



COMPETENCE-BASED CURRICULUM



CURRICULUM FRAMEWORK FOR TEACHER TRAINING COLLEGES

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FOREWORD

The Ministry of Education (MINEDUC) is pleased to present the Competence-Based Curriculum for Teacher Training Colleges (TTCs) in Rwanda. This is to align pre-service teacher training programmes to the National Competence-Based Curriculum (CBC) being implemented in basic education. For successful implementation of CBC, REB found it important to review Rwanda Pre-Primary and Primary Pre-service Teacher Training Curriculum. The review will help to improve the approach of teaching and learning towards successful CBC implementation.

This review focuses on the content, the methodology and the competences that student teachers acquire. The above mentioned are influenced by many factors, among them, the relevance of the curriculum, necessary and sufficient pedagogical approach by tutors, the assessment strategies and sufficient instructional materials. With respect to CBC, this will lead to having qualified and competent teachers to implement the Competence-Based Curriculum for pre-primary and primary education and hence develop a new generation of teachers with relevant knowledge, skills, attitude and values for the 21st century labour market. This revised curriculum will allow future teachers to contribute to the development of equity and quality education at pre-primary and primary levels for improved quality of education system as a whole.

The change to a Competence-Based Curriculum in teacher training colleges is about transforming learning, thus ensuring deepened, enjoyable and habit-forming learning. This change calls for new thinking with regard to instructional approaches in teaching, learning and assessment processes. The TTC curriculum framework is envisaged to be the main reference document based on elements highlighted in the harmonization of curricula and suggested implementation in the EAC partner states. The curriculum framework offers the basis for the creation of guidelines for pre-service and in-service teacher education, training and professional development.

The pedagogical approaches adapted by the tutors will enable student teachers to develop positive attitudes towards work and to demonstrate strategies and techniques to provide competence based learning in the pre-primary and primary schools.

Dr. UWAMARIYA Valentine
Minister of Education

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ABBREVIATIONS AND ACRONYMS

CBA	Competence Based Assessment
CBC	Competence Based Curriculum
CBET	Competence Based Education and Training
DoS	Dean of Studies
EAC	East African Community
EAQFHE	East African Qualifications Framework for Higher Education
ECLPE	Early Childhood and Lower Primary Education
ECD	Early Childhood Development
EDPRS	Economic Development and Poverty Reduction Strategy
EMA	Ecole des Moniteurs Auxiliaires
ENA	Ecole Normale Auxiliaire
ENI	Ecole Normale Inférieure
ENM	Ecole Normale Moyenne
ESSP	Education Sector Strategic Plan
HOTS	Higher Order Thinking Skills
ICT	Information and Communication Technology
IEE	Inspire Educate and Empower Rwanda
KIE	Kigali Institute of Education
LE	Languages Education
MDG	Millennium Development Goals
MINEDUC	Ministry of Education
PCK	Pedagogical Content Knowledge
PTE	Primary Teacher Education
P&PTE	Preprimary and Primary Teacher Education
PTTC	Primary Teacher Training Colleges

REB	Rwanda Education Board
RSL	Rwanda Sign Language
RNQF	Rwanda National Qualifications Framework
SEN	Special Education Needs
SET	Science and Elementary Technology
SN&IE	Special Needs and Inclusive Education
SME	Science and Mathematics Education
SQHT	Standardization, Quality Assurance, Metrology and Testing
SSE	Social Studies Education
TML	Teaching Modern Languages
TMP	Teaching Methods and Practice
TSM	Teaching Sciences and Mathematics
TSS	Teaching Social Studies
TSS*	Technical Secondary School
TTC	Teacher Training Colleges
UDL	Universal Design for Learning
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Childrens' Emergency Fund
UR-CE	University of Rwanda College of Education
USAID	United States Agency for International Development
9YBE	Nine Years Basic Education
VSO	Voluntary Service Overseas

DEFINITIONS OF KEY WORDS

Basic/Core Competences are the key or vital competences identified based on the expectations and aspirations of a country. They are the sum of skills needed to live in a contemporary knowledge society.

Competence is the ability to use an appropriate combination of knowledge, skills, attitudes and values to accomplish a particular task successfully. That is, the ability to apply learning with confidence in a range of situations.

Competence- Based Assessment is a process where a student is confronted with a complex situation relevant to his/her everyday life and asked to get a solution by applying what has been learnt (knowledge, skills, competence and attitude).

Competence-based curriculum is a curriculum designed to develop learners' competences and not only knowledge. It focuses on what learners can do. It is founded on learner-centered pedagogy and emphasizes on formative assessment.

Cross-Cutting Issues are important curriculum contents that do not belong to any one subject or learning area exclusively but which are best taught and learnt in a number of subjects.

Curriculum framework is a document that explains the philosophy within which the curriculum is developed / reviewed, implemented, and evaluated.

Curriculum is a broad concept which includes all planned activities and subjects which take place during the normal school day. It also includes after school planned co curricula activities such as sport, clubs and drama.

EAC refers to the East African Community consisting of 6 countries: Kenya, Uganda, Tanzania, Rwanda, Burundi, and South Sudan. The treaty to establish the EAC was envisaged on 30 November 1999 but entered into force on 7 July 2000 with the Republics of Kenya, Tanzania, and Uganda as Partner states. On 30th November, 2006, the EAC summit admitted the Republics of Burundi and Rwanda to join the membership and they officially became members with effect

from 1 July 2007. The definition of EAC has since 2007 referred to the 5 countries until August 2016, when South Sudan acceded to the 2016 treaty. Therefore, the new definition of EAC has been expanded to include South Sudan thus making the membership rise to six (6) countries.

Exit Profile refers to the general learning outcomes expected at the end of each level of education

Exit Profile for a student teacher refers to the general learning outcomes a student teacher is expected to exhibit at the end of three years of teacher education.

Generic Competences are the competences which are transferrable and applicable to a range of subjects and situations including employment.

Inclusive Education refers to the process of addressing all learners' educational needs in a mainstream education setting. It is based on the principles that all learners are different but they can learn and develop differently. Therefore the education system is expected to be flexible and adapted to cater for every learner's needs.

Learning outcome refers to the observable behavioural changes in the student after a learning experience.

Principal refers to the person heading a Teacher Training College.

School attachment refers to the period during which a student teacher spends in a school doing activities which include observation of school environment, lessons, extra curriculum activities and teaching lessons in their areas of specialization.

Special Needs refers to the various difficulties (such as physical, emotional, behavioural or learning disability) that cause an individual to require additional or specialized services or reasonable accommodations (in education or recreation). All those difficulties or challenges a person faces and render him or her different from other average persons are referred to as special needs because they may demand adjustments in order to participate or access services equally.

Special Needs Education refers to an education programme that is designed to meet the unique needs of a learner with a disability or special needs. It equips teachers and other members of the society with skills to handle children having various challenges be they physical, mental or psychosocial.

Special Educational Needs refers to non-ordinary needs a learner may have in schooling as a result of intrinsic or extrinsic limitations/barriers. The learner with SEN will need extra attention/assistance from the teacher and/ or the use of different educational approaches or/and tools. Special needs that have a bearing on school work and education are generally referred to as special educational needs.

Student portfolio is a systematic collection of a student's work and performance over time. It is a longitudinal gathering of students' achievements on assigned tasks.

Student teacher refers to a person who is enrolled for a teacher education programme

Syllabus is a document describing the key components, learning outcomes, content and learning activities

Teacher Education refers to the policies and procedures designed to equip prospective teachers with the knowledge, skills, attitude, and values they require to perform their tasks effectively in the classrooms. It is the frame through which student teachers go to become teachers.

Teacher professional standards are the characteristics that all qualified teachers should possess.

Tutor refers to a person who teaches in a Teacher Training College.

Value is a standard that guides an individual on how to respond or behave in a given circumstance. Our values influence how we feel, act and make choices in life.



1. Introduction

Rwanda is striving to build a knowledge-based economy, with particular emphasis on science and technology as engines of socio-economic development. One of the national priorities in the education system in Rwanda is to ensure that the quality of education continues to improve through closer integration of curriculum development, quality assurance and assessment, improved supply of learning materials, particularly textbooks and improved teaching and learning strategies.

The Government of Rwanda has detailed its plans to review the curriculum and the teaching programs. The competence based curriculum that was launched in April 2015, was envisaged to be responsive to the needs of the learners, society and labour market. The holistic learner centered approach demands linking Primary Teacher Education strategies and techniques with learning and assessment approaches in preprimary and primary schools.

The new approach to learning in teacher training colleges is to empower all student teachers to acquire knowledge and understanding, skills, positive attitude and values. The learning is personalized, active and participative. Learning activities will be organized in a way that encourages learners to construct the knowledge either individually or in groups.

The process of TTC curriculum review has been done through consultations with TTCs. The consultation was done by conducting a needs assessment using guided questionnaires for tutors, interviews with the Principals, Deans of studies and head teachers of demonstration schools as well as focus group discussions with student teachers. An observation schedule was also used to assess the availability and adequacy of various curriculum support materials. The desk review concentrated on aspirations and skills underlined in National policy documents and the literature that emphasize on the required TTC competence based curriculum framework and the associated syllabi from year one to year three. Findings from this desk review indicated some shortcomings and challenges in the draft curriculum framework.

The TTC Curriculum Framework is the nation's guiding curriculum policy document for Teacher Education, indicating how the TTC

curriculum vision is translated into practice at the TTCs and reflected in learning experiences, assessment and in monitoring and evaluation. It is consistent with the Rwanda Curriculum and Assessment Policy Draft.

It is an inspirational document, drawing on best practices in education systems around the world and setting out how student teachers can achieve the highest academic and professional standards.

The TTC Curriculum Framework is the point of reference for all decision-making relating to the TTC curriculum and it guides the work of curriculum developers, college principals, tutors, textbook developers and TTC Pedagogical inspectors and examiners. It also provides important information about the curriculum to all of the nation's stakeholders in education. In this way, the nation's ambitions for its student teachers are expressed through the learning expected of them. Learning which will empower them to achieve and to play a significant role in the global economy. Preprimary and Primary Teacher Education in Rwanda should be aligned to the Philosophy of Education in Rwanda, the Goals of Education and the objectives of the Education Sector.

1.1. Rwanda Philosophy and Goals of Education

The Rwandan education philosophy is to ensure that young people at every level of education achieve their full potential in terms of relevant knowledge, skills and appropriate attitudes that prepare them to be well integrated in society and exploit employment opportunities. Specifically, the TTC Curriculum has been developed to train quality teachers who will confidently and efficiently implement the Competence based curriculum in preprimary and primary education.

The philosophy of education hinges on the following pillars:

- i. Rwandans are viewed as the major resource for the country.
- ii. Education is considered as a human right to be provided to all Rwandan children.
- iii. Education is considered as a tool for molding the desired Rwanda citizen characterized by national unity, work and patriotism as is expressed through the Rwanda's motto 'ubumwe' (unity),

'umurimo' (work), 'gukunda igihugu' (patriotism).

- iv. Imparting cultural knowledge, skills and attitudes needed for development of all aspects of life.
- v. Eradicating illiteracy and building a self-sustaining economy.

Thus the above pillars have been identified to support the Rwanda Ministry of Education in achieving its mission of facilitating the development of human capital for the socio-economic development of Rwanda (EAC, 2014). These have been summarized into three goals as follows:

- i. Promoting access to education at all levels,
- ii. Improving the quality of education and training,
- iii. Strengthening the relevance of education and training to meet labour market demands.

Equity in access to education is emphasized across all three goals to ensure that disadvantaged students, the poor and disabled, have access to meaningful learning opportunities.

1.2 Rwanda Education Sector Objectives

The Education Sector objectives are the reference point for the inclusion of education issues into other Rwandan policy documents. These objectives are aligned with those recommended in the East African Curriculum Framework proposals. The Government of Rwanda through law number 36/2018 of 29th June, 2018 determining the organization of education revised the objectives of the sector. These are to:

1. provide Rwandans with adequate skills at all levels of general, professional, as well as technical and vocational education;
2. offer quality education at all levels;
3. promote science, technology and research in order to equip Rwandans with capacity to speed up national development;

4. promote the culture of peace, tolerance, justice, respect for human rights, solidarity, democracy and that of avoiding any form of discrimination or favouritism;
5. provide each Rwandan with an integrated education based on ethical values, science and social welfare and directed towards building a nation to ensure its sustainable development ,
6. instil into Rwandans the love of a job well done, the value of hard work, punctuality and promotion of competence
7. train Rwandans to have freedom of thought, be innovative, have abilities to acquire and be analytical towards other people's opinions and to communicate their own ideas, to be patriotic and encourage them to be updated on the situations prevailing elsewhere;
8. eliminate all grounds and obstacles that hinder the development of girls and women education as well as of any other groups that need special attention.

These objectives and associated strategies are the backbone for developments in education including the curriculum and assessment policy and the curriculum framework.

2. Analysis of Teacher Education Curriculum

2.1 Introduction

This section highlights the development of the curriculum in the international and local context where various countries are moving from a knowledge- based curriculum towards competence- based programmes. The most common concern in these countries is lack of vocational skills and competences in young people who graduate from different levels of education. Multiple approaches are suggested as solutions to the concern identified.

