



SCHOOL OF EDUCATION

PROGRAMME RULES AND INFORMATION

2017



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2017



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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.



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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”):

1.2 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).

1.3 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 2017*.

3. BACHELOR OF EDUCATION DEGREE

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

	Minimum duration of study	Abbreviation
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 Sciences (FET); Natural Sciences (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 Sciences (SP), Language (SP)
	Teaching of: Physical Sciences (FET) plus Maths (SP and FET) OR Natural Sciences (SP); Maths (SP)
	Teaching two of: Accounting (FET)/Economics (FET)/Business Studies (FET) plus Economic and Management Sciences (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 2017

Qualification	Programme
B.Ed. (IP Teaching)	Teaching of: Languages, Mathematics, Natural Sciences and Technology
	Teaching of : Languages, Social Sciences, 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 are 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 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 Sciences 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 Sciences 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 Sciences 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 Sciences for the Senior Phase must have passed both History and Geography at least at first year level;
 - Economic and Management Sciences must have passed Accounting (16 credits minimum) and Economics or Business Studies at least at first year level.

E6.5 TEACHING PRACTICE

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.

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 provide by those institutions/bodies responsible for offering the relevant courses.



E6.6 LANGUAGE ENDORSEMENTS

E6.6.1 Intermediate Phase

E6.6.1.1 English as LoLT

The skills needed to teach in medium of English form an integral part of the Teaching English module offered in years three and four.

The endorsement of English as Language of Learning and Teaching (LoLT) will be printed on the degree certificate. To obtain this endorsement, students must successfully demonstrate their competence to teach in medium of English.

E6.6.1.2 Afrikaans as LoLT

The skills needed to teach in medium of Afrikaans form an integral part of the Teaching Afrikaans module offered in years three and four.

The endorsement of Afrikaans as Language of Learning and Teaching (LoLT) will be printed on the degree certificate. To obtain this endorsement, students must successfully demonstrate their competence to teach in medium of Afrikaans.

E6.6.1.3 Setswana as LoLT

The skills needed to teach in medium of Setswana form an integral part of the Teaching Setswana module offered in years three and four.

The endorsement of Setswana as Language of Learning and Teaching (LoLT) will be printed on the degree certificate. To obtain this endorsement, students must successfully demonstrate their competence to teach in medium of Setswana.



E6.6.1.4 IsiXhosa as LoLT

The skills needed to teach in medium of IsiXhosa form an integral part of the Teaching IsiXhosa module offered in years three and four.

The endorsement of IsiXhosa as Language of Learning and Teaching (LoLT) will be printed on the degree certificate. To obtain this endorsement, students must successfully demonstrate their competence to teach in medium of IsiXhosa.

E6.6.2 SENIOR PHASE AND FET

E6.6.2.1 English as LoLT

All students have to take English (in year 4) as language of learning and teaching.

The endorsement of English as Language of Learning and Teaching (LoLT) will be printed on the degree certificate. To obtain this endorsement, students must pass the English Language Proficiency and Communication module with a minimum of 60%.

E6.6.2.2 Afrikaans as LoLT

It is optional for students to take Afrikaans (in year 3) as language of learning and teaching.

The endorsement of Afrikaans as Language of Learning and Teaching (LoLT) will be printed on the degree certificate. To obtain this endorsement, students must pass the Afrikaans Language Proficiency and Communication module with a minimum of 60%.

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 (counting up to a maximum of 20% of the semester/year mark) may take place during contact sessions. These marks will form part of one or more of the above mentioned summative assessment opportunities. A module will be incomplete 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 the School of Education.

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.

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 are excluded from the programme, but they 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 and FET Teaching)

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

Programme	Study codes
	4-year programme
Teaching of: Life Sciences (FET); Natural Sciences (SP); Mathematics (SP)	EEDU731
Teaching of: Geography (FET); Technology (SP); Mathematics (SP) or Social Sciences (SP)	EEDU732
*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 Sciences (SP), Language (SP)	EEDU735
Teaching of: Physical Sciences (FET) plus Maths (SP and FET) OR Natural Sciences (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 Sciences (SP)	EEDU738
*Teaching of: Information Technology (FET) plus Mathematics (SP and FET) OR CAT (FET), Mathematics (SP)	EEDU739

**These programmes are NOT implemented in 2017*

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

Name of module	Year	
	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 module	SCOR61016	
Life-long learning Skills for Teachers	ELST51112	
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	
<i>Total (Sem. 1; Sem. 2)</i>	<i>Min 56</i>	<i>Min 56</i>
<i>Total (Year)</i>	<i>24</i>	
TOTAL CREDITS: YEAR 1	Min136	

YEAR 2

Name of module	Year	
	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	EEDU72116	
2.2: Human Relationships In Education Context		EEDU72216
General Pedagogy 2: 2-1: Inclusive teaching and learning	EPED62112	
2-2: Instruction and assessment		EPED62212
Teaching Practice 2	ETPH62008	
<i>Total (Sem. 1; Sem. 2)</i>	<i>60</i>	<i>60</i>
<i>Total (Year)</i>	<i>8</i>	
TOTAL CREDITS: YEAR 2	128	



YEAR 3	Year	
	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 for teaching and learning	EALT53012	
Teaching Practice 3	EWLH63024	
<i>Total (Sem. 1; Sem. 2)</i>	16	16
<i>Total (Year)</i>	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	
	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 for teaching and learning	EELT54012	
Teaching Practice 4	EWLH74040	
<i>Total (Sem. 1; Sem. 2)</i>		
<i>Total (Year)</i>	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 the Natural Sciences or the Human Sciences or the Economic and Management Sciences.

