

**MINISTRY OF EDUCATION, SCIENCE AND
TECHNOLOGY
TANZANIA INSTITUTE OF EDUCATION**



**FRAMEWORK FOR THE IMPLEMENTATION
OF THREE YEAR DIPLOMA IN TEACHER
EDUCATION FOR
SCIENCE AND BUSINESS STUDIES**

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DECLARATION

This framework is approved for use in Tanzanian Teachers' Colleges for three Year Diploma in Teacher Education; Science and Business Studies Programme.



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PREFACE

This is the framework for the implementation of the three-year Diploma in Teacher Education programme for Science and Business Studies. This framework is designed to guide tutors to implement the three-year Diploma in Teacher Education for Science and Business Studies. The programme is aimed at preparing teachers for Science, Agriculture, Mathematics, Information and Communication Technology (ICT) and Business Studies subjects. It aims at meeting the country's need for Science and Business Studies teachers for ordinary secondary schools.

This programme targets form four graduates with Division I – III in Certificate of Secondary Education Examination (CSEE) with at least two passes in Science, Mathematics, Information Technology, Agricultural Science and Business Studies. Student teachers shall take two advanced secondary school subjects and Education subjects during their course of study to meet the requirement of Diploma in Teacher Education. A candidate shall be awarded a Diploma in Teacher Education after successful accomplishment of the academic, pedagogical components and block teaching practice as well as sat for Advance Certificate for Secondary Education Examination (ACSEE) and Diploma in Teacher Education Examinations.

This framework provides the objectives, rationale, implementation strategies, assessment and evaluation of this programme. The insights in this framework ought to support tutors and other education stakeholders in the implementation of this programme.

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Dr Aneth Komba

Director General

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List of Abbreviations and Acronyms

| | |
|----------|---|
| ACSEE | Advanced Certificate of Secondary Education Examination |
| BAM | Basic Applied Mathematics |
| BTP | Block Teaching Practice |
| DSEE | Diploma in Secondary Education Examination |
| DTE-SBs | Diploma in Teacher Education in Science and Business Studies |
| DSE-SMIB | Diploma in Secondary Education for Science, Mathematics, ICT, Agricultural Science and Business Studies |
| ICT | Information and Communication Technology |
| MoEST | Ministry of Education, Science and Technology |
| NECTA | National Examinations Council of Tanzania |
| SLTP | Single Lesson Teaching Practice |
| TIE | Tanzania Institute of Education |

1.0 INTRODUCTION

This framework provides guidelines on how to effectively and efficiently implement the three-year Diploma in Teacher Education for Science and Business Studies curriculum. The framework provides objectives, rationale, implementation strategies, assessment and evaluation of this programme. This programme targets form four graduates with division I – III in Certificate of Secondary Education Examination (CSEE) with at least two passes in Science, Mathematics, Information Technology, Agricultural Science and Business Studies. Student teachers in this programme shall take two advanced secondary school subjects together with the education subject during the first two years, and during the third year they shall focus on pedagogy components, Communication Skills and Development Studies. The programme is intended to get good quality teachers who are capable to teach in ordinary secondary schools.

1.1 The purpose of the programme

The main purpose of this programme is to prepare Science and Business Studies teachers who will teach in ordinary level secondary schools (i.e. Form I – IV). Within this broad aim, the programme intends to develop teachers who will be able to:

- a) demonstrate subject matter competencies in the TWO (02) teaching subjects taught in secondary schools;
- b) use appropriate pedagogical skills, assessment, and academic skills in teaching two of the following subjects: physics, Chemistry, Biology, Agricultural Science, Commerce, Bookkeeping, Mathematics, and Computer Science;
- c) demonstrate ability in planning and conducting effective practical sessions in their teaching subjects;
- d) apply research skills and techniques in the teaching and learning process;
- e) demonstrate competencies in classroom organization and management;
- f) use appropriate language of instruction and have mastery of that language of instruction;
- g) identify and respond to the needs of students with different learning needs;
- h) construct valid and reliable tests and examinations items;

- i) demonstrate a strong sense of ethics, commitment to teaching and address the varying learning needs among students; and
- j) demonstrate a sense of nationalism and patriotism in contributing to the national economy.

1.2 The rationale for the three year diploma in teacher education

For about two decades now, secondary schools in Tanzania have suffered from a critical shortage of highly qualified teachers especially in Science, Agriculture, Computer Science and Business Studies subjects. A report from the President's office Regional Administration and Local Government (PO-RALG) of 2017 indicated a shortage of 18,836 science teachers. Teacher shortage challenge has been mainly attributed to the massive expansion of primary and secondary education through PEDP and SEDP implementation between 2001/2002 and 2009/2010, and as a response to the national and international commitments and consensus in education. Some of these includes: The 1990 Joemtien World Conference on Education for All (EFA); The 2025 Sustainable Development Goals; Tanzania Development Vision 2025; National Strategy for Growth and Reduction of Poverty (NSGRP) and Education and Training Policies (ETP,1995: 2014); respectively. Implementation of these policies and commitments resulted into rapid increase of schools and enrolment rate whereas, form 1- 4 enrolment rose from 432,599 in 2004 to 1,466,402 in 2009 (24.9 % increase) fiscal year.

The number of secondary schools (both Government and Non-Government) has also increased from 1,291 in 2004 to 4,102 in 2009. The massive increase in enrolment resulted in increased demand for teachers, especially of Science and Business Studies subjects. However, despite the efforts to training teachers through special programmes, such as the introduction of induction programme for licensed teachers in the early 2000s and the special Diploma in Science, Mathematics and Information Communication Technology (ICT) of the University of Dodoma (UDOM) in 2015, could not adequately address the problem.

Considering the critical teacher shortage in Science, Mathematics, ICT and Business Studies subjects, the government has adopted the previous three-year diploma in teachers' education model to cope with the demand of science and business studies teachers.

This programme is aimed at meeting the country's need to create a just society which is knowledgeable and skilled to effectively and efficiently participate in national development and solving its own challenges, as well as realizing the government mission of building an industrial based middle income economy. It is also expected that availability of adequate number of qualified teachers for Science, Mathematics, ICT, Agricultural Science and Business Studies subjects will motivate students to choose science and business studies, which consequently may help to mitigate the challenge of teacher shortage.