The first schools that trained teachers were known as *École Normale* and were first established and derived their name from France. These

institutions were established specifically to educate and train teachers within teacher-training colleges or teachers' Colleges that educated teachers for primary education. In 1685, Saint Jean Baptiste de La Salle founder of the Institute of the Brothers of The Christian Schools founded the first normal school, the "*École Normale*", in Reims, Champagne, France. Later, normal schools were established during the nineteenth century in USA. The term "normal" in this, refers to the goal of these institutions of teacher training to instill and reinforce particular *norms* within students. "Norms" included historical behavioral norms of the time, as well as norms that reinforced targeted societal values, ideologies and dominant narratives in the form of curriculum. Since that time the Normal School added courses and improved its methods from year to year (Herbst, 1991).

2.2 Primary Teacher Education Curriculum in the International Context

A report of the International Commission on Education for the Twenty-first century submitted to UNESCO states: "The importance of the role of the teacher as an agent of change, promoting understanding and tolerance, has never been more obvious than today. It has become even more critical in the twenty-first century. The need of change, from narrow nationalism to universalism, from ethnic and cultural prejudice to tolerance, understanding and pluralism, from autocracy to democracy in its various manifestations and from a technologically divided world to a technologically united world, this places enormous responsibilities on teachers who participate in the moulding of the characters and minds of the new generation" (Delors, et al., 2014).

Teacher education and teachers themselves are a crucial part of educational change and development. Teachers are considered to be the agents of change. In Pakistan it is emphasized that teacher qualification and training should be adequate to meet the needs of the student. If teachers are of quality then the product would be good. In Pakistan there is a proposal that the teachers in basic education should be degree holders after three years of teacher training. In Belgium candidates for primary teacher education are admitted after twelve years of basic education and they are trained for three years.

They graduate with a diploma in teacher Education.

Regional integration is an integral part of Rwanda's plans for economic development. In the longer term the harmonization of curricula and recognition of qualifications will facilitate easier movement of people seeking employment across the East African Community (EAC) and support the drive for higher education standards across the region. To facilitate the recognition of qualifications within the region there is an East African Qualification Framework for Higher Education (EAQFHE) which has harmonized the qualification standards for the region and come up with eight (8) qualification levels. Each country is expected to adapt the levels and come up with their national qualification frameworks. In Rwanda there is the Rwanda National Qualifications Framework (RNQF) which regulates the qualification standards for the country.

Success is dependent on the creation of a workforce with the right competences. Developing these will require investment in education at all levels of the education system, from early childhood to higher education. In respect to the above, the EAC harmonized curriculum framework undertakes to provide a set of policies, regulations and guidelines central to curriculum development and implementation within the East Africa Community (EAC). Partner states will be expected to domesticate the framework in their national curricula framework for teacher education.

The intention of the Primary Teacher Education (PTE) framework is to give prospective teachers within the EAC a strong base for future education undertakings. The TTC entry requirement in different EAC member countries vary slightly from country to country.

For Uganda the minimum entry requirement is Ordinary level with pass in six (6) subjects including mathematics, English and at least two sciences. The pre-service programme consists of two years of training in content and pedagogy, with three school practice periods of 8 weeks each. The curriculum consists of Professional Studies, Mathematics, Language, Science, Social Studies and Cultural Studies. Students are trained to teach all subjects on the primary school curriculum.

In Kenya for a candidate to qualify for primary teacher education course, he or she must have acquired a minimum grade of C in the Kenya Certificate of Secondary Education (KCSE), a grade of D in mathematics and C- in English. The course duration is 2 years, with three sessions of teaching practice, one in year 1 and two in year 2. In year one, the student teachers take all the subjects offered. These include: English, Kiswahili, Physical Education, Social Studies, Creative Arts, Art and Craft, Music, Information and Communication Technology (ICT), Mathematics, Integrated Science, Christian Religious Education (CRE) and Islamic Religious Education (IRE). In the second year of the course, there are two options, Option A (Sciences) and Option B (Humanities), the student teachers study nine subjects. There are five core subjects to be studied by all students and four in the respective options. Option A has Science, Home Science, Agriculture and Mathematics, Option B has Music, Art and Craft, Social Studies and Religious Education. To enhance specialization each subject is assigned more lessons.

In Tanzania the candidate should have a division 3 in the Certificate of Secondary Education Examination (CSEE). The course duration is two years and the student teachers take all subjects, there is no subject specialization in the entire teacher education programme. The subjects offered include the following: English, Kiswahili, ICT, Tehama, Mathematics, Integrated Science, History, Geography, Religious Education, Foundations of Education, SNE, Communication Skills, Civic/Political Education, Education Media and Technology, Creative Arts, Foreign Language and Haiba na Mchezo.

In Burundi the candidate should have Ordinary level certificate to qualify for admission into a teacher education course and qualifies with a D7 Certificate after four years of training. Those who join after S6 do the course for two years and graduate with a D6 certificate. The student teachers take all subjects offered at this level and these include the following: Physics, Chemistry, Biology, Mathematics, English, History, Geography, Religious Education, Civics/Political Education, Generic Methods and Physical Education. In all the countries the graduating teachers can teach all subjects offered in the primary schools and this opens up the job market for the teachers in the EAC member states.

2.3 Teacher Education Background in Rwanda

Rwanda Primary Teacher Education system has learnt from best practices, challenges and mistakes encountered by other previous Teacher training systems from within the country, the region and beyond.

The primary teacher training system was initiated by religious associations early before Rwanda's independence. They started with a 3 years program after primary education to deliver a D3 certificate then after 4 years to deliver a D4 certificate. When the country got independence in 1962, due to the lack of teachers while the demand of education was increasing, special teacher education was organized for 2 years after the primary education in the schools called *Ecole des Moniteurs Auxiliaires* (EMA) and then after *Ecole Normale Auxiliaire* (ENA). Those schools trained teachers to teach in lower primary.

To improve the quality of teacher education, a teacher education programme for 2 years after O Level (D5) in *Ecole Normale Inférieure*(ENI) and *Ecole Normale Technique*(ENT) and another for 4 years (D7) in *Ecole Normale Moyenne*(ENM) were introduced in 1967, three years after the introduction of O level in the Rwanda education structure. With those changes, the former ENA was discontinued.

The first major review in education happened in 1978.It introduced a new education structure of 8 years of primary education and maximum of 6 years of primary teacher education. The choice of career path and specialization in branches of study including teaching profession started immediately after primary education. Then the graduate from 6 years of teacher education got a D6 certificate.

Teacher education schools program initially followed the same career pathways as the general education up to University level, depending on the results and the grades the candidates obtained from national examinations. Candidates having excellent results in examinations were allowed to continue for further studies while others were deployed to teach.

The teacher education system since 1994 has been gradually undergoing the paradigm shift to training for teaching skills as a

profession that is terminal, rather than continuing to consider the teacher education as an integral part of the general education. It is in that perspective that all schools training primary teachers were grouped together in centers under the name Teacher Training Centers, which later came to be known as Teacher Training Colleges (TTCs). Those centers were established to take care of pre service and in service training. The graduating student teachers were expected to teach all subjects offered in the primary schools.

In order to uphold standards and quality in the teaching profession, the Ministry of Education at the time through a ministerial letter Ref. No. 3243/12.00/2010 dated 10/11/2010 decided to expand the role of the Kigali Institute of Education (KIE), currently University of Rwanda-College of Education (UR-CE) since 2013, to incorporate all teacher training institutions including TTCs (TDM Policy, 2007). The task assigned to KIE was to take responsibility of the Primary Teacher Training Curriculum and Examinations, with the goal of de-linking the National Primary Teacher Qualification from the general secondary school leaving examinations.

In 2011, KIE developed and reviewed TTC programs to incorporate new trends in teacher education as a profession. At TTC level, students were given the opportunity to choose one option from the then existing three pathways namely: Teaching Modern Languages (TML), Teaching Social Studies (TSS) or Teaching Sciences and Mathematics (TSM).

In 2013, Ministry of Education recognized the Early Childhood Development Education as a vital foundation for learning, particularly for children from more disadvantaged backgrounds. To support effective governance and policy implementation, the University of Rwanda – College of Education (UR-CE) announced plans in 2015 to revise the Teacher Training Curriculum for Pre-primary and Primary Teacher Education. This was to align these pre-service teacher training programmes to the National Basic Education competence-based curriculum. There being no legal framework that addresses its jurisdiction as a Higher Learning Institution, having oversight over Primary Teacher Education, an official letter 1009/12.00/2017 dated 11th May 2017 on transfer of TTCs from UR-CE to REB was sent by the Minister of Education. The letter officially made REB, the institution in

charge of the Teacher Training Colleges effective May, 2017.

In Rwanda, the Primary Teacher Education course currently takes three years and student teachers are admitted to specific options from year one. However, they are taught all subjects, except that the weightings vary. This is done to enable student teachers be conversant with all the subjects offered in primary schools as they undertake the Teaching Methods and Practice (TMP) for their specialization in Pre primary, and Primary Teacher education. The options are; Early Childhood and Lower Primary Education (ECLPE), Social Studies Education (SSE), Languages Education (LE), and Science and Mathematics Education (SME). The core subjects in year one of the course, for all options are; Foundations of Education, Social Studies, Creative Performance, Physical Education, English, Kinyarwanda, French, Kiswahili, Entrepreneurship, ICT, Teaching Methods and Practice, Special Needs and Inclusive Education and Religious Education. They also participate in Co-curricular activities. However the difference in the options is only in Mathematics and Integrated Science, where in ECLPE and SME the student teachers take Mathematics and Integrated Science while those in SSE and LE take Mathematics and General Science. The student teachers will have to pass the examinations in all the subjects before proceeding to year two of the course.

In the second and third years of the course, those in SME will take Physics, Chemistry and Biology, instead of Integrated Science, while those in SSE will take History, Geography and Economics, instead of Social Studies. This will enhance their professional development as teachers and improve the professionalism, thus resulting in quality education, which is envisaged by the Country. This will also enable them to have the relevant combinations required for admission in degree programmes in education at various institutions of higher learning, nationally, regionally and internationally. All students in the various options will take **five common subjects (Foundations of Education, Teaching Methods and Practice, English, Kinyarwanda and Entrepreneurship)** and the **core subjects** in the respective options in second and third years.

The qualification for the graduating student teachers can be equated to Level 3 of the Rwanda National Qualifications Framework

(RNQF), which addresses the qualifications after, S4 to S6, TVET and Professional Studies. The progression pathways for this level include higher education enrolment (bachelors or Diploma), ordinary diploma in vocational education or technical and professional diploma. Level 3, aims at enhancing knowledge and skills in communication, science and technology, personal and interpersonal management, entrepreneurship and business development, critical thinking and problem solving, creativity and innovation among others and then application of the acquired skills and competences in the respective sub sectors (RNQF, 2015).

The Rwanda National Qualifications Framework recognizes prior learning of knowledge and accumulated experience which people in the labour market possess and makes provision for them to re-join any of the education subsectors if they fulfil the minimum entry requirements for the Level and sub-sector of their interest. The recognition of prior learning is important for the realisation of lifelong learning (RNQF, 2015).

2.4 Teacher Education Curriculum in the context of Rwanda

Rwanda's ambition is to become a knowledge based and technology led economy and this underlines the need to generate, disseminate and acquire scientific skills as well as technological innovations, in addition to integrating them into social and economic development.

Human resource development has been identified as one of the six pillars of Vision 2020 and starts with the provision of quality education right from pre-primary to university levels. A relevant and appropriate curriculum is at the heart of the strategy to achieve this objective. The Economic Development and Poverty Reduction Strategy 2013-18 (EDPRS2) also recognizes the pivotal role of education in providing the population with the skills to make a positive contribution to the economy and hence to achieve a higher standard of living.

A high quality curriculum is the foundation and one of the key indicators of effective education. Its adequacy, relevance and coherence, has to be regularly updated to keep pace with the changing global situation

and to address issues in conflict with inclusive access to education. In line with efforts to improve the quality of the curriculum, Rwanda has been through phases of significant change in recent decades.

Since 2009, there have been mini-curriculum reviews in some learning areas and subjects to address the issues of relevance, adequacy and alignment to the teaching and learning processes. Compulsory and elective vocational subjects in lower and upper secondary were constituted to provide the learners with general knowledge and vocational competences. The current review of the Teacher Education Curriculum has been necessitated by the implementation of the Competence- Based Curriculum (CBC) in basic education. There is need to harmonize the two curricula to facilitate quality learning. It will help in preparing student teachers who can effectively implement the CBC in basic education.

3. The structure of Teacher Education in Rwanda

3.1 Introduction

This section highlights how teacher education is organized, the aim of education at this particular level, the language of instruction used and the entry requirements as students join the colleges from the Ordinary level of education. At upper secondary level, students choose between continuing in general secondary schools, enrolling in a Technical Secondary School (TSS*) or Teacher Training Colleges (TTC) to become a pre- primary or primary school teacher.

Teacher Education is under the responsibility of Rwanda Education Board. To become a preprimary or primary school teacher, a person must gain entry into an accredited Primary Teacher Training College (PTTC) after successfully completing 9 years of basic education and undertaking a 3-year programme of teacher education, including School Attachment. By the end of the 3 years, a Primary Teacher Certificate is awarded to successful candidates. The training is organized around four options namely Sciences and Mathematics Education, Social Studies Education, Languages Education and Early Childhood and Lower Primary Education.

3.2 Regulations for the Pre-Service Teacher Education Course

3.2.1 Entry Requirements

Previously in Rwanda the candidates who joined TTCs had to complete Ordinary level and pass with at least division IV. There is need to train quality teachers who would be able to effectively implement the competence based curriculum and hence, enhance quality education in Rwanda. This makes it necessary to set standards for those candidates joining the teacher training colleges, this will also facilitate their upward mobility in their professional growth. A candidate must satisfy the minimum requirements as prescribed in this document. To be eligible for the Preprimary and Primary Teacher Education Certificate Course, a candidate must have attained at least a **DIVISON 2(Aggregate of 33-45)** in the Ordinary level national examinations. The candidate should also score a minimum grade of a credit pass (preferably C4) in English, being the medium of instruction both at the college and basic education levels. The English exam should have both written and oral parts. She/He should be able to score an advanced level in English Proficiency and He /She should get a minimum grade of C5 in the major subjects in the option of choice.