Students must choose elective subjects using the information in the table below, E6.8.1 and by consulting the prerequisites in E6.10.

Study Code	Year 1	Year 2	Year 3	Year 4
	Choose two subjects of which at least one proceeds to year 2	Continue with the subjects chosen in year 1 OR replace one of those with another subject	Choose two SP and one FET subjects OR choose two FET and one SP subject	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
*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 2017

** Students who offered Mathematics Literacy in Grade 12 or who have obtained less than 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. 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 Sciences

E6.8.3.1 Year 3 - Senior Phase subject teaching modules

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

E6.8.3.2 Year 4 – Senior Phase subject teaching modules

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

E6.8.3.3 Year 3 – FET subject teaching modules

Mathematics, Natural Sciences 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 Sciences Teaching 1: FET	ELST63020
Mathematical Literacy Teaching 1: FET	EMLT63020
Mathematics Teaching 1: FET	EMFT63020
Physical Sciences Teaching 1: FET	EPST63020



E6.8.3.4 Year 4 – FET subject teaching modules

Mathematics, Natural Sciences 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 Sciences Teaching 2: FET	ELST74020
Mathematical Literacy Teaching 2: FET	EMLT74020
Mathematics Teaching 2: FET	EMFT74020
Physical Sciences Teaching 2: FET	EPST74020

E6.8.3.5 Subjects – Natural Sciences, 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)				
Biology 1 A	NBLG51116			
Biology 1 B		NBLG61216		
BOTANY				
Plant adaptations: Molecular biology, morphology and ecology of survival			NBOT62116	
Introductory plant development and biotechnology				NBOT62216
CHEMISTRY				
Chemistry 1A and 1B	NCHM61116	NCHM61216		
COMPUTER SCIENCE AND INFORMATICS				
Computer Science (Basic computer organisation)	NCOS51116			
Computer Science (Introduction to object oriented programming)		NCOS51216		
Computer Science (Information systems)			NCOS62116	
Computer Science (Mobile computing application development)				NCOS62216



SUBJECT / MODULE	FIRST YEAR		SECOND YEAR	
	Sem. 1	Sem. 2	Sem. 1	Sem. 2
ENGINEERING GRAPHICS				
Engineering graphics	EEGD61116	EEGD61216	EEGD72116	EEGD72216
GEOGRAPHY				
Geography 1A	NGEO51116			
Geography 1B		NGEO61216		
Geography 2A			NGEO62116	
Geography 2B				NGEO62216
MATHEMATICS				
Mathematics 1A and 1 B (FET)	NMAT51116	NMAT61216		
OR	OR			
Calculus (SP)	NMAT51316			
Calculus and linear Algebra (SP)		NMAT61416		
PHYSICS				
Physics 1A and 1B	NPHY51116	NPHY61216		
Physics 2A and 2B			NPHY62116	NPHY62216
PHYSICAL SCIENCES				
Physical Science (Chemistry)	EPSC52116			
Physical Science (Physics)			EPSP52216	
STATISTICS				
Statistics 1A and 1B	NSTA51116	NSTA61216		
Statistics 2A and 2B			NSTA62116	NSTA62216
TECHNOLOGY				
Technology	ETEC62116	ETEC62216		
ZOOLOGY				
Invertebrate life and evolution			NZOO62116	
Vertebrate life and evolution				NZOO62216



E6.8.4 Elective Subjects in the Human Sciences

E6.8.4.1 Year 3 - Senior Phase subject teaching modules

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

E6.8.4.2 Year 4 – Senior Phase subject teaching modules

Languages and Social Sciences 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 Sciences 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	EAAF63020
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	EAAF74020
Setswana Teaching (Additional Language) 2: FET	ESAF74020
History Teaching 2: FET	EHIT74020

E6.8.4.5 Subjects – Human Sciences (*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 Sociolinguistiek			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 Sciences

E6.8.5.1 Year 3 - Senior Phase subject teaching modules

Economic and Management Sciences	
Economics and Management Sciences Teaching 1: Senior Phase	EMST63020



E6.8.5.2 Year 4 – Senior Phase subject teaching modules

Economic and Management Sciences	
Social Sciences Teaching 2: Senior Phase	EMST74020

E6.8.5.3 Year 3 – FET subject teaching modules

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

E6.8.5.5 Subjects – Economic and Management Sciences (*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

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

Programme	Study codes
	4-year programme
Teaching of Languages, Mathematics, Natural Sciences and Technology	EEDU721
Teaching of Languages, Social Sciences 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 548 credits upon the successful completion of the degree.