1.3 The contextual policies for development of the programme

The development of this framework for the three-year Diploma in Teacher Education for Science and Business Studies reflects the exiting local, regional and international socio-cultural contextual policies. Such policies are: Tanzania Education and Training Policies of 1995, and 2014, Sustainable Development Goals 2014-2030, National Development Vision 2025, National Strategy for Growth and Reduction of Poverty (NSGRP), Five Year Development Plan (FYDP) and Millennium Development Goals (MGDs). These policies advocate for ensuring the following:

- a) equity in access to quality formal education;
- b) provision of quality of and accessibility to education;
- c) creation of competent manpower to compete in the world market;
- d) alleviation of high demands of teachers; and
- e) creation of skilled and competent graduates who can contribute to the realization of an industrial economy and middle level income.

1.4 Aims and objectives of education in Tanzania

The aims and objectives of Education in Tanzania are to:

- a) guide and promote the development and improvement of the personalities of the citizens of Tanzania, their human resources and effective utilization of those resources in bringing about individual and national development;
- b) promote the acquisition and appreciation of culture, customs and traditions of the people of Tanzania;

- c) promote the acquisition and appropriate use of literacy, social, scientific vocational, technological, professional and other forms of knowledge, skills and attitudes towards the development and improvement of the condition of man and society;
- d) develop and promote self-confidence and an inquiring mind, understanding and respect for human dignity, human rights and a readiness to work hard for personal self-advancement and national improvement;
- e) enable and to expand the scope of acquisition, improvement and upgrading of mental, practical, productive and other life skills needed to meet the changing needs of industry and the economy;
- f) enable every citizen to understand the fundamentals of the National Constitution as well as the enshrined human and civil rights, obligations and responsibilities;
- g) promote the love for work, self and wage employment and improved performance in the production and service sectors;
- h) inculcate principles of the national ethnics and integrity, national and international cooperation, peace and justice through the study, understanding and adherence to the provisions of the National Constitution and other international basic charters; and
- i) enable the rational use, management, and conservation of the environment.

1.5 Vision and mission of this programme

The Vision and Mission of the three-year Diploma in Teacher Education for Science and Business Studies are drawn from Tanzania education and training policy.

Vision

To have efficient, effective and dynamic secondary school teachers capable of handling students with different learning needs in preparation to join higher levels of education, other courses or world of work.

Mission

To prepare a cadre of qualified, committed, creative, adaptable and competent Diploma teachers for secondary education.

1.6 Objectives of diploma in teacher education

The objectives of teacher education and training are to enable student teachers to:

- a) acquire knowledge on theories and principles of education psychology, guidance and counseling;
- b) acquire knowledge on the principles and pedagogical skills of creativity and innovation;
- c) increase an understanding of the foundation of the school curriculum;
- d) sharpen knowledge and mastery of selected subjects, skills and technologies;
- e) develop skills and acquire the techniques of assessment and evaluation in education;
- f) acquire leadership and management skills in education and training; and
- g) acquire knowledge and skills on inclusive education.

1.7 Competencies for diploma in teacher education

The expected competencies to be developed by student teachers include ability to:

- a) guide learners to create and construct knowledge through a variety of methods;
- b) demonstrate facilitation of competence, ethics and commitment to work;
- c) select and organize conducive teaching and learning environment including teaching/ learning resources;
- d) transact curriculum effectively for learners including learners with special needs;
- e) use media and appropriate instructional technologies in teaching and learning;
- f) communicate effectively using English and Kiswahili Languages;
- g) guide and counsel students for their personal development, adjustment and learning;
- h) conduct action research and demonstrating innovativeness;
- i) organize students' activities;
- j) demonstrate leadership skills and leading students to develop interest in lifelong learning;

- k) establish mutually supportive linkages between the school and the community;
- l) lead students to acquire entrepreneurial attitudes and skills;
- m) conduct educational assessment, measurement and evaluation;
- n) demonstrate the professional character of the teaching enterprise; and
- o) live up to the highest moral standards of the teaching profession.

2.0 PROGRAMME STRUCTURE AND LEARNING AREAS

2.1 The structure of the programme

In the first two years, student teachers shall take two advanced secondary education subjects from Science or Business Studies subjects plus the education subject. Besides taking the three subjects to form their combinations, all student teachers will also take General Studies, Information and Computer Studies. Student teachers who are not taking Advanced Mathematics shall take Basic Applied Mathematics. Information and Computer Studies shall be compulsory for all Science and Business Studies students except those who are taking the Computer Science subject.

All students shall be required to sit for ACSEE after completion of the second year of the study. Those student teachers who will successfully pass their ACSEE will join the 3rd year where they will comprehensively undertake the pedagogical subjects related to their combinations. These pedagogical subjects focus on specific subject teaching methodologies, such as the art and science of teaching and learning. The student teachers will also take Educational Research, Measurement and Evaluation, Communication Skills and Development Studies subjects.

Upon successful completion of the programme, the candidate shall be entitled to the award of a Diploma in Secondary Education Certificate in one of strands or specialisation in section 2.4, accredited by the National Examinations Council of Tanzania. The graduate also shall be able to proceed to higher education levels depending on good performance in ACSEE and DSEE.

The structure and learning areas are indicated in Figure 1:

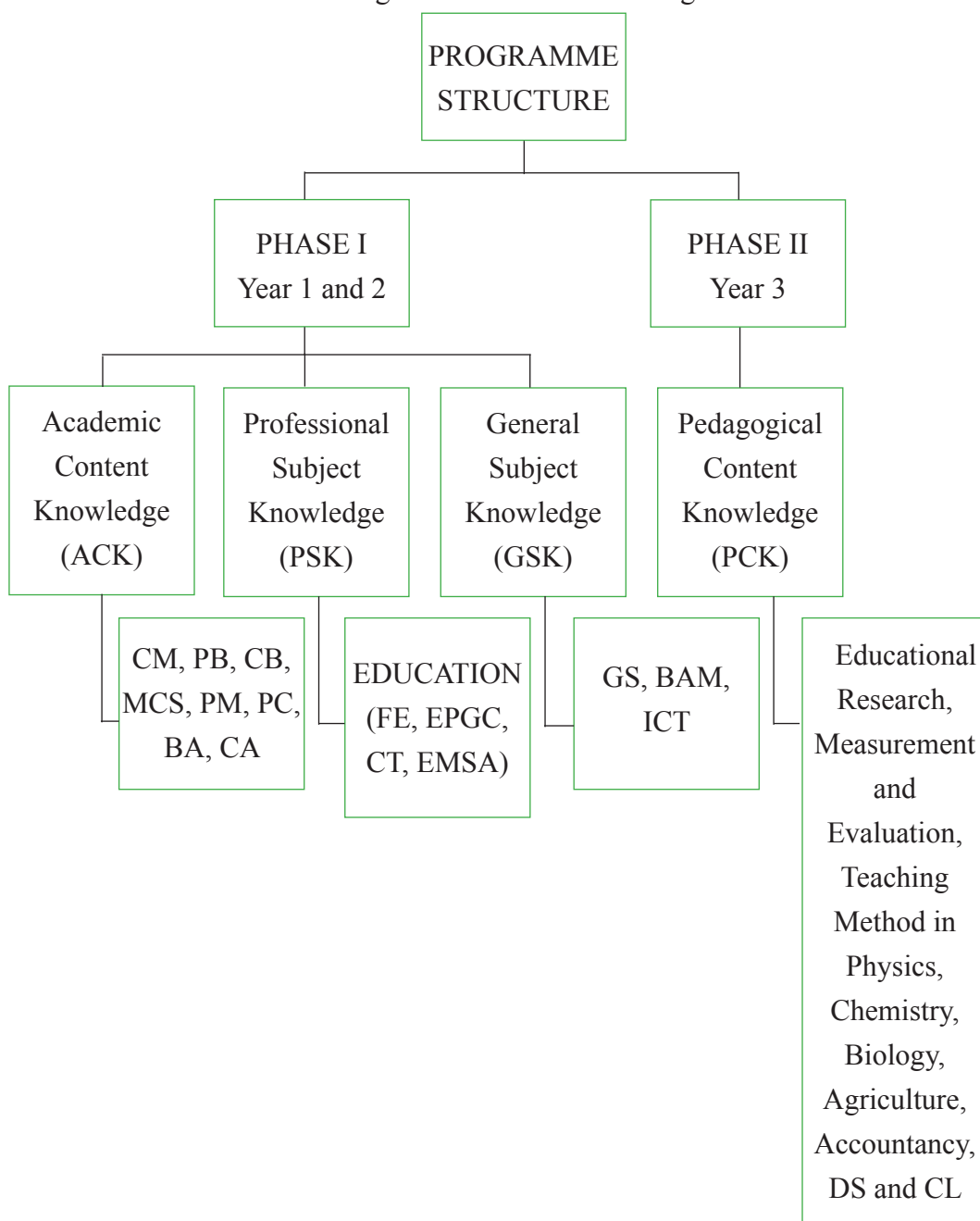


Figure 1: The Structure of the Programme

Key;

- GS: General Studies
- CM: Chemistry, Mathematics
- PB: Physics, Biology

| | |
|-------|---|
| CB: | Chemistry, Biology |
| MCS: | Mathematics, Computer Science |
| PM: | Physics, Mathematics |
| ICS: | Information and Computer Studies |
| PC: | Physics, Chemistry |
| CL: | Communication Skills |
| BAM: | Basic Applied Mathematics |
| BA: | Biology, Agriculture |
| CA: | Chemistry, Agriculture |
| DS: | Development Studies |
| AC: | Accountancy, Commerce |
| FE: | Foundation of Education |
| EPGC: | Education Psychology Guidance and Counseling |
| CT: | Curriculum and Teaching |
| EMSA: | Education Management and Schools Administration |

2.2 Duration of the programme

Three year Diploma in Teacher Education for Science and Business Studies shall comprise six (6) terms across three (3) years. The academic year will commence in July in accordance with the government financial year, or as shall be decided from time to time by the Ministry responsible for education. The number of days in schooling shall be 194 per year.

The college terms for this diploma will differ in weeks. The 1st and the 2nd terms of the 1st academic year will have a total of 16 weeks each. The 1st term of the 2nd and 3rd years shall comprise 17 weeks each, whereas, the second terms of the same years shall comprise of 22 weeks of which 8 weeks shall be for teaching practice. Block Teaching Practice shall take place for a duration of 60 days in the second term during the 2nd and the 3rd years of study.

2.3 Learning areas and subject categories

The sections below outlines categories of subjects, learning areas, and organization of subjects. This programme shall have five categories of subjects, namely:

- a) Academic subjects (Physics, Chemistry, Biology, Mathematics, Agriculture, Computer Science, Commerce, and Accountancy subjects);
- b) Pedagogical studies (the science of teaching and learning) for two teaching subjects selected from the following subjects: Physics, Chemistry, Biology, Mathematics, Computer Science, Commerce, Agriculture, and Accountancy;
- c) Studies in education namely, Education subject: Education Psychology Guidance and Counseling, Curriculum and Teaching, Education Management and Schools Administration, Foundations of Education, and Research, Measurement and Evaluation;
- d) General knowledge subjects: General Studies for ACSEE, Development Studies for DTEE, Communication skills for DTEE, Information and Computer Studies for non-MCSE candidates, and Basic Applied Mathematics (BAM) for non-Advanced Mathematics majors; and
- e) Block Teaching Practice.

2.4 Subject combinations

The programme shall have the following subject combinations:

- a) Accountancy, Commerce and Education-ACE
- b) Biology, Agricultural Science and Education- BAE
- c) Chemistry, Agricultural Science and Education-CAE
- d) Chemistry, Biology and Education-CBE
- e) Chemistry, Mathematics and Education-CME
- f) Mathematics, Computer Science and Education-MCSE
- g) Physics, Biology and Education-PBE
- h) Physics, Chemistry and Education-PCE
- i) Physics, Mathematics and Education-PME.

Table 1a outlines the subjects to be taught in each subject combination.