3.2.2 The Course Duration

The course duration will be three years and it will be residential. In the past, school attachment was in second term of third year and the student teachers used to do it, in primary schools near their homes and they would operate from home and only come back to college after the attachment. In the revised TTC curriculum the attachment will be in the first term of third year and it will be done from the college. During school attachment the student teachers will be attached to primary schools near the college to enhance proper supervision by the tutors. Colleges which have to use primary schools which are far should organize to transport the students to and from the schools, in the morning and evening.

This will provide the student teachers with an ideal atmosphere for practice and they will be exposed to similar conditions, unlike when they are in their rural homes. They will also have ample time to prepare

for their lessons and make resource materials. This is an examination like any other, so the conditions should be comparable.

3.2.3 Subjects Offered

The student teachers will study all the subjects offered in the college in year one but the weightings will vary depending on the options. The subjects include the following:

1. Creative Performance/Fine Arts
2. Creative Performance /Music
3. English
4. Entrepreneurship
5. Foundations of Education
6. French
7. Information Communication and Technology
8. Integrated Science
9. Kinyarwanda
10. Kiswahili
11. Mathematics
12. Physical Education
13. Religious Education
14. Social Studies
15. Special Needs and Inclusive Education
16. Teaching Methods and Practice for pre-primary and primary subjects

Time will also be set aside for co-curriculum activities such as; sports, culture activities, debate, drama, clubs, research and library. In the second and third year, those in SME option will take Physics, Chemistry and Biology instead of integrated science, while those in SSE option will take History, Geography and Economics instead of SST. Throughout the three years of study the student teachers will have eight (8) periods per week of individual study, during which they can concentrate more on the professional courses and practice making professional documents. This is meant to enhance their professionalism.

3.2.4 Evaluation

At the end of first year the student teachers will sit for an end year exam. A student who fails in some subjects will only be promoted to second year after passing all the failed subjects. At the end of the second year the examinations set should be moderated by an external examiner to improve the quality. The students who fail some subjects will not be promoted to year three until they pass the failed subjects. The process will ensure quality of the graduating teacher, so that only qualified students are allowed to proceed to third and final year of study. The teaching practice should be emphasized throughout the course duration and assigned a percentage pass of 30%. It includes; observation of actual teaching in pre and primary schools and watching video clips of lessons in progress, micro teaching, teaching practice, school attachment and final lesson exam. The student teacher is assessed gradually from year one to year three and records are kept until the completion of college. During the school attachment the assessment should be done by both internal and external assessors. The professional marks are added to the marks obtained in the final national exam which will account for 70%. The English examination should have an oral component so as to enhance English speaking in the colleges.

3.2.5 Award of Certificate

To be awarded the Primary Teacher Education Certificate, a student teacher must: pass practical teaching and obtain a pass in all the subjects tested.

- A student teacher who does not pass teaching practice will redo it and pass, before being certified as a qualified teacher.
- A student teacher who fails to meet the requirements for the award of the certificate will be allowed to repeat the final national examination in the failed combination.

3.3 The Exit Profile of a Student Teacher

The exit profile of a student teacher describes the general learning outcomes expected at the end of the three years of teacher education. They are derived from the main national aspirations of the country

contained in different policy documents including Vision 2020, Economic Development and Poverty Reduction Strategy 2 and Education Sector Policy and sub policies. The profile describes the nation's aspirations for the kind of student teacher it wants and needs at the end of the three years of teacher education. On completion of their training, the student teachers should have the characteristics to become quality teachers who will effectively implement the competence based curriculum and integrate positively into society.

The exit profile is further determined by the option a student teacher undertakes for the three years. The profile and corresponding options make it easy to organize teacher training programmes at the university level and training activities. In the reviewed curriculum the subject content has been opened up to enable student teachers to be more competent in their subject areas and as professionals. Currently the graduates of TTCs can only be admitted to UR-CE in the Primary Teacher Education, Special Needs Education and ECLPE programmes. In the revised curriculum the content has been opened up further, so that in the second and third year of study, the student teachers in the SME option will be able to take specific subjects such as; Biology, Physics and Chemistry instead of Integrated Sciences. Likewise those in SSE will take History, Geography and Economics instead of Social Studies. This will enable them to have the relevant combinations required for admissions in degree programmes in education at various institutions of higher learning. This would enhance the professionalism and hence result in quality education, which is envisaged by the country. The exit profile also helps in the placement of newly qualified teachers in the job market. As they leave college after the course they should have the standards required of a teacher, as well as the competences teachers need to effectively perform their duties. These are referred to as the broad competences for Primary Teacher Education in Rwanda.

Broad Competences for Pre-primary and Primary Teacher Education in the Republic of Rwanda

Preprimary and Primary Teacher Education is under the responsibility of Rwanda Education Board and the following are the broad competences of Teacher Education which are formulated in line with the Education Sector objectives. By the time a student teacher is exiting the college

after three years he or she should:

- a. be able to compete not only locally but regionally and internationally;
- b. exhibit professional ethics and develop an inquiring mind for innovative education;
- c. be efficient in education administration, management, and assessment.
- d. be competent, reliable, honest and responsible.
- e. have competences that enable him/her to explore the learners' abilities and interests
- f. be able to develop the child's ability in critical thinking, free expression and ideas
- g. have a firm foundation for further education and training.

3.4 Exit profile for student teachers per option

The exit profile and the corresponding options make it easier to organize teacher training programs at the university level, implement training activities designed specifically for future teachers and organize student teacher placements.

1. Students successfully completing the **Early Childhood and Lower Primary (ECLPE) Option** will be awarded a **"Certificate of Primary Education: Pre-primary and Lower Primary Education"**. They are prepared among others for:
 - Teaching all subjects in pre-primary and lower primary classes
 - Mentoring inservice peers
 - Creating, leading and managing a preprimary and day care centers
 - Being caregiver in day care centers
 - Early childhood education advisor at sector level
 - Pursue early childhood and primary education at tertiary level

2. Students successfully completing the **Languages Education (LE) Option** will be awarded a **“Certificate of Primary Education: Languages Education”**. They are prepared among others for:
 - Teaching languages (French, English and Kinyarwanda) in primary education
 - Mentoring inservice peers in terms of teaching languages
 - Creating,leading and managing a primary school
 - Language Education advisor at sector level
 - They could be well equipped to teach creative Arts.
 - Pursuing languages education and any related subject at tertiary level

3. Students successfully completing the **Sciences and Mathematics (SME) Option** will be awarded a **“Certificate of Primary Education: Sciences and Mathematics Education”**. They are prepared among others for:
 - Teaching sciences, numeracy and mathematics in primary education
 - Mentoring inservice peers in terms of teaching Sciences and Mathematics
 - Creating,leading and managing a primary school
 - Sciences and Mathemtics Education advisor at sector level
 - Pursuing Sciences and Mathematics Education and any related course at tertiary level
 - They could also be good teachers of physical education

4. Students successfully completing the **Social Studies Education (SSE) Option** will be awarded a **“Certificate of Primary Education: Social Studies Education”**. They are prepared among others for
 - Teaching Physical Education, Creative Arts, Social Studies and Religious Education in primary schools
 - Mentoring inservice peers in terms of teaching Social Studies
 - Creating,leading and managing a primary school
 - Social studies Education advisor at sector level

- Managing sport and cultural activities at school and community levels
- Pursuing Social Sciences education and any related subjects at tertiary level

4 Policies that Guided the Curriculum Framework

A range of important national policy documents have been produced in recent years which relate to education. These have influenced thinking about the effectiveness of the TTC curriculum and have contributed to the momentum for change and the drive for the current revision. This section summarizes the relevant elements of these documents.

4.1 Vision 2020

The Vision 2020 seeks to fundamentally transform Rwanda into a middle income country by 2020, based on the development of a knowledge-based economy and a highly skilled and educated population, with improvements in Health and Education services used to build a productive and efficient workforce.

4.2 Economic Development and Poverty Reduction Strategy 2013 – 2018 (EDPRS 2)

The EDPRS2 recognizes the pivotal role of education in providing the population with the skills to make a positive contribution to the economy and hence to achieve a higher standard of living. Priority Area 1 in EDPRS 2 highlights a range of crucial improvements that the curriculum must deliver if it is to lead to a workforce with the necessary skills and attitudes. In primary and pre-primary, basic skills accompanied by soft or transferable skills must provide the solid foundation upon which to build. These include literacy, numeracy, language and social and soft skills. Building a preprimary and primary teacher education system that provides preprimary and primary teachers who have the skills to transform the profiles of primary leavers as they exit the level.

4.3. Education Sector Strategic Plan 2013 – 2018 (ESSP)

The strategic plan highlights the mission of the Ministry of Education as:

‘To transform the Rwandan citizen into skilled human capital for the socio-economic development of the country by ensuring equitable access to quality education focusing on combating illiteracy, promoting science and technology, critical thinking, and positive values.’

It goes ahead to emphasize the need for the curriculum to be competence-based and assessment systems which focus on competences rather than just knowledge and the strengthening of science, technology and innovation at all levels of education. A higher caliber of teachers who are better trained, better equipped and resourced, better supported and managed. These are all strategies outlined in this strategy to address the challenge of quality improvements.

4.4 Draft Curriculum Policy (2003)

The Curriculum Policy document (2003) sets out the principles and content for the curriculum, as well as providing guidance on its delivery and how it should be evaluated.

Its principles cover a wide range of aspects of the curriculum, including its competence based and inclusive nature, the need for a learner-focused approach; engagement in active rather than passive learning and the need to focus on national cultural values that characterize the national identity.

4.5 ICT in Education Policy (2014)

The ICT in Education policy set out principles, objectives and strategies to harness the innovative and cost-effective power of world-class educational technology tools and resources to push out the boundaries of education and improve quality, increase access, enhance diversity of learning methods and materials, include new categories of learners, foster both communication and collaboration skills and build capacity of all those involved in providing education to develop a competent

and relevant ICT professional base to meet industry needs through ICT penetration and usage at all levels of education.

4.6 Seven Year Government Programme 2017-2024

This policy document emphasizes the streamlining of teaching of cultural values, the teaching of English and Kiswahili in order to develop graduates who are self-reliant, job creators and with a competitive advantage in exploiting regional job opportunities.

4.7 National Early Childhood Development Policy Strategic Plan of MIGEPROF (2016 to 2021)

Early Childhood Development (ECD) is defined as a comprehensive approach to policies and Programmes for children from birth to eight years of age (for Rwanda it is from conception to six years) their parents and caregivers, aim at protecting the child's rights to develop his or her full cognitive, emotional, social and physical potential" (UNESCO: 2001). This curriculum is based on the need to develop the learner to fit in this competitive world and of course comparable to international best practices.

In addition to cognitive stimulation, children during this period benefit from experiences and programmes that provide increased opportunities for learning through play and exploration in groups and more opportunities to interact with other children and a variety of adults. Key programming aspects of school going children include support for successful transition to formal education, life skills education, school health and hygiene as well as safety and protection

Early childhood policy ensures that by 2020 infants and toddlers receive nurturing care and developmental services and that young children from 3 years to primary school entry are well developed and prepared for success in school and life. This is in line with the policy of improved access to school readiness programmes by 2017/18, accompanied by expanded access to three-years of early learning for four-to-six-year olds.

Expanding access to appropriate pre- primary school services for 3 to 6 years old is a key policy priority to enhance children readiness to join

and cope with primary environment.

School preparation entails the use of appropriate teaching and learning environment by competent and skilled teachers to nurture the individual learning needs of the children who are in pre-school programs. These children are more likely to have better language, verbal and arithmetic skills, higher reading and cognitive achievement scores.

4.8. The EAC Draft Harmonized Curriculum Structures and Framework for Primary Teacher Education Certificate (2014)

The EAC Treaty, Articles 5 and 103 set out the commitment of the Partner States (Burundi, Kenya, Tanzania, Uganda, Rwanda and recently South Sudan) to foster co-operation in education and training. This commitment includes harmonizing curricula, examinations and certification. The formulation, development and implementation of the EAC Primary Teacher Education curriculum framework, demonstrates the commitment of Partner States within the EAC to develop primary teacher education and training programmes capable of producing teachers who are able to prepare youth for the rapidly changing world. Teachers who are capable of enhancing an education system that will propel, national, regional and international development. The intention of the Primary Teacher Education framework is to give prospective teachers within the EAC a strong base for future education undertakings. The curriculum framework and structure should uplift the status of teacher and teacher educators in the region. Hence the curriculum framework emerging from this review is Rwandan in character but harmonized with those of the other Partner States in terms of its structure, learning outcomes, competences, learning areas, principles and the implementation approaches. The definition of EAC has since 2007 referred to the five (5) countries until August 2016, when South Sudan acceded to the 2016 treaty. Therefore, the new definition of EAC has been expanded to include South Sudan thus making the membership rise to six (6) countries

The Proposed Philosophy of Education for the region is “Education for self-reliance, sustainable development and good governance” and the

EAC Regional goals of Education are to:

- a) Foster regional patriotism, unity and harmony.
- b) Promote good governance, democracy and respect for human rights in the region.
- c) Develop human resource for sustainable regional and international social-economic growth and development
- d) Enhance acquisition of life skills, religious, moral and ethical values in the region.
- e) Promote transmission and preservation of the region's varied culture, traditions and customs.
- f) Enhance education for sustainable environmental conservation and management.
- g) Promote the use of scientific and technological innovations in teaching and learning process for regional development.
- h) Promote individual development, good health and self-fulfillment

Key principles relating to the harmonized curriculum framework structures for Primary Teacher Education are to:

- be learner-centered and competence-based;
- integrate cross-cutting issues and make meaningful connections between learning areas and subjects;
- be holistic with a focus on knowledge, skills, attitudes and values;
- include integrated teaching and learning;
- be aligned with those of the other Partner States but reflect national priorities;
- enhance vertical mobility of all student teachers.