YEAR 1	Year	
	Semester 1	Semester 2
English 1	EENG51032	
Pre-calculus 1	EMTH61116	EMTH61216
Pre-calculus 2		
OR	OR	
Life Skills 1	ELSI61116	ELSI61216
Life Skills 2		
Core curriculum module	SCOR61016	
Life-long learning Skills for Teachers	ELST51112	



YEAR 1	Year	
	Semester 1	Semester 2
Name of module		
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
General Pedagogy I: Managing the curriculum		EPED61212
Teaching Practice 1	ETPI51008	
<i>Total (Sem. 1; Sem. 2)</i>	40	40
<i>Total (Year)</i>	56	
TOTAL CREDITS: YEAR 1	136	

YEAR 2	Year	
	Semester 1	Semester 2
Name of module		
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	
General Pedagogy 2 2.1 Inclusive Teaching and Learning 2.2 Instruction and Assessment	EPED62216	EPED62212
Afrikaans OR Setswana OR IsiXhosa	HAFN51116 OR HSTH51116 OR HIXH51116	HAFN61216 OR HSTH61216 OR HIXH61216
Elementary Natural Sciences and Technology 1 ***Elementary Natural Sciences and Technology 2 OR *Social Sciences (History) 1 ****Social Sciences (Geography) 2	ENST62116 ESSC62116	ENST62216 ESSC62216
Teaching Practice 2	ETPI62008	
<i>Total (Sem. 1; Sem. 2)</i>	60	60
<i>Total (Year)</i>	20	
TOTAL CREDITS: YEAR 2	140	

* 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.
- *** Choose Elementary Science and Technology if Mathematics was chosen in year 1
- **** Choose Social Sciences if Life Skills was chosen in year 1

YEAR 3 Name of module	Year	
	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 (Home Language) OR English Teaching 1 (Additional Language)	EEHI63016 OR EEA163016	
**Afrikaans Teaching 1 OR Setswana Teaching 1 OR IsiXhosa Teaching 1 (Home Language) OR **Afrikaans Teaching 1 OR Setswana Teaching 1 OR IsiXhosa Teaching 1: (Additional Language)	EAHI63016 OR ESHI63016 OR EXHI63016 OR EAAI63016 OR ESAI63016 OR EXAI63016	
Teaching of Natural Science and Technology 1 Teaching of Mathematics 1 OR Teaching of Life Skills 1 Teaching of Social Sciences 1	ENTI63016 EMTI63016 OR ELSI63016 ESSI63016	
***Conversational Language: Setswana OR IsiXhosa OR Afrikaans OR Sign Language	ETCL53008/EXCL53008/EACL53008/ESCL53008	
Teaching Practice 3	EWLI63024	
<i>Total (Sem. 1; Sem. 2)</i>	16	16
<i>Total (Year)</i>	104	
TOTAL CREDITS: YEAR 3	136	



- # Two groups:
1. Students who selected Mathematics and Natural Sciences and Technology register for EICS53008 (focus on Social Sciences)
 2. Students who selected Social Sciences and Life Skills register for EICN53008 (focus on Natural Sciences and Technology).
- * This will depend on whether English is your home language or not.
- ** The choice of a language teaching module depends on the choice of language in year 2
- *** A conversational language other than Afrikaans and Setswana is only presented if a suitable person can be contracted to teach the module in the specific year

YEAR 4	Year	
	Semester 1	Semester 2
Intermediate Phase School Curriculum 2	#EICM54008 OR EICL54008	
*English Teaching 2 (Home Language) OR English Teaching 2 (Additional Language)	EEHI74020 OR EEA174020	
*Afrikaans Teaching 2/ Setswana Teaching 2/ IsiXhosa Teaching: (Home Language) OR	EAHI74020 OR ESHI74020 OR EIXH74020	
*Afrikaans Teaching 2/Setswana Teaching 2/ IsiXhosa Teaching 2: (Additional Language)	OR EAAI74020 OR ESAI74020 OR EIXI74020	
*Teaching of Natural Science and Technology 2	ENTI74020	
*Teaching of Mathematics 2	EMTI74020	
OR	OR	
*Teaching of Life Skills 2	ELSI74020	
*Teaching of Social Sciences 2	ESSI74020	
***Conversational Language: Setswana OR IsiXhosa OR Afrikaans OR Sign Language	ETCL54008/EXCL54008/EACL54008/ESCL54008	
Teaching Practice 4	EWL174040	
<i>Total (Sem. 1; Sem. 2)</i>		
<i>Total (Year)</i>	136	
TOTAL CREDITS: YEAR 4	136	

* Continuation of subject teaching choices in year 3

- # Students who selected Mathematics and Natural Sciences and Technology register for EICL54008 (focus on Life Skills)
Students who selected Social Sciences 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 state differently a student can only enrol for a subsequent module in a subject if the preceding module in that subject was passed.

Module Code	Prerequisite
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)
NBLG51116	Grade 12 Life Sciences (achievement level 5) or Physical Science (achievement level 5)
NCOS51116	Grade 12 Mathematics (achievement level 5)
NGEO51116	Grade 12 Mathematics (achievement level 4)
NMAT51116	Grade 12 (achievement level 5)
NMAT51316	Grade 12 Mathematics (achievement level 4)
NPHY51116	Grade 12 Physical Sciences (achievement level 5)
NPHY62116	NPHY51116 and NPHY61216
NSTA51116	Grade 12 Mathematics (achievement level 4)



7. CURRICULUM CHOICES

Students who qualify to enrol for the B.Ed. (SP and FET Teaching) programme in 2017, 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
NBLG51116	NBLG61216	NBOT62116 OR NZOO62116	NBOT62216 OR NZOO62216	EALT53012 (optional)		EELT54012	
		ENSC52116	ENSP52216	ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
NMAT51316	NMAT61416						
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR61016				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
NGEO51116	NGEO61216	NGEO62116	NGEO62216	EALT53012 (optional)		EELT54012	
NMAT51316	NMAT61416	ETEC61116	ETEC61216	ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR61016				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
NGEO51116	NGEO61216	NGEO62116	NGEO62216	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				
SCOR61016				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 2017