Table 1a: Subject combination and other compulsory courses for the first two years

| S/N | Combination | Subjects |
|------------|---|----------------------------------|
| 1 | ACE (Accountancy, Commerce and Education) | Accountancy |
| | | Commerce |
| | | Education |
| | | General Studies |
| | | Basic Applied Mathematics |
| | | Information and Computer Studies |
| 2 | BAE (Biology, Agricultural Science and Education) | Biology |
| | | Agricultural Science |
| | | Education |
| | | General Studies |
| | | Basic Applied Mathematics |
| | | Information and Computer Science |
| 3 | CAE (Chemistry, Agricultural Science and Education) | Chemistry |
| | | Agricultural Science |
| | | Education |
| | | General Studies |
| | | Basic Applied Mathematics |
| | | Information and Computer Science |
| 4 | CBE (Chemistry, Biology and Education) | Chemistry |
| | | Biology |
| | | Education |
| | | General Studies |
| | | Basic Applied Mathematics |
| | | Information and Computer Science |

| S/N | Combination | Subjects |
|------------|---|----------------------------------|
| 5 | CME (Chemistry, Mathematics and Education) | Chemistry |
| | | Mathematics |
| | | Education |
| | | General Studies |
| | | Information and Computer Science |
| 6 | MCE (Mathematics, Computer Science and Education) | Mathematics |
| | | Computer Science |
| | | Education |
| | | General Studies |
| 7 | PBE (Physics, Biology and Education) | Physics |
| | | Biology |
| | | Education |
| | | General Studies |
| | | Information and Computer Science |
| 8 | PCE (Physics, Chemistry and Education) | Physics |
| | | Biology |
| | | Education |
| | | General Studies |
| | | Basic Applied Mathematics |
| | | Information and Computer Science |
| 9 | PME (Physics, Mathematics and Education) | Physics |
| | | Mathematics |
| | | Education |
| | | General Studies |
| | | Information and Computer Science |

Table 1b outlines the subjects to be taught in the third year.

Table 1b: Subjects for the third year

| S/N | Combination | Subjects |
|------------|---|--|
| 1 | ACE (Accountancy, Commerce and Education) | Accountancy Pedagogy |
| | | Commerce Pedagogy |
| | | Development Studies |
| | | Communication Skills |
| | | Educational Research, Measurement and Evaluation |
| 2 | BAE (Biology, Agricultural Science and Education) | Biology Pedagogy |
| | | Agricultural Science Pedagogy |
| | | Development Studies |
| | | Communication Skills |
| | | Educational Research, Measurement and Evaluation |
| 3 | CAE (Chemistry, Agricultural Science and Education) | Chemistry Pedagogy |
| | | Agricultural Science Pedagogy |
| | | Development Studies |
| | | Educational Research, Measurement and Evaluation |
| | | Communication Skills |
| 4 | CBE (Chemistry, Biology and Education) | Chemistry Pedagogy |
| | | Biology Pedagogy |
| | | Development Studies |
| | | Educational Research, Measurement and Evaluation |
| | | Communication Skills |

| S/N | Combination | Subjects |
|------------|---|--|
| 5 | CME (Chemistry, Mathematics and Education) | Chemistry Pedagogy |
| | | Educational Research, Measurement and Evaluation |
| | | Mathematics Pedagogy |
| | | Development Studies |
| | | Communication Skills |
| 6 | MCE (Mathematics, Computer Science and Education) | Mathematics Pedagogy |
| | | Information and Computer Science Pedagogy |
| | | Development Studies |
| | | Educational Research, Measurement and Evaluation |
| | | Communication Skills |
| 7 | PBE (Physics, Biology and Education) | Physics Pedagogy |
| | | Biology Pedagogy |
| | | Educational Research, Measurement and Evaluation |
| | | Development Studies |
| | | Communication Skills |
| 8 | PCE (Physics, Chemistry and Education) | Physics Pedagogy |
| | | Educational Research, Measurement and Evaluation |
| | | Chemistry Pedagogy |
| | | Development Studies |
| | | Communication Skills |
| 9 | PME (Physics, Mathematics and Education) | Physics Pedagogy |
| | | Mathematics Pedagogy |
| | | Development Studies |
| | | Educational Research, Measurement and Evaluation |
| | | Communication Skills |

2.5 Teaching timetable

The subject instructional time for each period shall be one hour. The number of instructional periods per subject per week shall be scheduled based on specific subject curriculum requirements and in the convenience of the teachers' college timetable. Table 2a shows the number of periods per subject for the first two years of study.

Table 2a outlines the number of periods per subject for the first and second years of study.

Table 2a: Subjects and number of periods per week for the first year and second year study

| S/N | Subjects | Number of Period Per Week | | |
|-----|----------------------------------|---------------------------|--------|-------------------------|
| | | Practical | Theory | Total Number of Periods |
| 1 | Biology | 4 | 4 | 8 |
| 2 | Chemistry | 4 | 4 | 8 |
| 3 | Physics | 4 | 4 | 8 |
| 4 | Mathematics | - | 8 | 8 |
| 5 | Agricultural Science | 2 | 6 | 8 |
| 6 | Accountancy | 2 | 6 | 8 |
| 7 | Commerce | 2 | 6 | 8 |
| 8 | Computer Science | 4 | 4 | 8 |
| 9 | Education | 2 | 6 | 8 |
| 10 | General Studies | | 2 | 2 |
| 11 | Basic Applied Mathematics | | 2 | 2 |
| 12 | Information and Computer Studies | 2 | 2 | 4 |
| 13 | Block Teaching Practice (BTP) | 60 days (second year) | | 60 days |

Table 2b outlines number of the periods per subject for the third year of study.

Table 2b: Subjects and number of periods per week for the third year of study

| S/N | Subjects | Number of Period Per Week | | |
|-----|--|---------------------------|--------|-------------------------|
| | | Practical | Theory | Total Number of Periods |
| 1 | Biology Pedagogy | 4 | 4 | 8 |
| 2 | Chemistry Pedagogy | 4 | 4 | 8 |
| 3 | Physics Pedagogy | 4 | 4 | 8 |
| 4 | Mathematics Pedagogy | 2 | 6 | 8 |
| 5 | Agricultural Science Pedagogy | 2 | 6 | 8 |
| 6 | Bookkeeping Pedagogy | | 6 | 6 |
| 7 | Commerce Pedagogy | | 6 | 6 |
| 8 | Educational Research, Measurement and Evaluation | | 8 | 8 |
| 9 | ICT | 2 | 4 | 6 |
| 10 | Development Studies | | 2 | 2 |
| 11 | Communication Skills | | 2 | 2 |
| 12 | Block Teaching Practice (BTP) | 60 days (third year) | | 60 days |

3.0 PROGRAMME BENCHMARKING

Benchmarking of the Diploma in Teacher Education for Science and Business Studies is necessary as it seeks to get good quality teachers who are capable to teach in lower or ordinary secondary schools. The following are key benchmark of the three year diploma in teacher education, science and business studies subjects.