4.9 Language Education Policy

This policy promotes quality education through providing detailed guidelines on the language learning and teaching strategies and techniques that will improve communication skills in the Rwandan education system. It will foster the ability to convey messages and to

express ideas in a coherent and logical manner.

The need for multilingualism in Rwandan society like anywhere else in the global community and as stipulated by the constitution of the country, can only be realized if it is implemented in the most effective way. The best option is to institutionalize the teaching of national language and other official foreign languages right from pre-primary.

The policy focuses more on the central role of language in learning and the language-related skills young Rwandans need for the world of work and life-long learning

4.10 The Rwanda National Qualification Framework (December 2015)

The RNQF has been designed taking into consideration the recognition of qualifications from the regional education systems and qualifications frameworks. The framework also spells out the preconditions for mobility and progression of learners as well as transferability of accumulated credits between the different QFs within the region and beyond. This implies that qualifications earned from an institution in the region will easily find equivalences in the RNQF. Similarly, the framework articulates the knowledge, skills and competences best suited for different professional as well as labor market demands and expectations. .

4.11 The East African Qualification Framework for Higher Education (EAQFHE, April 2015)

The EAQFHE provides a set of policies, objectives and information central to the organization, management, implementation and monitoring arrangements for the qualifications framework. It applies to all types of education modes of delivery, training and qualifications from basic to higher education, professional and vocational institutions, obtained through formal and or formal and or informal learning. The EAQFHE is central to education reforms currently being undertaken in the community. The framework does not distinguish between any

profiles or orientations of qualifications, as such distinctions shall be made by the national qualification frameworks.

5. Rationale for Reviewing the Teacher Education Curriculum

The Competence Based Curriculum for Basic Education that was launched in April 2015 was designed to be responsive to the needs of the learners, society and labour market. For its implementation to succeed the student teachers have to be trained to implement the Competence Based Curriculum and this can only be achieved by reviewing the TTC curriculum so as to harmonize the two curricula. The review also intends to harmonize the TTC curriculum with the harmonized Primary Teacher Education Curriculum for the EAC states. The harmonized curricula should promote quality teacher education and facilitate free movement of teachers in the EAC and beyond. It will also enhance exchange programmes amongst teachers and teacher trainers across the member states. For Rwanda to achieve its ambition of developing a knowledge-based and technology led society in line with globalization and particularly the growth of the world market and competition at the global level, it calls for a shift from a knowledge-based curriculum to a competence based curriculum. Thus the Teacher Education Curriculum has to be reviewed to be aligned with the above mentioned requirements and to train teachers who fit within the new environment.

The rationale behind the review of the Rwandan Teacher Education System and the elaboration of the TTC Curriculum Framework is highlighted below:

- Curriculum is always dynamic and should keep pace with the ever evolving global knowledge and technology
- To ensure that student teachers achieve their full potential in terms of relevant knowledge, appropriate attitude and skills that prepare them to adapt and integrate in real life situations;
- To align curriculum, teaching and learning, and assessment so that the Rwandan Teacher Education System produces the kind of quality teacher the country desires

- To develop skills and competence-based curriculum that are relevant to individual and societal needs as the primary beneficiaries
- To provide Rwandan student teachers with a solid foundation in order to acquire a competitive edge in the local, regional and international labour markets
- To ensure that the subject content in the syllabi is coherent and consistent across all subjects and compares favorably with the best curricula from the region and from the rest of the world
- To ensure a balanced approach in teaching and learning with regard to providing student teachers with valuable and updated knowledge, while also helping them to develop valuable skills and positive attitudes towards themselves and others
- Deepen learning and raise levels of attainment as higher order thinking skills are routinely developed
- Develop a love of and devotion to learning so that Rwanda becomes a nation of lifelong learners.

6. The Teacher Training Colleges (TTC) Curriculum Framework

6.1 Meaning of a Curriculum Framework

A curriculum framework is a set of policies, regulations, directions and guidelines central for the development of the curriculum, syllabi and other related documents. The framework also guides other learning and teaching materials, standards and benchmarks for the evaluation of quality of student achievements and college operations. The framework sets out what students should know, value and be able to do at all stages of learning. It gives colleges and tutors flexibility to plan and deliver the subject content to meet their varied needs but within the national framework. The curriculum is developed in line with the curriculum framework and the syllabus content is developed in line with what is in the curriculum for the level.

6.2 Components of a Curriculum Framework

It reflects education policies, Rwandan aspirations in Education sector, basic and generic competences, cross cutting issues, assessment approaches and student profile for the level. It comprises a set of interlocking components including: essential learning experiences, generic skills, values and attitudes and key learning areas.

Subject overviews form part of the framework, they are summaries of content to be taught every year, they focus on topic areas, sub topic areas and competences to be covered every year. Subject overviews guide the development of syllabus content and learning objectives/outcomes.

6.3 Role and Purpose of the Curriculum Framework

The main purpose of this Curriculum Framework is to ensure that all necessary elements are put in place so that learning and teaching in the Teacher Training Colleges (TTC) is transformed and student teachers in Rwanda reach new heights in terms of their achievement in TTCs and throughout their lives and to realize the nation's aspirations for

its people. In particular, the framework serves the following purposes:

- To serve as the official policy document highlighting what the teaching learning process entails in and outside the college environment;
- To guide policy makers on how to restructure the teacher education system clearly showing exit points into the labor market;
- To guide subject curricula/syllabi developers to elaborate subject competences, learning outcomes and subject content topic by topic basing on the general overview reflected in the framework;
- To guide the appropriate pedagogical approach to be used with special emphasis on learning activities, learning materials and how tutors should address the issue of low achievers and those with other special needs in the learning process;
- To give orientation on assessment for learning and clearly distinguishes when and how criterion and norm referenced criteria are to be used;
- To facilitate the planning and organization of college operations, including the elaboration of schemes of work and lesson plans by individual tutors;
- To guide colleges, education administrators and other stakeholders in the organization, management and evaluation of curriculum implementation.

6.4 Meaning of Curriculum

A curriculum is a broad concept which includes all planned activities and subjects which take place during the normal school day. It also includes after school planned co curricula activities such as sport, clubs and drama. These take place within a specific system and aim to lead and assist the learners, so that they can be useful citizens within the community. When it comes to change, the curriculum managers, implementers and other persons involved in one way or another in its implementation should be informed about the changes and the rationale.

It is designed in line with the curriculum framework for a given level, for example the TTC curriculum has to be in line with the TTC curriculum framework.

6.5 The TTC Curriculum Vision and Mission

Taking into account national policies, the East African Community Protocol, the national context, the views of stakeholders, the student teachers profiles and the range of objectives expressed in the rationale, the following teacher education curriculum vision and mission have been formulated.

Vision

To be an inspiring 21st century teacher education curriculum provider, that will prepare competent pre primary and primary teachers, capable of effectively delivering subject content, handling all learners, ready for lifelong learning and able to cope with rapid changes.

Mission

To transform the delivery of pre-service teacher education by providing the necessary infrastructure and improving the quality of teaching and learning, through provision of adequate curriculum support materials and competent personnel.

The vision determines the aims for the curriculum and for student teachers. These aims define what the nation envisions its student teachers to be competent in, by the time they leave the TTCs and the nature of curriculum that will bring this about.

6.6 TTC curriculum aims

The aims of the TTC curriculum are to develop teachers who are:

- Patriotic and responsible citizens, ready to play a full part in society
- Confident and self-reliant teachers, ready to take their place in the labour market and mould the learners
- Successful life-long learners, ready to adapt to new situations, and be agents of change nationally and internationally

- Creative and innovative teachers who are curious, adaptive and productive.

6.7 TTC curriculum objectives

The objectives of teacher education curriculum are to ensure that it:

- is engaging, dynamic and aligned to the future employment needs of the nation and the global economy;
- challenges all student teachers to optimize their achievement;
- promotes standards benchmarked internationally in terms of competences.

6.8 Curriculum Values

Values are defined as standards that guide an individual on how to respond or behave in a given circumstance. Our values influence how we feel, act and make choices in life. Internationally, there has been a rise in the challenges and issues related with cultural integration, as well as ethnic and religious diversity. The teaching and learning of values will enable student teachers to value diversity in all people, and to demonstrate respect, empathy and compassion for all people.

The Rwandan Curriculum is underpinned by the values that represent the basic beliefs of the nation. These basic values permeate the curriculum because education has an important role to inculcate values in young people to complement what parents do.

The Framework recognizes that values are important to the socio-economic development and stability of the country, in the same way that competences in academics are important.

Curriculum values are those that underpin the curriculum itself and determine the nature of the subject syllabi. Some of these values are, excellence, aspiration and optimism, equity and inclusiveness, learner-centeredness, openness and transparency, the importance of family, Rwandan culture and heritage. Basic human values include; dignity and integrity, self-reliance, national and cultural identity, peace and tolerance, justice, respect for others and for human rights, solidarity and democracy, patriotism, hard work, commitment and resilience.

6.9 Rwandan Culture and Heritage

It is important for all the subject syllabi to reflect the Rwandan culture and heritage, so that as the student teachers go through the teacher training they are constantly reminded of who they are and where they are coming from. This is emphasized for two main reasons:

- It is important that all young people learn to understand and value their own heritage and culture, so that their heritage will not be forgotten and the culture will be nurtured;
- Learning is most effective when it relates to the immediate context of the student and subject content is enhanced by the Rwandan context.

Five interlinking elements of heritage and culture to be incorporated into the syllabi, have been identified as follows:



Figure 1: Rwandan Culture and Heritage (CBC 2015)

It is important to include heritage and traditions, but also to reflect present-day culture. In the figure above, the central circle, Rwandan history, literature, myths and stories, can be seen as providing the link to the other elements.

7. Principles of the TTC Curriculum Framework

Rwanda envisages a relevant, coherent, consistent and flexible Preprimary and Primary Teacher Education Curriculum that responds to changing circumstances and contexts and will engender adaptability in student teachers, so that they are prepared for an uncertain future in the local, regional and global context.

The curriculum development principles guide the way the curriculum is constructed but they go beyond this and have an impact on teaching and learning, on the way progress is assessed, on the way teachers are trained and on the way colleges are led and managed.

7.1 General Principles of the Curriculum

The approach adopted in the preprimary and primary teacher education curriculum development should be guided by the following:

The Rwandan Teacher Training Curriculum will:

- Provide a balance of knowledge, skills and attitudes that will produce a competence level of learning in the Teacher Training Colleges;
- Include the respected traditions and achievements of the previous curricula;
- Ensure coherence within subjects and across subjects, throughout the three years of training.;
- Provide learner- centered, active and participative learning experiences ;
- Ensure inclusiveness so that every individual is valued and there are high expectations of every student teacher;
- Effectively address issues of relevance, scope, sequencing, overlaps, overloads and repetitions
- Provide content and guidance that allows tutors to differentiate and tailor learning to meet individual and local needs and aspirations;
- Encourage flexibility so that it can evolve in response to

changing circumstances and contexts and will engender adaptability in young people so that they are prepared for an uncertain future;

- Provide learning which is relevant to young people – addressing their individual needs, situations, interests and abilities
- Clearly state the intended learning outcomes that focus on individual and national interests.
- Focus on student teachers’ roles and responsibilities to their families, to the community and to society;
- Engage with the world of work and with employers;
- Provide an adequate preparation for Lifelong Learning;
- Provide learning that encourages girls’ ambitions and sense of self-worth and ensures all tutors and student teachers respect these ambitions;
- Shape teaching identity;
- Address issues of professional development.

7.2 TTC Curriculum Implementation related Principles

7.2.1 Learner centeredness

The curriculum must address student teachers’ individual needs, interests, abilities and backgrounds, creating an environment where learning activities are organized in a way that encourages students to construct knowledge either individually or in groups in an active way.

7.2.2 Competence-Based Approach

This is an approach where teaching and learning is based on discrete skills rather than dwelling on only knowledge or the cognitive domain of learning. Affective and psychomotor domains are also dealt with. Student teachers work on one competence at a time in the form of concrete units with specific learning outcomes broken down into knowledge, skills and attitudes. The student is evaluated against the set standards to achieve before moving on to other competences. The learning activities should be learner centered rather than the traditional didactic approach.

The Rwandan teacher education curriculum will ensure that all subject syllabi articulate the definition of competences and learning outcomes per unit of learning and the learning activities and assessment approaches must reflect a shift from knowledge-based to a competence-based approach. The focus will be to integrate transferable key competences into all learning areas while strengthening the effective delivery of the basic competences.

7.2.3 Inclusiveness

The curriculum must ensure that every individual is valued and there are high expectations of every student teacher. Learning must be organized so that all students thrive, including students with disabilities and those with special educational needs, regardless of their background.