7.1.4 EEDU734

a) Major in Language1 Teaching (SP), Language1 Teaching (FET) and Language2 (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
*HAFN51116/ HENG51116/ HSTS51116	HAFN51216/ HENG51216/ HSTS61216	HAFN62116/ HENG62116/ HSTS62116	HAFN62216/ HENG62216/ HSTS62216	EALT53012 (optional)		EELT54012	
				ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR61016							
				**EAHF63020/ EEHF63020/ ESHF63020/ EAAF63020/ EEAF63020/ ESAF63020		EAHF74020/ EEHF74020/ ESHF74020/ EAAF74020/ EEAF74020/ ESAF74020	
				***EAHS63020/ EEHS63020/ ESHS63020/ EAAS63020/ EAS63020/ ESAS63020		EAHS74020/ EEHS74020/ ESHS74020/ EAAS74020/ EAS74020/ ESAS74020	
ETPH51008		ETPH62008		EWLH63024		EWLH74040	

- * Choose any two of the three languages.
- ** 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 Language1 Teaching (FET), Language1 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	HAFN51216/ HENG51216/ HSTS51216	HAFN62116/ HENG62116/ HSTS62116	HAFN72216/ HENG72216/ 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				
SCOR61016				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	HAFN51216/ HENG51216/ HSTS51216	NGEO51116	NGEO61216	ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR61016				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
NPHY51116	NPHY61216	NPHY62116	NPHY62216	EALT53012 (optional)		EELT54012	
NMAT51116	NMAT61216	NMAT62116	NMAT62216	ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
NCHM51116	NCHM51216						
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR61016				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
NPHY51116	NPHY61216	NPHY62116	NPHY62216	EALT53012 (optional)		EELT54012	
NMAT51316	NMAT61416	NBLG51116	NBLG61216	ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR61016				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
NMAT51116	NAMT61216	NMAT62116	NMAT62216	EALT53012 (optional)		EELT54012	
NSTA51116	NSTA61216	NSTA62116	NSTA62216	ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR61016				EMST63020		EMST74020	
				EMFT63020		EMFT74020	
				EMLT63020		EMLT74020	
ETPH51008		ETPH62008		EWLH63024		EWLH74040	



7.1.8 EEDU738

Major in one of Accounting (FET)/Economics (FET)/ Business Management (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	#MACC51116			
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR61016				EMST63020		EMST74020	
				**EACT63020		**EACT74020	
				**EECT63020		**EECT74020	
				**EBST63020		**EBST74020	
ETPH51008		ETPH62008		EWLH63024		EWLH74040	

- * Choose two of Accounting, Economics, Business Management in year 2
- ** Choose the teaching of two of the subjects that relate to your choice in year 2
- # Compulsory to students who did not have Accounting as subject in years 1 and 2.

7.1.9 EEDU739

a) Major in Information Technology (FET), Mathematics (FET) and Mathematics (SP)

Not offered in 2017



b) Major in Information Technology (FET), CAT (FET) and Mathematics (SP)

Not offered in 2017

7.2 B.ED. (IP TEACHING)

7.2.1 EEDU721: Languages, Mathematics and Natural Sciences and Technology

Year 1		Year 2		Year 3		Year 4					
Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2				
		ETEC62116	*ETEC62116	EICS53008		EICL54008					
EENG51116	EENG61216	HAFN51116 OR HAFR51116 OR HSTH51116 OR HSTA51116	HAFN61216 OR HAFR61216 OR HSTH61216 OR HSTA61216								
EMTH61116	EMTH61216	ENST62116	ENST62216	ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008					
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216						
ELST51112	EPED61212	EPED62112	EPED62212								
SCOR61016				EEHI63016 OR EEAI63016		EEHI74020 OR EEAI74020					
				EAHI63016 OR ESHI63016 OR EAAI63016 OR ESAI63016		EAHI74020 OR ESHI74020 OR EAAI74020 OR ESAI74020					
				ENTI63016		ENTI4020					
				EMTI63016		EMTI74020					
				ETPI51008		ETPI62008		EWLI63024		EWLI74040	

* This is an optional module;

Students enrolled for Mathematics and Natural Sciences must choose EICS53008 OR EICL54008 AND students enrolled for Life Skills and Social Sciences must choose EICN53008 OR EICM54008



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	
EENG51116	EENG61216	HAFN51116 OR HAFR51116 OR HSTH51116 OR HSTA51116	HAFN61216 OR HAFR61216 OR HSTH61216 OR HSTA61216				
ELSI61116	ELSI61216	ESSC62116	ESSC62216	ETCL53008/ EXCL53008/ EACL53008/ ESCL53008		ETCL54008/ EXCL54008/ EACL54008/ ESCL54008	
EEDU61112	EEDU61212	EEDU72116	EEDU72216	EEDU73116	EEDU73216		
ELST51112	EPED61212	EPED62112	EPED62212				
SCOR61016				EEHI63016 OR EAI63016		EEHI74020 OR EAI74020	
				EAHI63016 OR ESHI63016 OR EAI63016 OR ESAI63016		EAHI74020 OR ESHI74020 OR EAI74020 OR ESAI74020	
				ELSI63016		ELSI74020	
				ESSI63016		ESSI74020	
				EWLI63024		EWLI74040	
				ETPI51008		ETPI62008	



8. SYLLABI

8.1 EDUCATION

AFRIKAANS

Module Code: EACL53008
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 scenarios.
Content: Forms of greetings; vocabulary; tenses; adjectives ; adverbs ;sentence structure; time; places.