3.1 Entry qualifications

This programme (three-year Diploma in Teacher Education) is streamed and offered along with specialization in Science, Agriculture, Mathematics, ICT and Business Studies. This programme, shall be open to qualified candidates interested in pursuing a teaching career in O’level secondary schools. For a candidate to qualify to enroll in this programme, he/she must meet all or one of the following criteria.

- a) Successful completion of O-Level education (DIV I-III) with at least 2 credits in any of the following subjects; Physics, Chemistry, Biology, Information and Computer Studies, Mathematics, Agricultural Science, Commerce and Bookkeeping (Credit is defined as pass ‘C’ and above).
- b) Grade “A” Certificate in teacher education with an overall average of “B”, PLUS five (5) passes in CSEE, of which two passes must be a minimum of C grades in the respective subject combinations, PLUS TWO years of teaching experience in primary schools.
- c) On the basis of the National Qualifications Framework (NQF), the holder of Technician Certificate (NTA 5) by NACTE with division I – III and above will be considered, as long as the applicant possesses at least 2 credit passes in the respective subject combination at CSEE.

3.2 Instructional delivery methods

Like any other programmes taught through conventional programme, this programme will involve a range of delivery means in order to enhance both tutors and learners’ flexibility during teaching and learning. The use of ICTs and other social media shall be at the forefront of tutors’ classroom facilitation practice.

This programme shall emphasize student-centered pedagogies and other interactive teaching and learning approaches. Teaching and learning processes shall emphasize on teaching approaches that:

- a) engage students in active learning practices;
- b) set high and meaningful student learning expectations;
- c) provide regular and timely feedback;
- d) recognize and respond to different student learning styles that promote the development of multiple intelligences;
- e) create opportunities for learners to apply the knowledge learnt on their real lives;
- f) understand and apply different techniques of student assessment; and
- g) create opportunities for student tutor and student-student interactions.

Tutors shall not be the sole sources of knowledge but act as facilitators who provide a broad range of learning experiences and engage students in learning processes. Student teachers will be encouraged to assume more responsibility for their own learning.

The following constitutes the main instructional delivery means:

- a) learner-centered pedagogies;
- b) routine tutor -student classroom interaction,` as per institutional academic schedule;
- c) student teachers' prepared portfolios;
- d) laboratory practical sessions;
- e) library assignments;
- f) teaching practice;
- g) field visits/excursions; and
- h) project works.

3.3 Criteria for successful completion of the programme

The following are the requirements for successful completion of the programme:

- a) the candidate shall qualify for graduation in this programme upon achievement of the Advanced Certificate of Secondary Education Examination at Division I-III with two (2) passes in teaching subjects (at least one principal pass and one subsidiary pass) and a principal pass in education subject;

- b) the pass at least D grade or above in ALL subjects in his/her third year of study examined by NECTA;
- c) shall have a minimum of 75% of classroom attendance in every academic year and do tests, assignments and examinations; and
- d) practiced and passed Block Teaching Practice.

Student teacher shall be considered failed if he/she has:

- a) failed or absconded from Block Teaching Practice without compelling reasons;
- b) failed to meet the criteria in 3.3 (a-d):
- c) failed in supplementary examinations; and
- d) failed to undertake a mini project and write its report for internal assessment forming part of continuous assessment.

3.4 Exit and pass for the programme

Conditions for registration and deregistration are as follows:

- a) the candidate shall in any case, not be allowed to postpone or deregister for the programme without justifiable reasons;
- b) upon successful completion of two years of the Advanced level syllabus i.e. two teaching subjects and the education subject, a candidate shall be awarded an Advanced Certificate of Secondary Education Examination (ACSEE), a certificate which will not qualify her/him as a trained teacher;
- c) a candidate shall be disqualified from the continuation of the programme if he/she has failed education subjects during the ACSEE;
- d) a candidate shall be disqualified from the continuation of the programme if he/she has failed his/her two major teaching subject combinations during the ACSEE; and
- e) a candidate shall be awarded the three-years Diploma in Secondary Education Certificate upon successful pass of ACSEE and completed a third year of pedagogical courses and with a minimum of D grade or above in all subjects.

3.5 Certification

Graduates of this programme will qualify for two types of certificates which are:

- a) Advanced Certificate of Secondary Education Examination (ACSEE) at the end of second year of the programme.
- b) A three year diploma certificate in Secondary Education at the end of year three of the programme.

4.0 PROGRAMME ASSESSMENT

4.1 Assessment criteria

In order to ensure that the competencies and learning outcomes of the programme are achieved, the programme will have built-in school based assessment system administered by tutors, teaching practice assessment, and national examination administered by the National Examinations Council of Tanzania (NECTA).

4.2 Modes of assessment

Assessment procedure shall include formative assessment, (i.e., classroom based assessment practices, college based tests and examinations) and the final national summative assessment. NECTA shall develop the final examination format for the two phases of the programme (i.e., ACSEE and Diploma in Education), complying with this framework.

4.2.1 Formative assessment practice

Setting of the formative assessment exercises should focus on three learning domains (i.e., affective, psychomotor and cognitive) and their levels basing on Blooms Taxonomy. The following assessment procedures shall be employed:

- a) question and answer;
- b) group discussions and presentations;
- c) written exercises, tests, and examinations;
- d) self-assessment portfolio;
- e) seminar presentations;
- f) Single Lesson Teaching Practice (SLTP);
- g) essay/report writing;
- h) micro-teaching;
- i) report writing;
- j) practical sessions and projects; and
- k) Block Teaching Practice (BTP).

Assessment evidences obtained from the above assessment procedures shall be used as feedback for a) assessing learners' strengths and weaknesses in learning b) diagnosing and improving teaching instructions and materials c) supporting and improving learning d) improving students teachers' performances and e) reporting purposes.