7.2.4 Flexibility

The curriculum will cater for students' individual needs and talents and ensure the provision of a holistic education that includes knowledge, skills, attitudes and values. The curriculum should facilitate horizontal and vertical mobility within and across different education systems, nationally, regionally and internationally. This will involve developing a curriculum that allows interactive teaching and learning involving all categories of learners to provide opportunities to nurture them.

7.2.5 Transparency and accountability

To ensure successful teaching and learning, colleges, student teachers and communities must communicate openly and honestly about the curriculum and learning in the college. Parents, tutors and senior management in colleges must be engaged together in supporting teaching and learning and holding each accountable for their contributions. College management must be open to stakeholders and policy makers to support efficient administration and effective teaching.

7.2.6 Integration of ICT as a tool

The curriculum must enable educators and students to use ICT as a tool to improve the quality of education in all subjects at all levels in teaching and learning practices. ICT must support the emergence

of teaching and pedagogical student-centered approaches as well as encourage research, communication and collaborative learning.

7.2.7 Interconnectedness with Cross-cutting issues

All cross-cutting issues are important for student teachers to learn about and must be integrated across learning areas appropriately since they are not confined to one subject. The issues are embedded within the syllabi of different subjects, across the years rather than having a dedicated timetable slot of their own. Mainstreaming the cross-cutting issues in formal, non-formal and informal programmes will provide an opportunity for student teachers to acquire knowledge, skills and values which will enable them address salient issues in their lives and in the community. The issues include but not limited to the following;

i. Genocide Studies

It is through education that citizens, young and old can be sensitized about their history. REB has taken the opportunity during review of the teacher education curriculum and teaching materials to strengthen the teaching of the history of the genocide which was perpetrated against the Tutsis in Rwanda in 1994.

The concept of genocide stems from its etymology. It is a combination of the Greek word *genos*, which means people or nation, and the Latin suffix *-cide*, which means murder. The word was codified in the 1948 United Nations Convention on the Prevention and Punishment of the Crime of Genocide, which defined genocide as acts “committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group”.

It is important to know about the genocide in Rwanda, as well as other genocides, including the Holocaust of World War II. They should know what caused the genocide that was perpetrated against the Tutsis in Rwanda, its planning and execution, how it was stopped and what the consequences have been. The people of Rwanda should take part in fighting genocide ideology and genocide denial. By learning about the Holocaust and other genocides, they will analyse the similarities and differences in the methods used to carry out genocide. Rwandan students will remember the genocide, which is a means to protect the memory of those who were lost, they also need to remember those

who are absent and humanity needs to remember what it is capable of.

ii. Environment and Sustainability

The integration of Environment, Climate Change and Sustainability in the curriculum places considerable emphasis on knowledge, skills, attitudes and values to be developed by learners aimed at sustainable ways of living. It focuses and advocates for the need to balance economic growth, the well-being of society and ecological systems.

The integration of Environment, Climate Change and Sustainability requires contributions from all subjects by incorporating related content in subjects like sciences and humanities, mathematics and literature.

iii. Gender

Gender refers to the socio-cultural definition of man and woman; the way societies distinguish men and women and assign them social roles. It entails the behaviors and attitudes which are culturally accepted as appropriate ways of being a woman (femininity) and ways of being a man (masculinity). The sex of a person is biologically determined, whereas ways of being a man or a woman are learned: they are constructed, reinforced, maintained and reconstructed over time through social and cultural practices. Such constructions of gender vary across cultures, social class and time.

The introduction of a gender perspective to the curriculum aims to improve the outcome of quality teaching by enabling girls and boys to exploit their full potential and talents without any discrimination or prejudice. Curriculum development to address gender inequality cannot happen in isolation from other aspects of schooling, such as ways of teaching and learning, and interactions within and out of the classroom.

iv. Comprehensive Sexuality Education

Today, few young people receive adequate preparation for a smooth transition from childhood through adolescence to adulthood and information for healthy sexual lives. This leaves them potentially vulnerable to coercion, abuse and exploitation, unintended pregnancy and sexually transmitted infections (STIs), including HIV. Thus, there is an urgent need to address the gap in knowledge about sexuality,

gender and other related reproductive health issues including HIV. Strategies to counter this situation should start early in the socialization of children - at home, in school and in the community.

Comprehensive Sexuality Education is broader than sex education; it includes topics such as sexual and reproductive health, human growth and development, communication, relationships, gender, prevention of STIs, HIV and AIDS, unwanted pregnancies and gender based violence among others. It supports a rights-based approach in which values such as respect, acceptance, tolerance, equality, empathy and reciprocity are inextricably linked to universally agreed human rights.

The primary goal of a college based comprehensive sexuality education curriculum is to equip adolescents and young people with the knowledge, skills and values in an age appropriate, culturally and gender sensitive manner so as to enable them to make responsible choices about their sexual and social relationships, explain and clarify feelings, values and attitudes, and promote and sustain risk-reducing behavior.

Comprehensive sexuality education requires learner centered and experiential learning methodologies to allow young people to acquire lifelong skills and competencies.

v. Peace and Values Education

Peace and Values Education (PVE) refers to how education can contribute to a better awareness of the root causes of conflicts, violence and absence of peace at the personal, interpersonal, community, national, regional, and international/global levels on the one hand and, on the other hand, about how education can simultaneously cultivate values and attitudes which will encourage individual and social action for building more peaceful families, communities, societies and ultimately a more peaceful world.

PVE is further defined as education that promotes social cohesion, positive values including pluralism and personal responsibility, empathy, critical thinking and action in order to build a more peaceful society (a society that does not use violence to resolve conflicts). PVE is also understood as being the process of acquiring values and knowledge, and developing attitudes, skills and behavior to live in harmony with

oneself, with others and with the natural environment.

Instead of being a stand-alone subject in this curriculum, PVE is integrated as a crosscutting issue in the following three ways:

First, PVE content elements and teaching-and-learning methodological approaches (including tools and resources) are mainstreamed in different subjects.

Second, PVE is integrated in all other subjects through infusion of its specific teaching-and-learning methodological approaches (including tools and resources).

Third, PVE is integrated in all subjects by making Peace and Values an everyday life practice and by requiring all tutors to (1) behave as peaceful facilitators of learning or to be “Guides on the Side” instead of being “Sages on the Stage”; and (2) behave as peace builder models for the students, i.e. PVE role modeling or PVE teaching by examples.

vi. Financial Education

To contribute to the Government of Rwanda’s Vision 2020, the Financial Sector Development Program (FSDP) has been recognized as one of the key components to drive the country forward. A crucial component of FSDP II’s plan is to increase financial inclusion which can be attained through financial education and financial literacy campaigns.

The integration of Financial Education into the curriculum is aimed at a comprehensive Financial Education program as a precondition for achieving the financial inclusion targets and improved financial capability of Rwandans, so that they can make appropriate financial decisions that best fit the circumstances of their life.

Financial Education will build a strong foundation among the students for responsible money management by developing good planning and saving habits and prepare them for the life cycle events such as entering work force, and managing their own finances after college.

vii. Standardization Culture

Standards are everywhere in our daily life and the benefits that stem from the use of standards do not solely come from their implementation only; but they are rather the product of a “Standard

Culture” when it is firmly rooted in the practices, activities and lifestyle of the citizens. While education is the foundation and strength of our nation, standards are one of the key pillars of sustainable economic development. Therefore, the use of standards must be echoed in our education system and most of our daily life principles. It is in this context that the standardization culture in Rwanda through formal education, will play a vital role in terms of improving the health of the people, economic growth, industrialization, trade and the general welfare of the people through the effective implementation of Standardization, Quality Assurance, Metrology and Testing (SQMT).

viii. Inclusive Education

Inclusive Education is not a marginal issue, but is central to the achievement of high quality education for all learners and the development of more inclusive societies. It is not only about issues of input, such as access and those related to processes such as teacher training but it involves a shift in underlying values and beliefs, along with very specific approaches, positions, and solutions. A broad range of strategies at all levels are needed to realize the right of students with disabilities to inclusive education

Inclusive education is when all students, regardless of any challenges they may have, are placed in the same classroom to receive high quality instruction, interventions and supports that enable them to achieve success in the core curriculum. It is regarded as a balanced, equitable and globally-oriented program that is adaptable according to circumstances. In its essence, inclusion is based on the right of all learners to a quality and equitable education that meets their basic learning needs, and understands the diversity of backgrounds and abilities as a learning opportunity.

Thus, inclusive education is perceived as the core of Education For All (EFA) and must be an integral part of the TTC Curriculum review, from vision to practices. All students’ learning needs are to be considered and accommodated. To be successful, it entails a range of issues including tutor’s positive attitude, adapting learning resources, differentiation of teaching/learning methods and working together. Overall, the benefits of an inclusive curriculum extend to all students.

Table 1: Subjects and Cross-Cutting Issues

The cross cutting issues have been integrated in the subjects as shown in table 1 below.

Cross-Cutting Issue	Subject incoorporating aspects of the cross-cutting issue
Genocide Studies	Social Studies, English, Kinyarwanda, French, Religious Education, Music, Information and Communication Technology, History, Geography
Environment and Sustainability	Integrated Sciences, Social Studies, English, French, Kinyarwanda, Kiswahili, Biology, Geography, Chemistry, Physics, Economics and Creative performance
Gender	Social Studies, French, English, Kiranyarwanda, Kiswahili, Entrepreneurship, Art and Craft, ICT, Music, Physical Education, Religious Education, History and Citizenship and Foundations of Education
Comprehensive Sexuality Education	Social Studies, Integrated Sciences, English, French, Kiswahili, Kinyarwanda, Biology and History
Peace and Values Education	All Subjects
Financial Education	Mathemaics, Entrepreneurship, Social Studies, ICT, Economics and Foundations of Education
Standardization Culture	All subjects
Inclusive Education	All Subjects

8. The TTC Curriculum Development Process

Curriculum development is a process that involves three critical levels. These include the following:

1. **Macro level-** this is the national level where policies are formulated to advise curriculum development. Curriculum has to be developed in line with the National Goals of Education because it is through these goals that the government indicates what it aspires for its citizens. It is at this level that the Education Sector objectives are formulated in line with the Goals of Education. These objectives form the reference point for the inclusion of education issues into other Rwandan Policy Documents. Examination programmes are also decided upon at this point. The outcomes at this level steer curriculum development at the subsequent meso and micro levels.
2. **Meso level-** at this point the REB Curriculum officers, TTC tutors and other stakeholders come up with the curriculum outcomes. They design the curriculum by coming up with scope and sequence charts referred to as subject overviews. The overview summarizes the topic area, the sub topic area and the competences to be acquired in the three years. These are arranged in a logical sequence both vertically and horizontally. It is from the identified competences that the panelists formulate key competences and units to be included in the syllabus. They also identify content and learning activities. The curriculum support materials such as textbooks, trainer and trainee guides are also developed at this level.
3. **Micro level -** this is at the classroom level where the curriculum has to be implemented. A curriculum is only as good as its implementation. If the implementation is not properly organized, then the curriculum will not achieve its intended

goals. The tutors have to be properly oriented to implement the curriculum.

It is important to adopt a dynamic and holistic approach to curriculum development. The process begins by examining the goals and aims of education in society, perceived as the broad purpose of education in Rwanda. The process is dynamic to ensure that emerging needs of Rwanda are addressed through the curriculum. The curriculum development and review process involves the following stages:

- a) Needs assessment;
- b) Policy formulation;
- c) Curriculum design and syllabus development;
- d) Approval of the curriculum and syllabus;
- e) Development and approval of curriculum support materials;
- f) Capacity building of curriculum implementers/ Orientation of implementers/users.
- g) Piloting of the curriculum
- h) Implementation of the curriculum.
- l) Monitoring and evaluation of the curriculum.