Module Code: EALT53012
Name of Module: Afrikaans as a medium of instruction
Assessment: Continuous assessment – 60%; with an end oral assessment counting 40% of the final mark. No examination.
Module outcome: On completion of this module the student should be able to critically analyse various learning scenarios.
Content: Reading and listening skills; communication theories and approaches

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: Education: What it means to educate: Theoretical perspectives and its significance for SA education.

Assessment: Continuous assessment – 50%;
3 hour exam (50%); 100 marks

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.
<hr/>	
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 relationships within classroom context; Different types of relationships within school community; Different types of relationships between the school and external stakeholders.
<hr/>	
Module Code:	EEDU73116
Name of Module:	Education systems in global and national contexts
Assessment:	Continuous assessment (20%) plus two summative assessment 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.
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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 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.

ENGLISH

Module Code: EENG51032

Name of Module: Language skills for Education

Assessment: Continuous assessment (tests and an assignment) – 50%;
Examination – 50%

Module outcome: On completion of this module learners should developed their language reading skills and extend their vocabulary; express their opinions about a variety of issues fluently, critically as well as creatively in the mode of oral presentation; express information and opinions clearly and with appropriate organisation in the written mode.



Content: Use of strategies to organise and comprehend texts; Identify and understand the functions of discourse markers in texts; Make inferences based on a given text; Control the sequencing of paragraphs; Complete comprehension-based and problem-solving tasks in the mode of written presentation; Extend vocabulary (and use new words in different contexts); Use speaking and listening skills to make and negotiate meaning and understand meaning during oral tasks; Express opinions about a variety of issues fluently, critically and creatively; and write clear and convincing personal reactions to novels.

Module Code: **EELT 53012**

Name of Module: English as a medium of instruction

Assessment: Continuous assessment – 60%; with an end oral assessment counting 40% of the final mark.
No examination.

Module outcome: On completion of this module the student should have gained necessary knowledges, skills and values in the use of English as a Language of Learning and Teaching (LoLT).

Content: The use of language for thought processes is the theoretical foundation that underpins this module. The module also introduces the student to the Policy documents that inform the Language Policy in South African schools. English as a language of teaching and learning across the school curriculum is critically studied in the module. At the end of this module, students should be able to infuse the pillars of English Language in terms of listening, speaking, reading, writing and language awareness in any subject they teach. This module is of a practical nature, therefore, class attendance and active participation in class are imperative. Students are expected to complete assignments (individual as well as group) set during the module.



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 with a South African context; development of the learner with specific reference to the cognitive, social cognitive and psychosocial aspects that has an effect on child development.

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; 100 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 skill 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; good and poor assessment practices; approaches to assessment; types of questions



GEOGRAPHY TEACHING

- 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.
-



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.
-

LIFE SKILLS

- 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: ELSC61116

Name of Module: Life Skills

Assessment: Continuous assessments (tests and assignments) – 50%;
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: ELSC61216

Name of Module: Physical Education for Life Skills

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

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



MATHEMATICS TEACHING

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.



MATHEMATICS

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.
-

NATURAL SCIENCES AND TECHNOLOGY

- Module code:** ENST62116
- 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:** Forces and Energy: Newton's laws and gravity, forms of energy, interchangeability of energy, electricity and magnetism, waves and electromagnetic radiation. Matter: elements, atoms, chemical bonds, properties of materials, the nucleus of the atom. Our Universe: origin and evolution of the universe, stars, our solar system. Earth: Plate tectonics, cycles on Earth.
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Module code:	ENST62216
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 a changing earth. Life Sciences, Physical Sciences and Earth Sciences are all disciplines of Natural Science that are connected through nature.
Content:	Characteristics of Life, Molecular Biology, Energy (Photosynthesis and Cellular Respiration), The Cell, Cell Division, Specialisation and organisation (including organs and organ systems), Biological Variation, Adaptations (strategies) for life on earth, Evolution and Ecology.

NATURAL SCIENCE TEACHING

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.

TECHNOLOGY

Module Code: ETEC62116

Name of module: Technology

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

Module outcome: 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 - 50%;
Examination - 50%

Module outcome: 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 ETEC73020

Name of Module: Technology Teaching

Assessment: Continuous assessment (tests, assignments and projects) – 50%;
3 hour theory 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 Technology informed by the nature, structure and underlying philosophies of the subject.

Content: Effective teaching and learning of Technology; Curriculum concepts and curriculum design (i.e, Technology; Content,Technology; Contextual Analysis and Instructional Media in Technology).

SETSWANA

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 items 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.

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.

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 Nederlandse 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 outcome:** 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.
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- Module code:** HENG61216
- Name of module:** Reading Literature, Film and Culture
- Assessment:** Continuous Assessment – 50%;
Examinations (100 marks) – 50%



Module outcome: 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 practise their interpretative, analytical, reading, writing and oral communication skills both in the form of written assignments and participation in class



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- Module code:** HENG62116
- Name of module:** English pragmatics; Drama and Poetry in English
- Assessment:** Continuous Assessment – 50%;
Examinations (100 marks) – 50%
- Module outcome:** 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.
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Module code: HENG62216

Name of module: Introduction to Linguistics, and Theories of Literature and Criticism

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

Module outcome: 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.