The continuous assessment marks shall be drawn from written tests and examinations, teaching practices (i.e., BTP, SLTP and Microteaching), practical sessions and project work. These marks shall be sent to the national examinations council following NECTA’s guidelines for submission of the Continuous Assessment. Student teachers’ continuous assessment records from teacher colleges shall be combined with NECTA examination results to obtain the final grade.

4.3 Final national examinations

Final national examination marks shall constitute students’ marks obtained from the national examinations (i.e., ACSEE and a third years Diploma in Teacher Education Examinations) and continuous assessments marks collected from college level. Final national examinations shall contribute 50 per cent and continuous assessment 50 per cent in the final national assessment in ratio of 50:50 as shown in Table 3a-d).

Table 3a: Assessment methods and marks distribution for ACSEE subjects with practical component

| Academic Subjects | Types of Assessment | Assessment Measures | Frequency of Assessment | | | | Weight % | Total % |
|--|--------------------------|--|-------------------------|--------|-------------|-----------|------------|---------|
| | | | First Year | | Second Year | | | |
| | | | Term 1 | Term 2 | Term 1 | Term 2 | | |
| Physics, Biology, Chemistry, Agricultural Science and Computer Science | Continuous Assessment | Tests | 2 | 2 | 2 | | 10 | |
| | | Practical | 2 | 2 | 2 | | 10 | |
| | | Individual Assessment | 2 | 2 | 2 | | 10 | |
| | | Project work | | 1 | | | 5 | |
| | | Terminal and Annual Examinations | 1 | 1 | 1 | | 15 | |
| Total continuous assessment marks | | | | | | 50 | 50 | |
| Final national examination marks | | | | | | 50 | 50 | |
| Total marks | | | | | | | 100 | |

Table 3b: Assessment methods and marks distribution for ACSEE subjects

| Academic Subjects | Types of Assessment | Assessment Measures | Frequency of Assessment | | | | Weight % | Total % |
|---|-----------------------|----------------------------------|-------------------------|--------|-------------|-----------|------------|---------|
| | | | First Year | | Second Year | | | |
| | | | Term 1 | Term 2 | Term 1 | Term 2 | | |
| Mathematics, Commerce, Accountancy, Education, General Studies, BAM and ICT | Continuous Assessment | Tests | 2 | 2 | 2 | | 10 | |
| | | Individual Assessment | 2 | 2 | 2 | | 10 | |
| | | Quizzes | 1 | 1 | 1 | | 5 | |
| | | Project work | | 1 | | | 10 | |
| | | Terminal and Annual Examinations | 1 | 1 | 1 | | 15 | |
| Total continuous assessment marks | | | | | | 50 | 50 | |
| Final national examination marks | | | | | | 50 | 50 | |
| Total marks | | | | | | | 100 | |

Table 3c: Assessment methods and marks distribution for subjects with practical component in the third year of study

| Pedagogy Subjects | Types of Assessment | Assessment Measures | Frequency | | Weight % | Total % |
|--|-----------------------|-----------------------|------------|--------|-----------|------------|
| | | | Third Year | | | |
| | | | Term 1 | Term 2 | | |
| Physics, Biology, Chemistry, Agricultural Science and Computer Science | Continuous Assessment | Tests | 2 | 1 | 10 | |
| | | Practical | 2 | 2 | 10 | |
| | | Individual assignment | 2 | 2 | 10 | |
| | | Project work | 1 | | 5 | |
| | | Terminal Examination | 1 | | 15 | |
| Total continuous assessment marks | | | | | 50 | 50 |
| Final national examination marks | | | | | 50 | 50 |
| Total marks | | | | | | 100 |

Table 3d: Assessment methods and marks distribution for subjects in the third year in the Diploma programme.

| Subjects | Types of Assessment | Assessment Measures | Frequency | | Weight % | Total % |
|---|-----------------------|--------------------------------------|------------|--------|-----------|------------|
| | | | Third Year | | | |
| | | | Term 1 | Term 2 | | |
| Mathematics, Commerce and Bookkeeping Pedagogy, Communication Skills and Development Studies. | Continuous Assessment | Test | 2 | 1 | 10 | |
| | | Individual assignments/ Portfolio | 2 | 1 | 5 | |
| | | Quizzes | 2 | 1 | 10 | |
| | | Project Work | 1 | | 10 | |
| | | Terminal Examination | 1 | | 15 | |
| Total continuous assessment marks | | | | | 50 | 50 |
| Final national examination marks | | | | | 50 | 50 |
| Total marks | | | | | | 100 |

4.4 Grading system

The Grading system for teaching subjects (Physics, Chemistry, Biology, Mathematics, Commerce, Accountancy, Agricultural Science, Basic Applied Mathematics, Education, ICS and Development Studies/General studies) shall base on the NECTA Advanced Certificate of Secondary Education Examination as indicated in Table 4.

Table 4: The grading system for A-Level subjects

| Grades | Description | Points |
|--------|--------------|--------|
| A | Excellent | 1 |
| B | Very Good | 2 |
| C | Good | 3 |
| D | Average | 4 |
| E | Satisfactory | 5 |
| S | Subsidiary | 6 |
| F | Fail | 7 |

Table 5: Awarding system

| S/n | Points | Division | Description |
|-----|---------|----------|--------------|
| 1 | 3 -9 | I | Excellent |
| 2 | 10 – 12 | II | Very Good |
| 3 | 13 – 17 | III | Good |
| 4 | 18 – 19 | IV | Satisfactory |
| 5 | 20 – 21 | 0 | Fail |

The Grading system for the Pedagogy Subjects, Communication Skills and Development Studies subject shall also be based on the NECTA Diploma in Education Examinations indicated as shown in Table 6.

Table 6: The grading system for pedagogy subjects

| Grades | Description | Points |
|--------|--------------|--------|
| A | Excellent | 1 |
| B | Very Good | 2 |
| C | Good | 3 |
| D | Average | 4 |
| F | Satisfactory | 5 |

Table 7: Award Classification for Diploma in Teacher Education Examination

| GPA range | Award description |
|-----------|-------------------|
| 3.6 - 5.0 | Distinction |
| 2.6 - 3.5 | Merit |
| 1.6 - 2.5 | Credit |
| 0.3 - 1.5 | Pass |
| 0 - 0.29 | Fail |

4.5 Teaching Practice (Practicum)

Teaching practice (TP) is an important and integral component of this programme. Therefore, TP is compulsory for all student teachers to be exposed to the real classroom experience.