Rwanda TTC Curriculum Development Process

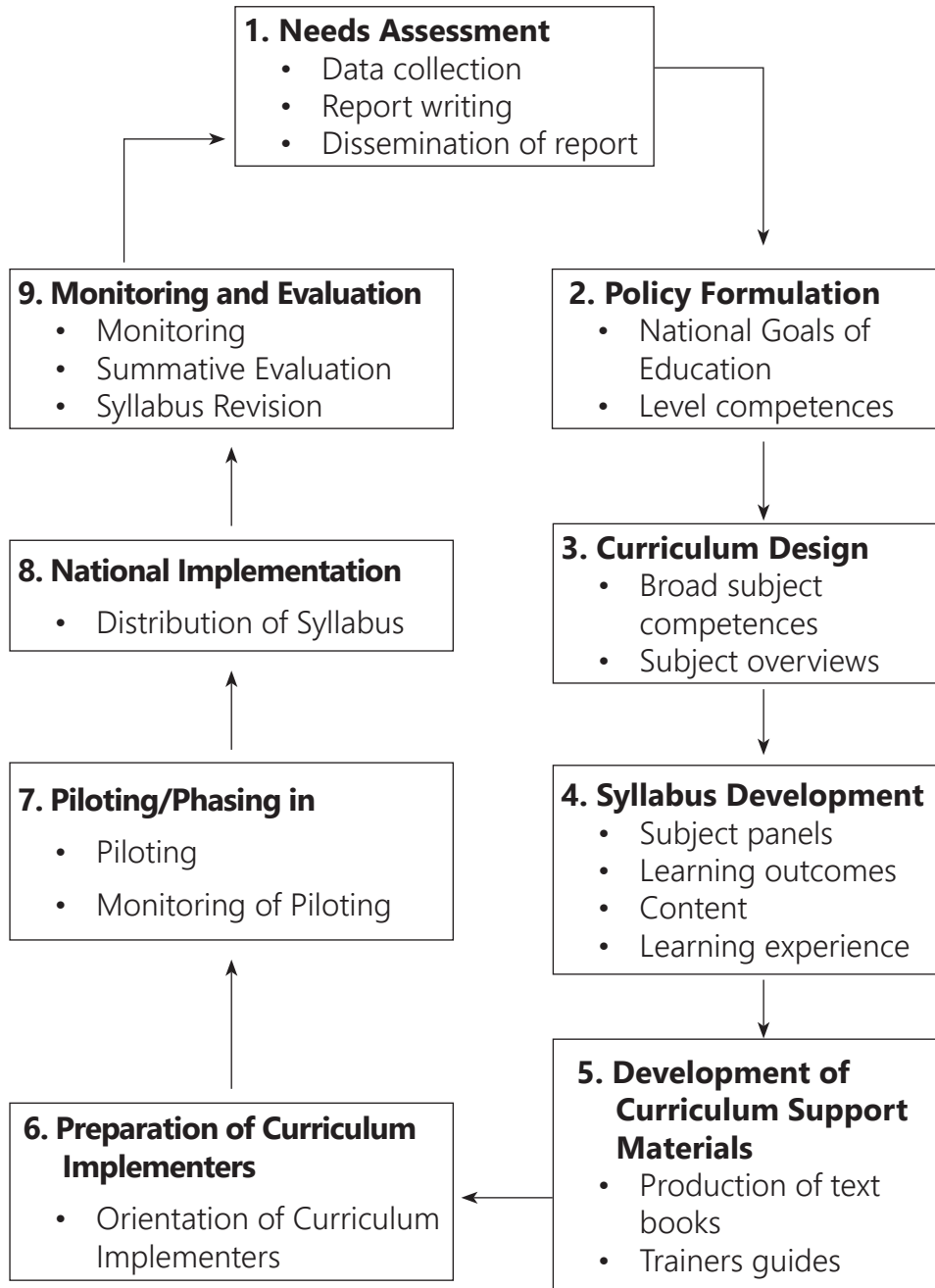


Figure 2: Curriculum Development Cycle (Adapted from EAC, 2014)

9. Quality Teaching Standards

Researches on teacher education show that the expectations of what teachers should know and do have changed over time (Darling-Hammond, 1994; Levine, 2006). Teachers have to possess a wide range of knowledge, skills, abilities, and dispositions required to perform the many teacher-related complex tasks. Darling-Hammond (1994) suggests that “teacher education policies must ensure that all teachers have a stronger understanding of how students learn and develop, how assessment can be used to evaluate what they know and how they learn, how a variety of curricular and instruction strategies can address their needs, and how changes in college and classroom organization can support their growth and achievement”. Teaching standards provide a consistent and supportive framework for teachers, principals, and teacher educators to reflect on and articulate their knowledge, skills, and attributes in their fields and guide their professional practice and development.

9.1 Global Teaching Standards

Globally, many education systems have designed high quality-teaching standards that support professional growth and development of teachers. The quality standards also have been used for purposes on aligning teacher education curriculum, licensing of teachers and basis for upgrade of teachers (Darling-Hammond, 2006; Levine, 2006; Morzano, et al., 2001; Barber and Mourshed, 2007). The main driver that determines student achievement is the quality of a teacher and the principal as instructional leader. Wright, Hornand Sanders (1997) cited in Morzano et al. (2001) found that, “If the teacher is ineffective, students under the teacher’s tutelage will show inadequate progress academically regardless of how similar or different they are regarding their academic achievement”.

A teacher’s profile viewed from a competence-based curriculum by Serdenciuc (2013) suggests that a teacher needs to have:

“Ability to design learning experiences taking into account the compatibility between the students’ needs and education offer, related to efficient task performing in real situations; having a critical approach

to reality; helping students to transfer outcomes of learning outside the classroom; using technology in alternative ways. Open to change, stimulating active forms of learning; designer of effective learning opportunities; shifting emphasis from knowing to doing inside and outside the classroom; fair and respectful relations with students; considering assessment as an integral part of the learning”.

9.2 Teaching Standards in the Rwandan Context -

By introducing a competence-based curriculum, Rwanda has joined other nations which consider a competence-based education as a promising path towards achievement of the country’s National Goals of Education, Vision 2020, and Sustainable Development Goals.

The shifting from a traditional way of schooling, a content-centered to a focus on competences, on performance skill-based, on inquiry, discovery and application of knowledge, than on the dissemination of information, has implications on teacher education and teacher professional development in Rwanda. The adoption of a competence-based curriculum requires Rwandan teachers to shift from the perspective that knowing the content alone is not adequate but doing and applying that knowledge is critical as well as behaving appropriately. In addition, teachers have to prepare students to be prepared for the measurement of the knowledge which require systematic application of what they are learning (Serdenciuc, 2013).

In order to successfully implement a competence-based curriculum, there is need for highly reflective, knowledgeable, professional teachers that have knowledge and confidence in a range of modern pedagogical approaches. The teacher education curriculum in Rwanda is being reviewed to incorporate emerging issues and hence be relevant. Previously the format of training allocates limited time to teaching practice, leading to poor quality products and poor competence for the job. The reviewed curriculum will allow the student teacher to be sufficiently exposed to the practice teaching, before school attachment in the third year of the course.

The suggested quality standards are meant to provide a consistent and support framework for tutors and principals in order to ensure their

performances are measured against consistent and comprehensive standards indicators that are meant to lead to significant student achievements.

9.3 Quality Teaching Standards in Rwanda

Teaching standards for Rwandan teachers are aimed at setting high quality effective teaching that is meant to improve overall students' achievement. The standards provide a consistent and supportive framework that teachers could reflect on their practice, use it to identify professional growth targets for further learning. Each teaching standard has descriptors in the form of competence indicators. The competence indicators are detailed descriptions of the knowledge, skills and attributes associated with each teaching standard. In the context of competences, the knowledge defines what tutors must know to teach the student teachers effectively. Attributes represent the attitudes, values and beliefs that play a critical role in teachers' practice. Attributes are foundational to teachers' professional practice and have been shown in the research to exert a significant influence on teaching and learning. Skills describe the application of teachers' attributes and knowledge in the classroom. Skills are the observable and measurable behaviors that represent what teachers believe, value and know about teaching and learning.

A Rwandan teacher should have six quality standards as follows:

Standard No.1: Teacher as an expert of a competence-based curriculum

Competence indicators;

The Teacher:

- has understanding of a competence-based education and how it works,
- has knowledge of Basic Education Competence-Based Curriculum, core/basic curriculum competences, competence indicators and generic competences,
- should demonstrate the ability to develop and integrate the cross-cutting issues within and across subject areas.

Standard No. 2: Teacher as an educator

Competence indicators:

The teacher should:

- Use a range of different interventions/methods/techniques for effective classroom teaching and learning management,
- Show a thorough understanding of the child's background, developmental stages, interests, motivations and problems and can adjust his/her actions and the learning environment to the different needs of the learners,
- Use the phases and dynamics of group processes,
- Understand and use major types of special needs and related interventions,
- Master subject content,
- - Show concern on promotion of nonviolence; conflict resolution and management, peace-making and peace building ,
- Act as a role model by showing empathy, trust, friendliness and peacefulness,
- Enhance and stimulates cognitive, social-emotional, physical and moral development of the children,
- Apply interventions that contribute to an inclusive, conducive, safe and peaceful learning environment for individual learners and the whole class (including students with special educational needs, males and females, student from different background, etc.),
- Apply interventions that contribute to the social-emotional and moral development of the learners
- Observe and recognize (special) needs of individual learners and the class as a whole,
- Planning activities/experiences referring to the needs and levels of the learner,
- Managing and organize teaching and learning activities and creating appropriate resources,

- Effective and supportive communication with children and their parents,
- Promote problem solving in life situation,
- Use assessment methods that are appropriate for the learner's age,
- Use ICT as a tool in education,
- Demonstrate ethical and moral responsibility including in leadership and management,
- Practice appropriate civic, moral and or religious norms and value,
- - Demonstrate respect for the cultural identity, heritage and values of themselves and others.

Standard No. 3: Teacher as a communicator and connector

Competence indicators:

The teacher should:

- Use principles of language as well as language transition and subject integrated learning,
- Use a variety of communication skills (listening, writing, speaking, reading) and presentations (volume, articulation and facial expressions) techniques,
- Use the available range of modern means of communication and channels, like internet and e-mail, and their advantages and disadvantages and how to use them,
- Have language proficiency in both mother tongue and language of instruction as well as other official languages, act and communicate in a positive and peaceful way with the learners and create positive interaction with the learners,
- React open-mindedly and respectfully to other views and opinions,
- Show clear, respectful and peaceful communication with colleagues, parents and representatives of the community/ society.

Standard No 4: Teacher as a guide, an organizer and a facilitator of the learning process and learning environment.

Competence indicators:

The teacher should:

- Use the core principles of special needs education and the most common special needs in Rwanda,
- Advocate for gender balance and equality in solving current gender issues in Rwanda,
- Use appropriately theories of learning to develop learner's competences using a variety of learner-centered teaching and learning techniques,
- Prepare and use effectively available teaching and learning resources in and around the school,
- Apply a wide range of assessment methods (feedback, formative and summative assessment, etc.) and their purposes for proper learning,
- Abide by school and national education policies, and human values,
- Facilitate and guide the learners' holistic development taking into account the individual differences and (special) educational needs,
- Organize and manage lessons and school activities effectively to maximize instructional time and student learning,
- Collect and analyze assessment data, adjust teaching in response and share the data with colleagues and parents.

Standard No. 5: Teacher as an innovator and reflective practitioner

Competence indicators:

The teacher should

- Reflect on the processes and adjust where need be,
- Give tangible and creative feedback on school attachment activities,
- Find information related to the profession and provides

solutions,

- Constantly question his/her behaviour and teaching through reflective practice,
- Use small scale reflective practice to contribute to ongoing improvement of the teaching and the school practice,
- Identify, select and use relevant documents (like National Professional Standards for Teachers), new trends and insights related to the profession that help to identify and plan professional learning needs,
- Progress to tertiary education.

Standard No. 6: Teacher as a subject expert

a) Teacher as an expert in Early Childhood and Lower Primary Education (ECLPE)

Competence indicators:

The teacher should

- Consider different stages of a young child's development and bring the child to the next stage by a variety of teaching and learning approaches,
- Apply holistic, thematic and play-based learning related to early childhood education,
- Make a connection with the learning areas and educate the learners in all subjects in the language of instruction,
- Appreciate the importance and benefits of play-based learning and thematic approach to facilitate learning,,
- Use a variety of assessment methods for young children to monitor the learning progress,
- Advocate for environmental awareness and teach the children under their care to be aware of their environment and how to respect it,
- Develop required mathematical skills and concepts into children under their care and make the learning enjoyable to them,

- Encourage appropriately the children under their care to develop sensory ability, physical coordination, fine and gross motor skills as well as good health habits,
- Present acquired creative arts expression skills and make them be appreciated by the children under their care,
- Use language skills in mother tongue and English language so that the children under their care develop early literacy: listening, speaking, reading and writing,
- Think Critically, act creatively and propose solutions to emerging problems,
- Manage and organize teaching and learning activities in corners using and creating appropriate resources for the age group,
- Give a friendly and approachable care to a child, react flexibly and tolerantly to a child's behaviour and stimulate a child's creativity,
- Use play-based learning in effective way,
- Collaborate with parents in order to ensure a joint responsibility for a child's proper development,
- Use assessment methods that are appropriate for the child's age with emphasis on formative assessment,
- Demonstrate a variety of teaching activities that enhance a smooth transition from Kinyarwanda to English as a language of instruction,
- Stimulate Kinyarwanda and English learning in such a way that the children by the end of P3 are able to make the transfer to English as a language of instruction in upper primary,
- Progress to teaching related tertiary education.

b) Teacher as an expert in Language Education (LE)

Competence indicators:

The teacher should

- Express themselves fluently, and with confidence, in speaking and writing using correct vocabulary and grammar appropriate to their level and relevant to their everyday interactions,

- Listen to, read and view, analyze, interpret and summarize a range of literary and non-literary texts in the target language,
- Use teaching/learning methods that enhance the learning of languages,
- Communicate information, ideas and feelings appropriately and effectively in a range of different social settings and cultural context,
- Integrate the official languages to show national consciousness, strong sense of belonging and patriotic spirit,
- Strive for harmonious and cohesive society and working with people from diverse backgrounds: social, cultural, political, linguistic and religious,
- Prepare and deliver coherent speeches on a range of themes for different audiences, purposes and occasions and critically appraise those of others,
- Apply different techniques of language assessment,
- Reflect on the daily teaching-learning processes and practices for continuous professional development,
- Stimulate learners' critical thinking, problem solving, creativity and effective communication,
- Demonstrate a variety of teaching/learning activities that enhance languages,
- Link the content of language with other subjects and connect in real life situation,
- Integrate cross-cutting issues (comprehensive sexuality education, Environment and Sustainability, financial education, Genocide studies, Gender, inclusive education, Peace and Values Education, Standardization Culture) in the teaching/learning of language,
- Contribute to the development of the country through acquisition of financial, vocational and entrepreneurial skills in business development,
- Analyze and evaluate rationally and constructively to resolve problems,

- Demonstrate the knowledge and skills required to progress to the next stage of their education (university).

c) Teacher as an expert in Sciences and Mathematics Education (SME)

Competence indicators:

The teacher should

- Apply mathematical concepts involving geometry, algebraic expressions and measurement of lengths, areas and volumes of different shapes and figures,
- Have a thorough Science and mathematics knowledge that enables him/her to develop the teaching/learning materials, lesson planning, to deliver the lesson and connect with his/her daily life activities using English as the language of instruction,
- Appreciate the importance and benefits of integration play-based learning in his/her teaching/learning Sciences and Mathematics,
- Describe, explain, analyze, interpret and make decision on scientific data,
- Work in systematic way to develop clear, logical, coherent and creative reasoning and imagination in science and mathematics,
- Use assessment methods related to science and mathematics to facilitate learning,
- Plan and Practice experiments of science and mathematics referring to the needs and levels of the learner,
- Manage teaching and learning activities and develop appropriate resources related to science and mathematics,
- Stimulate the learner's critical thinking, problem solving and creativity,
- Stimulate English in the teaching/learning of Sciences and Mathematics by considering the transition from Kinyarwanda to English as medium of Instruction,
- Use appropriate science and mathematics methods/techniques

to assess learners and give constructive feedback to the whole class,

- Link the content of science and mathematics with other subjects and connect in real life situation,
- Integrate cross-cutting issues (comprehensive sexuality education, Environment and Sustainability, financial education, Genocide studies, Gender, inclusive education, Peace and Values Education, Standardization Culture) in the teaching/learning of Science and Mathematics,
- Make children aware of themselves physically and biologically within the world we live,
- Reflect positive attitudes towards environmental protection and conservation,
- Develop positive attitudes, practical skills and basic scientific concepts in their daily life,
- Use ICT tools to solve Science and mathematical problems,
- Demonstrate the knowledge and skills required to progress to the next stage of their education (university).

d) Teacher as an expert in Social Studies Education (SSE)

Competence indicators:

The teacher should:

- Demonstrate more abstract and complex thinking to inquire about the world and themselves including how past and present historical, geographical, sociological and cultural events, processes and systems shape our future,
- Show a strong sense of cultural identity and belongingness to society,
- Have a thorough subject knowledge that enables him/her to develop competences embedded in the upper primary social and religious studies curriculum, creative arts curriculum as well as physical education and sport curriculum,
- Express a strong sense of commitment to students, community and the society,

- Demonstrate an understanding of sustainable growth, conservation, reconstruction and development of the country in the regional and global context,
- Evaluate national, social, economic and political issues within the regional and global context and contribute to the national debate,
- Demonstrate ethical and moral responsibility including in leadership and management,
- Practice appropriate civic and moral norms and values of the society,
- Demonstrate respect for the cultural identity, heritage and values of themselves and others,
- Demonstrate curiosity in researching their area of study and creativity in presenting their findings,
- Demonstrate the emotional literacy and life skills required to make responsible decisions and choices especially in relation to personal nutrition, hygiene and fatal diseases including HIV/ Aids and Malaria,
- Contribute to the development of the country through acquisition of financial, vocational and entrepreneurial skills in business development,
- Analyze and evaluate rationally and constructively to resolve problems,
- Perform musical, dramatic and sport activities,
- Show national consciousness, strong sense of belonging and patriotic spirit,
- Strive for harmonious and cohesive society and working with people from diverse social, cultural, political, linguistic and religious backgrounds,
- Connect historical events with the current issues,
- Implement social and religious, creative arts and physical education upper primary curriculum content in classroom settings,

- Empower learners with knowledge, skills and attitudes in order to promote the culture of peace, integrity, tolerance, reconciliation at school, community and the society,
- Develop learners’ knowledge, skills and attitudes in creative performance and physical education as powerful means of shaping individual personality that is required for community and society sustainability,
- Demonstrate the knowledge and skills required to progress to the next stage of their education (university).

The figure below summarizes the quality standards for a teacher in Rwanda

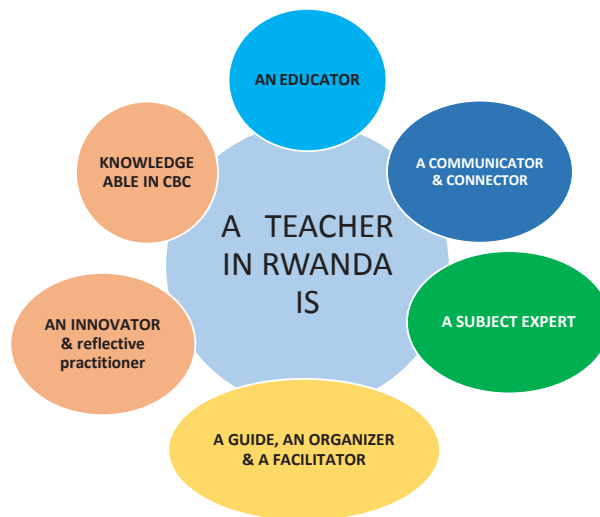


Figure 3: Standards of a Teacher in Rwanda

Each standard has to be performed equally to different target options and in a variety of ways. The teacher as an expert refers to a particular subject but also to the crosscutting subjects such as Entrepreneurship, Foundation of Education and crosscutting issues, such as; Comprehensive sexuality, Education, Environment and Sustainability, Financial Education, Genocide Studies, Peace and Value Education and Standardization Culture.

10. Competences in the TTC Curriculum

A competence is the ability to use an appropriate combination of knowledge, skills, attitudes, and values to accomplish a particular task successfully. That is, the ability to apply learning with confidence in a range of situations. There are two categories of competences in a competence based curriculum; these are basic and generic competences. They are both built into the subject syllabi.

A competence- based curriculum takes learning to a higher level by providing challenging and engaging learning experiences which require deep thinking rather than just memorization. Its focus is on what student teachers can do rather than just what they know. A Competence Based Curriculum should be designed to emphasize the importance of not only developing skills and knowledge but also applying them to real life situations.

10.1 Basic Competences

These are the core, key or vital competences identified in line with the vision of the teacher education in Rwanda and based on the expectations and aspirations of the country. These include the following:

- Pedagogical competence
- Literacy
- Numeracy
- Information and Communication Technology
- Citizenship and National Identity
- Entrepreneurship and Business Development
- Science and Technology
- Communication in the official languages

The listed basic competences are described in table 2.

Table 2: Basic Competences and their Descriptors

Competences	Competence Descriptors: what the student teachers are able to demonstrate during the learning process
Professional/ Pedagogical competencies	<ul style="list-style-type: none"> - Ability of an individual to use a coordinated, synergistic combinations of tangible resources such as; instructional materials and intangible resources such as knowledge, skills and experience to achieve efficiency and, or effectiveness in pedagogy. - This basic competence is the backbone of professional competences that the student teacher acquires in Foundations of Education, Special Needs and Inclusive Education and in different Teaching Methods and Practice of subjects taught in pre-primary and primary schools. A teacher with pedagogical/professional competences will have ability to: <ul style="list-style-type: none"> - Effectively cater for all learners of different ages and needs - Set relevant learning activities or tasks that are age appropriate and suitable to develop subject and generic competences - Set relevant tasks for formative assessment and effectively use assessment results to improve learner’s performances - Make lesson plan, scheme of work and other pedagogical documents as required - Facilitate different sessions/lessons using well selected active methods, techniques and strategies

	<ul style="list-style-type: none"> - Demonstrate creativity, problem solving, innovation skills and sense of initiative when making and using teaching and learning resources. - Use preventative and responsive classroom management strategies to create a conducive, peaceful and safe learning environment - Observe a lesson taught by a fellow teacher and provide constructive feedback - Use methods and principles of guidance and counseling to understand learners' emotions and detect their abilities, talents, as well as deal with behavioral problems.
Literacy	<p>Reading a variety of texts accurately and fast.</p> <p>Expressing ideas, messages and events through writing legible texts in good hand-writing with correctly spelt words.</p> <p>Communicating ideas effectively through speaking using correct phonetics of words.</p> <p>Listening carefully for understanding and seeking clarification when necessary</p>
Numeracy	<p>Computing accurately using the four mathematical operations.</p> <p>Manipulating numbers, mathematical symbols, quantities, shapes and figures to accomplish a task involving calculations, measurements and estimations.</p> <p>Use numerical patterns and relations to solve problems related to everyday activities like commercial context and financial management. Interpreting basic statistical data using tables, diagrams, charts and graphs.</p>

<p>ICT and Digital competence</p>	<p>Locating, extracting, recording and interpreting information from various sources,</p> <p>Assessing, retrieving and exchanging information via internet or cell phones,</p> <p>Using cell phones and internet for leisure, for money transactions and for teaching,</p> <p>Using ICT as a teaching tool,</p> <p>Using computer keyboard and mouse to write and store information,</p> <p>Using information and communication technologies to enhance learning.</p>
<p>Citizenship and National Identity</p>	<p>Relating the impact of historical events on past and present national and cultural identity.</p> <p>Understanding the historical and cultural roots of Rwandan society and how the local superstructure functions in relation to the global environment.</p> <p>Demonstrating respect for cultural identities and expressing the role of the national language in social and cultural context.</p> <p>Advocating for the historical, cultural and geographical heritage of the nation within the global dimensions.</p> <p>Showing national consciousness, a strong sense of belonging and patriotic spirit.</p> <p>Advocating for a harmonious and cohesive society and working with people from diverse cultural backgrounds.</p>

<p>Entrepreneurship and Business development</p>	<p>Applying entrepreneurial attitudes and approaches to challenges and opportunities in school and in life.</p> <p>Understanding obligations of parties involved in employment.</p> <p>Planning and managing micro projects and small and medium enterprises.</p> <p>Creation of employment and keeping proper books of accounts.</p> <p>Taking risks in business ventures and in other initiatives.</p> <p>Evaluating resources needed for a business.</p>
<p>Science and Technology</p>	<p>Applying science and technology skills to solve practical problems encountered in everyday life including efficient and effective performance of a given task.</p> <p>Develop a sense of curiosity, inquisitiveness and research to explain theories, hypotheses and natural phenomena</p> <p>Reasoning deductively and inductively in a logical manner.</p> <p>Using and experimenting with a range of objects and tools of science and technology and drawing appropriate conclusions.</p>
<p>Communication in the official languages</p>	<p>Communicating and conveying confidently and effectively information and ideas through speaking and writing and other forms of communication using correct language structure and relevant vocabulary effectively in a range of social and cultural contexts.</p> <p>Comprehending language through listening and reading.</p>

	<p>Using oral and written language to discuss, argue and debate a variety of themes in a logical and appealing manner.</p> <p>Communicate clearly and confidently using a range of linguistic, symbolic, representational and physical expression.</p> <p>Developing and communicating formal messages and speech appropriate to the target recipient or audience.</p>
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10.2 Generic Competences

Generic competences are the competences which are transferrable and applicable to a range of subjects and situations including employment. They involve and promote the development of higher order thinking skills. In doing so they boost subject learning as well as being highly valuable in themselves. They are seen as generic because they apply across all curricular and can be developed in all the subjects studied.

The generic competences help students deepen their understanding of subjects and apply their subject learning in a range of situations. They therefore contribute to the development of subject competence. Their descriptors are given in table 3.

Table 3: Generic competences and their descriptors

Generic Competences	Competence Descriptors: what learners are able to demonstrate during the learning process
Critical thinking	<p>Think reflectively, broadly and logically about challenges encountered in all situations.</p> <p>Weigh up evidence and make appropriate decisions based on experience and relevant learning.</p> <p>Think imaginatively and evaluate ideas in a meaningful way before arriving at a conclusion.</p> <p>Explore and evaluate alternative explanations to those presented by others.</p>
Research and problem solving	<p>Be resourceful in finding answers to questions and solutions to problems.</p> <p>Produce new knowledge based on research of existing information and concepts and sound judgement in developing viable solutions.</p> <p>Explain phenomena based on findings from information gathered or provided.</p>
Communication	<p>Communicating and conveying confidently and effectively information and ideas through speaking and writing and other forms of communication using correct language structure and relevant vocabulary in a range of social and cultural contexts.</p> <p>Comprehending language through listening and reading.</p> <p>Using oral and written language to discuss, argue and debate a variety of themes in a logical and appealing manner.</p>

	<p>Communicate clearly and confidently using a range of linguistic, symbolic, representational and physical expression.</p> <p>Developing and communicating formal messages and speech appropriate to the target recipient or audience.</p>
<p>Cooperation, interpersonal management, life skills</p>	<p>Co-operating with others as a team in whatever task assigned.</p> <p>Adapting to different situations including the job market.</p> <p>Demonstrating a sense of personal and social responsibility and making ethical decisions and judgments.</p> <p>Respect others' rights, views and feelings.</p> <p>Having positive ethical and moral attitudes with socially acceptable behaviour.</p> <p>Perform practical activities related to environmental conservation and protection.</p> <p>Advocating for personal, family and community health, hygiene and nutrition.</p> <p>Developing motor skills to perform a variety of physical activities for fitness, health, leisure and social interaction.</p>
<p>Social competence (intra and inter personal skill)</p>	<p>Ability in facilitating interaction and communication with others</p> <p>Intra skills refer to the skills of knowing and living with oneself</p> <p>Inter personal skills deal with knowing and living with others</p>

<p>Creativity and innovation</p>	<p>Ability to develop new ideas that are unique, useful and worthy of further elaboration</p> <p>Ability to think creatively, calling into question the assumptions underlying our customary habitual ways of thinking and acting and then being ready to think and act differently on the basis of critical questioning</p> <p>Responding creatively to different challenges encountered in life.</p> <p>Use imagination beyond knowledge provided to generate new ideas to enrich learning.</p> <p>Take initiative to explore challenges and ideas in order to construct new concepts.</p> <p>Generate original ideas and apply them in learning situations. Demonstrate resilience when faced with learning challenges.</p>
<p>Lifelong learning</p>	<p>Taking initiative to update knowledge and skills with minimum external support.</p> <p>Coping with the evolution of knowledge and technology advances for personal fulfilment.</p> <p>Seeking out acquaintances more knowledgeable in areas that need personal improvement and development.</p> <p>Exploiting all opportunities available to improve on knowledge and skills.</p>

11. Developing Competences

11.1. Developing competences in all subjects

Competences cannot be taught directly like subject knowledge. They are acquired over time through the cumulative effect of a learner centered approach. They require students to practice and employ the generic competences throughout the subjects that they study. They require the syllabi to be constructed with competences at their centre. They require teachers to adopt approaches that encourage and enable students to think critically, to carry out research, to solve problems, to be creative and innovative, to communicate, to co-operate and to become life-long learners.