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.
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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: NBLG51116

Name of module: Biology 1A

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

Module outcome: After you have completed this theme you will be able to: explore, discuss and analyse; Organic macromolecules; Basic cell structure and function; Membrane structure and function; Molecular Biology of the gene; Mitosis; Meiosis; Mendelian patterns of inheritance; Darwin and evolution; Origin and history of life; Taxonomy, systematics and phylogeny

Content: Basic Chemistry; Organic macromolecules; Basic cell structure and function; Membrane structure and function; Molecular Biology of the gene; Mitosis; Meiosis; Mendelian patterns of inheritance; Darwin and evolution; Origin and history of life; Taxonomy, systematics and phylogeny

Module code: NBLG61216

Name of module: Biology 1B

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

Module outcome: After you have completed this theme you will be able to: explore, discuss and analyse: The different plant tissues; Flowering plants: nutrition and transport; Photosynthesis; Cellular respiration; Animal organization; Circulation and cardiovascular systems; Respiratory systems; Body fluid and excretory systems; Locomotion and support systems; Population



Content: ecology; Community and ecosystem ecology; Major ecosystems of the world; Conservation of biodiversity
The different plant tissues; Flowering plants: nutrition and transport; Photosynthesis; Cellular respiration; Animal organization; Circulation and cardiovascular systems; Respiratory systems; Body fluid and excretory systems; Locomotion and support systems; Population ecology; Community and ecosystem ecology; Major ecosystems of the world; Conservation of biodiversity

BOTANY

Module code: NBOT62116

Module name: Botany 2A

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

Module outcome: On completion of this module you should be able to: Use detailed knowledge of the DNA structure to discuss DNA replication, the PCR technique and to apply this knowledge to DNA sequencing; Discuss the different types of mutations, how they are formed and explain how these mutations lead to variations on genetic level that can lead to speciation; Use detailed knowledge to discuss and explain the morphological and ecological adaptations of angiosperm plant organs; Explore and explain ergastic substances, the structure of the cell wall and to use this knowledge and other detailed knowledge to analyse and compare the different plant tissue.

Content: DNA double helix & replication; DNA amplification and DNA sequencing; DNA mutations and DNA repair mechanisms; Molecular evolution and speciation; Ergastic substances; Structure and development of the cell wall; Modification for sexual reproduction; Seed,



fruit and their dispersal; Fertilization and development of the embryo; Morphology of stems, foliage leaves and roots; Life on land.

Module code: NBOT62216

Module name: Botany 2B

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

Module outcome: On completion of this module you should be able to:
Use detailed knowledge of the unique properties of water to explain the transport of water; Explain how plants as autotrophic organisms, survive in an entirely inorganic environment; Use detailed knowledge of plant responses to explain the effect of environmental extremes on plants; Use detailed knowledge of differentiation and growth; Apply detailed knowledge of plant development and biotechnology.

Content: Plant water balance; Plant nutrition; Plant responses to the environment; Plant growth and development; Sustainable crop production.

CHEMISTRY

Module code: NCHM51116

Module name: Chemistry 1A

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

Module outcome: The module emphasises the underlying concepts in chemistry and how these can be used to rationalise and understand the behaviour of chemical systems and molecular interactions.

Content: Matter and measurement; Stoichiometry: Calculations with chemical formulas and equations; Gaseous state; Aqueous reactions and solution stoichiometry, Acids



and bases; Thermodynamics; Electronic structure of atoms and Periodic properties of the elements.

- Module code:** NCHM61216
- Module name:** Chemistry 1B
- Assessment:** Continuous assessment - 50%;
Examination – 50%
- Module outcome:** The module emphasises the underlying concepts in chemistry and how these can be used to rationalise and understand the behaviour of chemical systems and molecular interactions.
- Content:** Atomic and electronic structure; Basic concepts of chemical bonding; Chemical bonding theory; Electrochemistry; Introductory Principles in Organic Chemistry: Functional groups, IUPAC nomenclature and structural formulae, isomers, Drawing organic structures, Physical properties, Chemical reactions and mechanism, Geometric isomerism.
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- Module code:** NCHM62116
- Module name:** Chemistry 2A
- Assessment:** Continuous assessment - 50%;
Examination – 50%
- Module outcome:** On completion of this module you should be able to demonstrate applied competence in Inorganic and Organic Chemistry
- Content:** Inorganic Chemistry: Chemistry of the main-group elements: Atomic size and electron configuration, Acid and base theories, General properties of the main-group elements; The transition elements and coordination compounds: Periodic trends and the general properties related to electronic structure, Introduction to coordination chemistry of transition



metals. Organic Chemistry: Stereochemistry, Conjugation and Aromaticity, Substitution reactions of aromatic compounds, Carboxylic acids and their derivatives; Amines: Preparation and reactions; Epoxides: Preparation and reactions; Heterocyclic Compounds: structure and reactivity of basic systems.

Module code: NCHM62216

Module name: Chemistry 2B

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

Module outcome: On completion of this module you should be able to demonstrate applied competence in Analytical and Physical Chemistry.

Content: Analytical Chemistry: Sampling and sample preparation; Statistical treatment of random errors; Application of statistics to data treatment and evaluation; Gravimetric Analysis; Volumetric Analysis. Physical Chemistry: Laws of Thermodynamics and applications; Physical properties of pure matter and mixtures; Phase diagrams; Properties of colloids and surface films.

GEOGRAPHY

Module code: NGE051116

Module name: Geography 1A

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

Module outcome: The module provides students with a range of theoretical, applied, and field-based courses in Geography and students may specialize in courses that will emphasize resource management and/or urban development.