This will enable them to understand the full scope of teacher’s career roles and responsibilities. Before going for teaching practice, student teachers should analyze the secondary school curriculum materials (syllabus, textbooks, and teaching and learning media). They shall also get demonstration sessions, peer group teaching, and single lesson teaching practice.

During Block Teaching Practice (BTP), student teachers will prepare and implement schemes of work and lesson plans in their respective subjects. Student teachers will also maintain teaching records through subject log books, create and maintain students’ assessment records. They will also be required to participate in extracurricular activities. Teaching practice shall be closely supervised by experienced subject teachers in the schools and tutors of the respective teachers’ colleges. Teaching practice shall be conducted twice in the programme: 8 weeks at the end of second year and 8 weeks at the end of the third year. Student teachers have to be given proper instructions before going for teaching practice. Each student teacher shall be assessed at least three times and by different tutors, excluding moderation panels. Block Teaching Practice will be moderated by a panel comprising of the college academic dean, college principals, zonal school quality assurer, officers regional and district education officers. Representatives from MoEST, TIE, NECTA and other education institutions may be co-opted.

Table 8: Assessment criteria for block teaching practice

| Subjects | Types of Assessment | Assessment Measures | Frequency | | Weight % | Total % |
|--|-------------------------------|----------------------------------|-------------|------------|------------|------------|
| | | | Second Year | Third Year | | |
| | | | Term 2 | Term 2 | | |
| BTP | Continuous Assessment for BTP | Preparation of teaching resource | 1 | 1 | 10 | |
| | | General classroom skills | 1 | 1 | 15 | |
| | | Black board use works | 1 | | 5 | |
| | | BTP field report | 1 | | 10 | |
| Total continuous assessment marks | | | | | 40 | 40 |
| Block Teaching Practice | | | | | 60 | 60 |
| Total | | | | | 100 | 100 |

The marks obtained from the BTP shall be submitted to NECTA for grading and certification purpose.

5.0 RESOURCES REQUIRED FOR SUCCESSFUL IMPLEMENTATION OF THE PROGRAMME

The quality of education in teachers' colleges is ensured by well-prepared competent tutors who can deliver the required content from the curriculum. Owners and managers of teachers' colleges shall ensure the availability and access of standard, infrastructure, facilities, equipment, instructional materials and well trained tutors needed for optimum and effective pedagogical and professional development and improvement of teachers. Key indicators for successful implementation of this programme are specified below.

5.1 Teaching staff qualifications

Tutors for the programme should have at least a bachelor's degree or equivalent specializing in Education, Science, Mathematics, ICT, Computer Science, Agricultural Science, and Business Studies subjects. In summary, tutors' qualifications should include:

- a) academic knowledge and skills;
- b) experience in teaching in teacher at training colleges, and having attended related short courses/seminars;
- c) upgraded teacher with diploma in education and having experience in teaching at primary or secondary schools for at least three years;
- d) commitment to the job;
- e) adequate professional qualifications to participate in teaching practice;
- f) commitment to professional development activities which may include: short and long term courses; and
- g) competence in educational research, measurement and evaluation.

5.2 College leadership qualities

The College Principals shall have the following leadership qualities:

- a) be a trained tutor with a working experience of not less than five (5) years with a Master degree or PhD in education;
- b) have high ability and capability to foresee and plan positively for the betterment of the institution and the government at large;
- c) be responsible and accountable for in his/her position;
- d) demonstrate good command and communicative ability in public relations;
- e) have enough knowledge of organization operational procedures;
- f) be capable of making sound decision for the benefit of its people;

- g) demonstrate ability to exploit employees' talents, skills and innovativeness for organizational improvements;
- h) have the ability to mobilize different resources for organizational performance;
- i) have the ability to encourage team spirit;
- j) possess the ability to attract people who are committed, dynamic, caring, and who can work with every staff/trainees cadre;
- k) have ability to analyze education policies, documents, regulations, and apply them appropriately for the health of the organization; and
- l) should demonstrate trust and integrity.

5.3 Teaching load

A college tutor shall have a maximum of 24 teaching periods per week. Apart from classroom activities, the tutor will participate in supervising student teachers' project works and other extra-curricular activities.

5.4 Students per class

The number of student teachers recommended per class shall range between 25 to 30 for DTE-SBs.

5.5 College facilities

For effective implementation of the DTE-SBs programme, teaching facilities shall be availed in colleges. The college administration shall be responsible in making sure that the resources are available and properly utilized. In particular, the teaching facilities shall include the following categories and types:

5.5.1 Physical plant and infrastructure

The following physical plant and infrastructures are necessary for ensuring effective implementation of this programme:

- a) enough classrooms and administration blocks;
- b) staff quarters;
- c) good drainage system;
- d) water supply;
- e) power supply facilities;
- f) pavements;

- g) transport facilities;
- h) services and maintenance workshops;
- i) toilets;
- j) halls with good ventilation, enough lighting, chairs and public address systems;
- k) lecture theaters/rooms for all student teachers;
- l) offices for tutors;
- m) laboratories for Science and Language subjects;
- n) dormitories with enough space, fire exits , enough lavatories, water supply, power supply and fire extinguishers;
- o) adequate playgrounds for different indoor and outdoor games;
- p) equipment for sports, games and recreational activities;
- q) adequate and appropriate equipment for learners with special needs;
- r) Sports and recreational facilities;
- s) adequate and reliable special pitches; and
- t) agricultural equipment.

5.5.2 Health and safety

- a) Adequate, clean and working toilets, including those suitable for trainees with special needs.
- b) Good and reliable drainage system.
- c) Hygiene and safety training.
- d) Reliable fire extinguisher and detectors.
- e) Availability of permanent clean and safe water.
- f) Availability of reliable and permanent first aid facilities.
- g) Adequate and permanent dispensary facilities.

5.6 Teaching and learning materials

The teaching and learning materials should address the requirements of all learners, including those with special needs and should also be relevant to the Tanzanian context.

