arrays, lists, etc.); Construct and execute basic programs in python; Design and implement basic algorithms in python.

Module Content	Introduction to quantum theory: particle character of light, Planck's radiation formula, photoelectric effect, Compton Effect, Bohr's model of the hydrogen atom; Wave theory - wave equation and solutions, standing waves, wave packets; Matter waves - probability interpretation, uncertainty relations, Schrödinger's equation, applications and measurement. Introduction to Python: language elements, expressions, arrays, graph plotting. Application in extensive project work dealing with physical problems.

STATISTICS

Module code:	NSTA51516
Name of module:	Introduction to Statistics
Assessment:	Continuous assessment - 50%; Examination – 50%
Module outcome:	This module is an introduction to the basic concepts of Statistics. Topics include Descriptive statistics, Probability distributions, Simple Random Sampling, Hypothesis Testing, Linear Correlation and Regression.
Content:	Descriptive Statistics; Introduction to Probability; Probability Distributions; Normal Distribution Simple; Random Sampling; Introduction to Inference (Estimations for one sample); Hypothesis Testing and Confidence Intervals (one sample); Linear Correlation and Regression

Module code:	NSAT51416
Module name:	Probability Theory
Assessment:	Continuous assessment - 50%; Examination – 50%
Module outcome:	This module is an introduction to the theory and concepts of Mathematical Statistics. It is a continuation of the Introduction to Statistics course. This course investigates probability distributions and their basic properties. Students are introduced to Non-parametric tests and ANOVA.
Content:	Set Theory; Probability Theory; Random Variables, Expected Values; Distributions and their properties (Discrete and Continuous); Hypothesis Testing and Confidence Intervals (two samples); Non-parametric Tests, Chi-squared and Correlation; Regression and Introduction to ANOVA.

Module code:	NSTA62320
Module name:	Distribution Theory
Assessment:	Continuous assessment - 50%; Examination – 50%
Module outcome:	At the end of the module the learner is expected to be able to: Derive the distributions of random variables and their transformations; Construct distributions from the Normal distribution; Apply the central limit theorem to solve problems; Investigate the limiting behaviour of sequences of random variables; Learn and apply the methods used for estimation of population parameters.
Content:	Probability, Random Variables, Expectations and Moments, Generating Functions, Advanced Univariate Distributions and their properties, Bivariate distributions and their properties, Marginal and Conditional Distributions, Limit Theorems, Sampling Theory, Transformation of Random Variables, Extrema and Order Statistics Sums and Quotients of Random Variables Estimation of Parameters.

Module code:	NSTA62420
Module name:	Statistical Inference
Assessment:	Continuous assessment - 50%; Examination – 50%
Module outcome:	At the end of the module the learner is expected to be able to: Understand Sampling distributions and their applications; Use the method of moments, maximum likelihood for Point estimation; Test hypothesis; Perform fitting tests and pairwise tests; Understand Bayesian theory and inference; Understand the basics of Decision theory.
Content:	Sampling distributions. Point estimation: maximum likelihood, method of moments, ordinary least squares; Properties of estimators. Interval estimation: Hypothesis testing: likelihood ratio test, best critical regions, uniformly most powerful tests; Least squares estimation and inference for the simple linear regression model; Principles of Bayesian estimation; Hypothesis testing and Assessing Goodness of Fit; Bayes analysis and Bayes inference; Introduction to Decision theory.

ZOOLOGY

Module code:	NZOO62320
Module name:	Invertebrate Life and Evolution
Assessment:	Continuous assessment - 50%; Examination – 50%.
Module outcome:	At the end of the module the learner is expected to be able to understand, explore, discuss and analyse: Invertebrate classification and relationships; Characteristics and adaptations of the Protozoa; Characteristics and adaptations of the Porifera; Characteristics and adaptations of the Cnidaria; Characteristics and adaptations of the Platyhelminthes; Characteristics and adaptations of the Arthropods; Characteristics and adaptations of the Annelida; Characteristics and adaptations of

	the Nematoda; Characteristics and adaptations of the Echinoderms; Characteristics and adaptations of the invertebrate chordates; The phylogeny of the invertebrate chordates and the chordates; Comparisons of adaptations between the different invertebrate phyla.
Content:	Evolutionary relationships, classification, morphology and adaptations across all major invertebrate phyla.
Module code:	NZOO62420
Module name:	Vertebrate Life and Evolution
Assessment:	Continuous assessment - 50%; Examination – 50%
Module outcome:	At the end of the module the learner is expected to be able to understand, explore, discuss and analyse: Phylogeny of the chordates; The Fishes as successful aquatic vertebrates; The relationship between lobe-finned fishes and tetrapods; The Amphibians as the first successful terrestrial tetrapods; The Reptiles as the first amniotic lineage and significance of ectothermy; The Birds as avian reptiles and significance of endothermy; Adaptations of flight in birds; The Mammals as synapsid amniotes; Adaptive radiation of mammals; Development of the vertebrate heart and circulatory systems.
Content:	Evolutionary relationships, classification, morphology and adaptations across all vertebrate phyla.