Content: Physical Environmental Elements of the earth; Relationship between lithosphere, atmosphere, hydrosphere and biosphere; Structure and dynamics of the Earth; Stratigraphy and Geological history; Climatology; Surface processes and evolution of landscapes; Biogeography; Humans and the environment; The earth system; Practice: Laboratory and fieldwork.

Module code: N GEO61216

Module name: Geography 1B

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

Module outcome: The module focuses on the causes, processes and consequences of weather on both a local and global scale. It includes the earth's energy budget, atmospheric moisture and motion, Southern African weather and climate change issues.

Content: Climate Change Adaptation; New Catastrophism; Earth Systems processes; Human Geography; Geographical controversies; Geographical techniques; 1 Day field trips: Human and Physical.

Module code: N GEO62116

Module name: Geography 2A

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

Module outcome: Upon successful completion of this module, students will be able to: Discern and articulate the various physical processes operating in a specific geomorphic environment; Apply geomorphic principles to describe and explain the landforms of a specific environment; Apply the system concept to geomorphic systems



(or any biological, chemical or physical system) and predict system responses to changes in external forces; Analyze geomorphological data from topographic and geologic maps, geological cross sections of the Earth's crust and field exposures of geological materials; Synthesize geomorphic data and formulate models for system function; Formulate linkages between different geomorphic processes and systems; Apply human and physical geographic perspectives to address complex environmental issues.

Content: Climate Change and Society; Conservation Biogeography; Environmental Governance: From Local to Global; Earth and atmospheric processes.

Module code: NGE062216

Module name: Geography 2B

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

Module outcome: Upon successful completion of this module, students will be able to: Identify and apply the appropriate geographic skills and techniques (data analysis, mapping, GIS etc.) to solve problems commonly seen by professional geoscientists and physical geographers; Demonstrate numerical, written, and verbal competency in the scientific arena; Use professional and respectful communication and work effectively in team settings.

Content: Concepts and Practices in Human Geography: Society, space and environment; Economy, territory and population; Maps, order and power; The production of space; Scale and the politics of place; The networked world. Geographic Information Systems, Science and Mapping: Introduction to Geographical Information Systems (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 in GIS.

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.
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- 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: **NMAT51116**
Module name: Mathematics 1A
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: NMAT61216

Module name: Mathematics 1B

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 R^2 ; 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 R^3 . Complex numbers. Integration. Transcendental functions. Applications of integration. Integration techniques. Sequences and series. Differential Equations.

Module code: NMAT62116

Module name: Mathematics 2A

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

Module outcome: On successful completion of this module students should have developed the capacity for solving both abstract and concrete unseen problems, presenting a concise and logical argument, and using standard software to tackle mathematical problems; Studied advanced material in the mathematical sciences, some of it in depth.



Content: Basic Analysis II: Convergences and Divergences of sequences; Rules for limits of sequences; Limits of Functions; Continuity of functions continuous. Linear Algebra II: Linear spaces and subspaces; Linear dependence; bases and dimensions; rank and nullity of matrices; eigenvectors; change of basis; Diagonalization, Jordan canonical form, inner products and orthogonality. Advanced Analysis and Multivariable Calculus II: Differentiation of maps from R^n to R^m ; differentials, divergence, gradient and curl; Path integrals; integrals over regions in R^2 ; change of variables in R^2 ; Jacobians; extrema; Greens theorem is proved.

Module code: **NMAT62216**

Module name: Mathematics 2B

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

Module outcome: On successful completion of this module students should be able to: Define, graph, compute limits of, differentiate, and integrate transcendental functions; Examine various techniques of integration and apply them to definite and improper integrals; Approximate definite integrals using numerical integration techniques and solve related problems; Model physical phenomena using differential equations; Define, graph, compute limits of, differentiate, integrate and solve related problems involving functions represented parametrically or in polar coordinates; Distinguish between the concepts of sequence and series, and determine limits of sequences and convergence and approximate sums of series; Define, differentiate, and integrate functions represented using power series expansions, including Taylor series, and solve related problems.



Content:

Mathematical Statistics: Probability; conditional probability; Bayes theorem; random variables; distributions and their properties; Generating functions; bivariate distributions; marginal and conditional distributions; transformations of random variables; order statistics; Introduction to sampling; Sums of random variables; sampling distributions; law of large numbers; Chebychev's inequality; Central limit Theorem; point estimation; interval estimation; hypothesis testing; ANOVA ; Chi-squared tests; sufficient statistics; theory of hypothesis testing; Monte Carlo simulation; review of matrix theory; multivariate normal distribution; introduction to multiple regression. Differential Equations: Solution of nth order; constant co-efficient linear differential equations, Laplace transforms; Fourier series; Solution of boundary value and initial value problems for constant coefficient partial differential equations. Multiple Integration and Abstract Mathematics: Double and triple integrals; Finite, countable and uncountable sets; equivalence relations and classes; mappings and their inverses; binary operations; Well-ordering axioms; the division algorithm; modulo arithmetic; groups and rigid motions.

PHYSICS

Module code:

NPHY51116

Module name:

PHYSICS 1A

Assessment:

Continuous assessment - 50%;
Examination – 50%

Module outcome:

At the end of this module, students will be able to apply basic physical principles, including classical mechanics, electricity, and magnetism, quantum mechanics, and statistical mechanics to explain, analyse and predict a variety of natural phenomena.