The Ministry responsible for Education, should put in place a mechanism which will direct the criteria and guidelines for evaluating teaching and learning materials and procuring both textual and non-textual materials. The following are textual and non-textual teaching and learning materials required:

5.6.1 Textual materials

- a) Syllabi
- b) Textbooks
- c) Modules and manuals
- d) Reference books
- e) Subject tutors' guides
- f) Encyclopedia
- g) Charts and maps
- h) Newspapers, journals and relevant cuttings
- i) Texts in Braille, texts in large print
- j) Software manuals and instructional resources
- k) Computerized library e.g. digital library

5.6.2 Non-textual materials

- a) Subject kits
- b) Prototype
- c) Weather stations/centers
- d) Ecological/nature study sites
- e) Sample of actual materials
- f) Writing board
- g) Illustration materials and photographs
- h) Posters, fliers and fact sheets
- i) Braille machines
- j) ICT and other electronic resources as well as computer based materials (CBMs)
- k) College/school website
- l) Overhead Projectors
- m) Versatile writing boards (different appropriate writing boards)

5.6.3 Facilities for students with special needs

- a) Braille, white cane, lenses for visually impaired
- b) Wheel chairs for physically handicapped
- c) U-shaped class for those who have loss of hearing and are deaf
- d) Wide doors
- e) Pavements friendly to those with disabilities
- f) Resource rooms
- g) Special toilets
- h) Special game pitches
- i) Sound proof rooms
- j) Alternatives to stair cases-lifts, stair ramps etc.

6.0 QUALITY ASSURANCE, SUPERVISION AND MONITORING OF CURRICULUM IMPLEMENTATION

During the implementation of the curriculum, quality assurance and supervision will be done to ensure that the curriculum is implemented accordingly.

6.1 Quality assurance

The task of ensuring quality during implementation of the curriculum is mainly the responsibility of the Zonal School Quality Assurance Department. In order to ensure quality in the provision of education in Tanzania, the Education Act No. 25 of 1978 and its amendment No.10 of 1995 demands college quality assurers to assess the provision of education in the colleges and provide appropriate advice to rectify any anomalies observed. Colleges shall be inspected at least once a year and quality assurers shall spend one week to inspect a single college.

The college quality assurers in the zonal offices shall be responsible to orient tutors on how to:

- a) use the syllabus, Guides, manuals and reference books in teaching/learning;
- b) prepare and use lesson plans and schemes of work, selection, preparation, use, handling and proper storage of teaching and learning aids and materials;
- c) use of participatory/interactive methods of teaching/learning;
- d) use assessment of trainees' achievement; and
- e) use the assessment results to improve teaching and learning and how to assist/help students' teachers with poor performance.

In addition, the quality assurers shall be responsible for:

- f) giving advice to principal on administrative and managerial matters.

6.2 Supervision

Supervision during implementation of the curriculum shall be done at ministerial and regional/district levels.

6.2.1 Ministerial level

The Commissioner for Education shall be the chief supervisor for all issues concerning curricula implementation, including that of the DSE-SMIB programme. Moreover, the Teacher Education Department in the MoEST

shall be responsible for overseeing curriculum implementation nationwide. Specifically, this department shall make sure that implementation of the curriculum starts and continues smoothly by accomplishing the following tasks:

- a) ensuring that colleges have enough tutors with the required qualifications;
- b) ensuring that colleges have adequate buildings, furniture, laboratory, and workshop equipment and teaching / learning materials; and
- c) recommending what should be included in the revised curriculum and also how the curriculum should be implemented and supervised.

Co-ordinating and working closely with the college quality assurers, regional and district education officers so as to ensure that:

- a) implementation of the DTE-SBs programme curriculum is conducted smoothly and that any emerging problems are solved on time;
- b) teaching and quality control in colleges is done effectively;
- c) the standards set by MoEST on various aspects of diploma in teacher education provision in the country are followed;
- d) suggestions/recommendations on how to improve the diploma in teacher education curriculum are implemented;
- e) the Commissioner for Education accesses the most effective technical advice and strategies for implementing the DTE-SBs Curriculum.

6.2.2 Zonal/ Regional/District level

The education officers in the zone, region, district, municipal and council headquarters shall be responsible for supervising all activities in the implementation of the curriculum in collaboration with other departments in the district. The other departments include: the quality assurance department, district commissioner's office, district planning office, district executive director and other region/district offices. In each region/district, apart from the education officers, the academic officers will ensure efficient curriculum implementation in their respective regions or districts.

6.3 Monitoring

The implementation of the curriculum shall be monitored nationally to track performance continuously against what was planned by collecting and analyzing data on the established indicators. Monitoring should be done regularly in a year and gaps identified should be addressed.

Different monitoring agencies will have different roles as, shown below:-

Table 9: Monitoring agencies and their role

| S/N | Agency | Role |
|-----|-------------------------------------|--|
| 1 | Quality Assurer | Monitor curriculum implementation |
| 2 | NECTA | Assessment and certification |
| 3 | TIE | Design, develop, monitor and evaluate the curriculum and curriculum supporting materials |
| 4 | MoEST | Administration of the overall education management |
| 5 | Professional (subject) Associations | Make an impact on their respective subjects by setting standards to be met |
| 6 | College Boards | Ensure smooth running of the colleges |

6.4 Evaluation

The evaluation of the diploma in teacher education curriculum shall be done by the MoEST in collaboration with TIE or TIE in collaboration with other stakeholders. Other education institutions, non-state actors, individuals, and external agencies can also conduct curriculum evaluation after being granted permission by the government. Depending on the availability of resources, there shall be two types of curriculum evaluation; formative evaluation, and summative evaluation.

7.0 PROGRAMME OUTCOMES

On completion of the programme, the graduates will demonstrate the following in their areas of specialization:

- a) knowledge of relevant teaching and learning methods;
- b) skills in planning and facilitation of effective lessons;
- c) skills in conducting practical sessions;
- d) mastery and use of subject technical language;
- e) skills in formative and summative assessment, including examination and test construction, administration, scoring and providing feedback to students;
- f) skills in responding to diverse students' learning needs including students with learning disabilities;
- g) knowledge and commitment to professional ethics and care for students with various needs including gender equality and equity;
- h) content mastery of two selected teaching subjects and the integration of gender and environmental education;
- i) knowledge of the professional subjects such as Educational Psychology Guidance and Counseling, Curriculum and Teaching, Foundations of Education, Educational Research, Measurement and Evaluation;
- j) communication skills across the curriculum; and
- k) use of ICT as a pedagogical tool.

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