Content: Classical Mechanics; Mechanical Properties of Matter; Electricity and Magnetism; Waves and Optics; Elementary experimental and computer-based techniques and set experiments related to this material.

Module code: NPHY61216

Module name: PHYSICS 1B

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

Module outcome: At the end of this module, students will be able to apply basic physical principles, including classical mechanics, electricity, and magnetism, quantum mechanics, and statistical mechanics to explain, analyse and predict a variety of natural phenomena.

Content: Electricity; Optics; Modern Physics; Elasticity; Hydrostatics; Fluid flow; Temperature and the ideal gas; Heat.

Module code: NPHY62116

Module name: Physics 2A

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

Module outcome: Students will become familiar with the fundamental physical laws of electromagnetic phenomena which underline the structure of matter, electronics, and optics.

Content: Relativity: Galilean-Newtonian; Faraday's field idea and waves on a field rather than a physical medium; Interferometer and the null result. Einstein's Postulates: Laws of Physics and inertial frame; Speed of light and inertial frame; Lorentz Transformation and relativity of time; Clocks, simultaneity, twin paradox;



Doppler effect, velocity transformations; Momentum and Energy; Equivalence Principle, Gravity and General Relativity; Origins of Quantum Mechanics; Quantum Structure of Atoms, Molecules, solids; Applications to lasers and microelectronics; Nuclear and Particle Physics; Cosmology

- Module code:** NPHY62216
- Module name:** Physics 2B
- Assessment:** Continuous assessment - 50%;
Examination – 50%
- Module outcome:** After completing this course students will have an intermediate level of knowledge in the areas of thermal and materials physics; will be able to analyze and solve problems in the areas of thermal and materials physics; will be able to carry out and communicate the results of experiments.
- Content:** Equilibrium thermodynamics and its applications; Introduction to non-equilibrium thermodynamics and the structure; Properties and phase behaviour of materials; Practical work in set experiments.
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STATISTICS

- Module code:** NSTA51116
- Name of module:** Statistics 1A
- Assessment:** Continuous assessment - 50%;
Examination – 50%
- Module outcome:** This module introduces students to the basic statistical concepts which they may need to understand and use in the other courses they intend to study in their degree or diploma. The purpose of this course is to introduce them to the subject of statistics as a science of data. The course will focus on the fundamentals of statistics, which may be broadly described as the



techniques to collect, clarify, summarize, organize, analyze, and interpret numerical information.

Content: Descriptive statistics (graphical/numerical summaries); Simple random sampling; Basic probability; The binomial, geometric, Poisson and normal distributions.

Module code: NSAT61216

Module name: Statistics 1B

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

Module outcome: This module provides a broad overview and practice of statistical techniques and data analysis using statistical packages. It is aimed at students who need a good background in statistics and its application.

Content: Hypothesis testing and confidence intervals; Non-parametric tests; chi-squared tests; correlation; Regression and an introduction to ANOVA; Two-way ANOVA; more advanced graphical techniques; More advanced distributions; sampling finite populations.

Module code: NSTA62116

Module name: Statistics 2A

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

Module outcome: Upon successful completion of this module, the student will be able to: apply statistical hypothesis testing for one population; conduct statistical hypothesis testing and estimation for two populations; apply multiple regression analysis to analyze a multivariate problem; analyze the outputs for a multiple regression model and interpret the regression results; conduct test hypotheses about the significance of a multiple regression model and



test the significance of the independent variables in the model; select appropriate multiple regression models using automatic model selection, forward selection, backward elimination, and stepwise selection; recognize and address issues when using multiple regression analysis; identify situations when non-parametric tests are appropriate; conduct non-parametric tests.

Content: Combinatorial probability; Conditional probability and independence; Bayes theorem; random variables; distributions and their properties; generating functions.; Discrete Random Variables; Bivariate distributions; marginal and conditional distributions; transformations of random variables; order statistics.; Introduction to sampling; introduction to sums of random variables and sampling distributions; Sums of random variables; sampling distributions; law of large numbers.

Module code: NSTA62216

Module name: Statistics 2B

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

Module outcome: Upon successful completion of this module, students will be able to: Solve more sophisticated probability and statistics problems than what has been covered so far; carry out integration methods and algebra for calculating probabilities and moments in continuous distributions; use asymptotic methods that are most common in practice as well as moment and maximum likelihood methods for constructing and evaluating statistical procedures; formulate and solve statistical problems.

Content: Chebychev's inequality; Central limit Theorem; point estimation; interval estimation; Hypothesis



testing; ANOVA ; Chi-squared tests; sufficient statistics; theory of hypothesis testing; Monte Carlo simulation; review of matrix theory; Multivariate normal distribution; introduction to multiple regression.

ZOOLOGY

Module code: NZOO62116

Module name: Zoology 2A

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

Module outcome: After completed this module you should be able to explore, discuss and analyse the relevant Zoology content.

Content: Invertebrate classification and relationships; the protozoans; the poriferans; the cnidarians; the Platyhelminthes; the molluscs; the annelids; the arthropods; the nematodes; the echinoderms.

Module code: NZOO62216

Module name: Zoology 2B

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

Module outcome: After you have completed this learning unit you should be able to explore, discuss and analyse the classes.

Content: Myxini, Petromyzontomorphi, Chondrichthyes, Actinopterygii and Sarcopterygii; Amphibia; Reptilia; Aves; Mammalia