The subject content provides a necessary context for students to develop the competences and the basic and generic competences help deepen students' understanding of the subject and build students' ability to apply their learning in practical situations. In this regard the curriculum is an important way of raising standards and making the curriculum more relevant. The performance in a subject requires a student to have achieved an appropriate level in terms of all two categories of competences.

11.2: Higher Order Thinking Skills (HOTS)

Higher Order Thinking Skills (HOTS) are central to a competence-based curriculum because they develop the understanding that enables learning to be applied effectively. Learning objectives use more challenging action verbs so that students are required to think more deeply and to develop higher order thinking skills, as opposed to the knowledge and understanding learning objectives which relate to memorization and explanation (Basic CBC, 2015).

Education theory relating to HOTS, starting with Bloom's Taxonomy (1956) Norman Webb (2009)'s *Depth of Knowledge Guide* and the *Structure of Observed Learning Outcomes (SOLO)*, Biggs and Collis (1982) all show a similar pattern, ranging from memorization and recall through to the higher levels of thinking which lead to the deep and lasting learning students need from the curriculum.

High levels of thinking are crucial for a successful knowledge-based economy. It is through the focus on competences and higher order thinking skills in a competence-based curriculum that learners' skills and abilities are developed and as a consequence, their knowledge and understanding are deepened.

12. Assessment

12.1 Introduction

Educational assessment is the process of determining the extent to which students have acquired specified knowledge, skills, values, attitudes, abilities and competences. The term “specified” means that they have been pre-determined before the subject begins. Assessment includes methods that tutors use to determine what students know and what they can do. It is an integral part of the national curriculum and an essential element of the teaching learning process. The Curriculum and Assessment Policy (2014) outlines the principles for both informal and formal assessment, in classrooms and national examinations, and for different purposes. Assessment is an integral part of the teaching learning process.

12.2 Purposes of Assessment

The aim of assessment is to establish the extent to which the student has acquired the expected competences. Assessment helps to diagnose and monitor the progress of a student, and provides feedback to students, parents, tutors and curriculum designers and implementers. This helps them plan learning in terms of what the student needs in order to continue advancing and fill gaps in understanding or performance. It also provides guidance on the selection of future subjects, certification and promotion to the next progression level.

In every curriculum implementation, assessment is expected to assess the extent to which learning outcomes have been achieved. The assessment provides the basis for advising teachers on pedagogical methods and deliberate intervention. Assessment focuses on the extent to which competence (the ability to carry out a certain task) has been acquired as opposed to laying emphasis on the acquisition of knowledge of the concepts. In most cases assessment is organized in a national or classroom level. The assessment needs to use a variety of ways to collect information about a student’s progress in all subjects. The collection of a student’s information should be a continuous process and should be recorded efficiently and effectively. The tutor should give importance to each student’s way of responding and learning and

the span of time he or she takes to do so. The tutor should provide timely and effective feedback that will lead to positive action and help the student. When a tutor is providing reports on a continuous basis he or she should be sensitive to every student's response.

All over the world, educators have taken notice of the fact that assessment is often overlooked when planning and implementing curriculum change.

12.3 Competence-Based Assessment

Competence based assessment focuses on knowledge, skills, attitude and values. It is aimed at determining the capability of a student teacher to apply a set of related knowledge, skills and abilities required to successfully perform critical work, functions or tasks in a defined setting.

Competence based assessment is a process whereby the students are given an opportunity to put into practice what they have learnt. It is a collection of evidence demonstrating how a student can perform or behave according to a specific standard. The student can be provided with a challenge and then be allowed to show how to resolve the problem. It can be a complex situation related to their everyday life and they are asked to put into practice what has been learnt (knowledge, skills and attitude) in order to resolve or overcome the situation.

Competence based assessment is based on the principle of assessing people as they use their knowledge and skills in a given situation. The strategy aims at providing a way of building the skills and knowledge that students require to perform identified tasks after going through a learning experience. It is a key element of the on-going process of continually building knowledge and skills that provides a roadmap for developing students for their future roles based on their acquired and developed knowledge and skills.

The centre of focus in competence based assessment is that it is based on actual skills and knowledge that a person can practically demonstrate.

Assessment of competences is criterion referenced, as compared to assessment of an objective based curriculum which is norm referenced. Criterion referenced assessment focuses on determining whether each student has achieved specific skills or concepts, norm referenced assessment focuses on ranking students with respect to the achievement of others in broad areas of knowledge. Assessing competence in a learning situation is necessary to ensure that students are both confident and competent in their learning process. Individuals are considered competent when they are able to consistently apply their knowledge and skills to the standard of performance required in the college.

12.4 Guiding Principles of Competence Based Assessment

The following principles are the essential characteristics of assessment which complement and support the content in the curriculum and which enable students to understand their progress and make good choices for their future. Assessment forms the basis for an equitable system on which to make decisions at individual, college and national levels.

a) Validity

An assessment is valid when it measures what it was meant for. Validity is therefore the degree to which evidence and theory support the interpretation of assessment scores entailed by the proposed uses of assessment. It is important to ensure that the scores obtained from assessments are used according to the intended purpose of the assessment. The assessment score must reflect the student's actual ability in the assessed criteria.

b) Reliability

This refers to the consistency of the interpretation of evidence and results of the assessment. The assessment tasks used should be of similar demands and provide similar opportunities to exhibit all the intended competences being assessed. The instrument used for administering and scoring should be interpreted in the same way by the assessors. Formal assessments and examinations must be

consistent in the results they produce over time and for all learners. In examinations, as far as possible, sources of inconsistency, such as item production, marking and linguistic barriers must be eliminated.

c) Fairness

This refers to how the assessment conditions are applied to all those being assessed. It aims at ensuring that the assessment process does not disadvantage any student and learning outcomes can be achieved through a range of strategies. Assessment should reflect an inclusive view of society and respect for diversity. Assessment tasks should have a balance in relation to gender, faith, cultural and socio-economic factors.

d) Flexibility

This is the process of ensuring the skills, knowledge, abilities and values can be demonstrated in a variety of ways that are suitable to the college.

e) Access

Assessments must be accessible to all learners in terms of space, assessment tools, and assessment methods. It also involves particular attention to the language demands for students.

f) Coherence

It is essential that the assessment measures are coherent across the colleges so that students can be confident that the standards being applied to their work are compatible with standards across the country. To achieve this level of confidence in the design on the assessment the marking or grading must be trustworthy, delivering reliable and valid tests and examinations.

g) Recognition of achievement

Assessments must examine or measure what learners know and can do, and how far they succeed, avoiding focusing on what they are unable to do. Assessments must allow for students to show their knowledge and skills in appropriate ways which may vary with individual students, topic and competence.

h) Support progression

Assessments should yield information about aspects of students' performance which can then be used to diagnose strengths, weaknesses and next steps for the students. Formative assessments which are relevant to the current learning should provide evidence which tutors can use as feedback to students. Competences, which include knowledge, skills and attitudes, should be assessed in the context of practical application in order for progress to be identified and supported.

12.5 Types of Assessment

a) Formative Assessment (Assessment for Learning)

This type of assessment is carried out during the learning process, it provides information that will help to guide a student's development towards a certain desired outcome stated in the curriculum. It provides immediate feedback to both the student and the tutor. In the classroom, the assessment should help the students to learn and should result in actions that are successful in closing the gap between the current and desired achievement levels. Formative assessment uses both formal and informal methods to check whether learning is taking place. This is carried out on a continuous basis to monitor the student's progress and to collect information on their ability to demonstrate the required competences in carrying out tasks.

Purpose of formative assessment

Formative assessment is used for the diagnosis of learning gaps, for corrective measures and feedback of evidence to tutors and students' self-evaluation. The assessment should focus also on abilities, attitudes and aptitudes that do not manifest themselves in the form of the written word. This aims at assessing a student's development in all areas of learning. In this scenario, the goal of formative assessment is to monitor student learning to provide ongoing feedback that can be used by tutors to improve pedagogical strategies and by students for improvement in their learning. The emphasis and focus is to foster skills and habits such as self-assessment, self-monitoring, and self-correction among students. Tutors may refer students to their personal

goals or external standards as references for self-assessment. They may also facilitate self-assessment among students by introducing the use of self-reflection questions and exemplary work for students' consideration. It fosters self-assessment among students and promotes self-awareness of strengths and weaknesses in their learning.

The overall assessment should be followed by descriptive remarks by the tutor responsible for the subject about positive and significant achievements, avoiding negative comments even by implication.

Formative assessment of the TTC Curriculum

Formative assessment can be carried out using multiple modes of assessment and not just limited to a specific method. The tutors should assess the student teachers in all aspects of training including the affective domain as they interact with other students in their daily activities. It is used to gauge how well the students have mastered knowledge, skills, competences and attitudes as specified in the instructional objectives/outcomes.

Instruments for Formative Assessment

These are the instruments used to establish whether learning is taking or has taken place. The tutor designs the tasks/activities in the learning environment to enable the students develop and display their knowledge and understanding through demonstration of acquired skills, competences, attitudes and values. The tasks can be assessed using the following methods: observation, checklists, rating scales, rubrics, questionnaire, project, journaling, portfolio, profiling, question and answer, written continuous assessment, homework and many other methods used in learner centered pedagogy.

b) Summative Assessment (Assessment of Learning)

Summative assessment takes place at the conclusion of a defined instructional period and provides information and feedback that sums up the teaching and learning process. Summative assessments should be the synoptic assessment of learning outcomes.

Synoptic assessment encourages students to show their ability to integrate and apply their skills, knowledge and understanding across

the breadth and depth of the subject. It assesses the student's capability of applying the knowledge and skills gained in one part of the subject to other parts of the subject or across the subject as a whole. Synoptic assessment therefore enhances the links between different parts of a syllabus and reduces compartmentalized learning. It seeks to develop critical and inventive thinking in students. This competence constitutes the abilities of sound reasoning, decision making, reflective thinking, curiosity, creativity, and managing complexities and ambiguities. This holistic learning experience is more meaningful to students as they appreciate that knowledge and skills in various parts of a subject or across subjects are not entirely independent of each other. This enhances the utilization of competences acquired through the formal and non-formal curriculum.

Summative assessments are generally evaluative, rather than diagnostic, they evaluate the effectiveness of educational programs, measure progress towards improvement goals, or make course-placement decisions.

Purpose of Summative Assessment

Summative assessments are used to evaluate student learning, skill acquisition, and academic achievement at the conclusion of a defined instructional period, typically at the end of a learning cycle, by comparing it against some standard or benchmark. In Rwanda, summative assessment for teacher education will be at the end of every academic year with the national examination at the end of the third year of training. Summative assessment is used for placement and certification. It is used to record a judgment of the competence or performance of a student. The results are also used for the ranking or grading of students and for deciding on progression into the next level of education. It should have an integrative aspect whereby a student must be able to show mastery of all competences.

To enhance effective implementation and testing of the competence based curriculum, the end of year summative assessment average scores for each subject will be weighted and included in the final national examinations grade. It will account for 20% of the final grade in the respective subjects offered in the various options.

Summative Assessment of TTC Curriculum

During the course duration, assessment for learning is done continuously because in a competence based learning, the student teachers are expected to be acquiring competences as they take part in the various college activities such as core- curricular, co- curricular and extra- curricular activities. The student teachers' individual termly and annual reports must show the performance of the student in every subject learnt. However at the end of the course, their academic achievements and acquisition of skills have to be assessed to warrant the awarding of a primary teacher education certificate.

Tables 4, 5, 6 and 7 show the subjects offered in each option at the TTCs, those to be examined nationally at the end of the three years are starred. For the national examination there are five common subjects (Foundations of Education, TMP, Entrepreneurship, English and Kinyarwanda) that will be examined in all options besides the core subjects which are specific to each option.

Table 4: Early Childhood and Lower Primary Education (ECLPE)

SN	SUBJECTS	PERIODS PER WEEK		
		YEAR 1	YEAR 2	YEAR 3
1	Foundations of Education*	6	6	6
2	English*	5	5	5
3	Kinyarwanda*	5	5	5
4	Mathematics*	3	3	3
5	Integrated Science*	4	4	4
6	Social Studies*	4	4	4
7	Creative Performance (Music and Fine Arts)*	4	4	4
8	Physical Education	1	1	1
9	Entrepreneurship*	2	2	2
10	ICT	2	2	2
11	TMP*	7	7	7

12	SNE	2	2	2
13	RE	1	1	1
14	French	4	4	4
15	Kiswahili	1	1	1
16	Co-Curricular	1	1	1
17	Individual Study	8	8	8
	School Attachment			1 st term
	TOTAL	60	60	60

Note: TMP includes TMP of pre-primary and all subjects taught in lower primary.

At the end of year three, students in this option will take national exams in nine (9) subjects: Common subjects (Foundations of Education, Teaching Methods and Practice, English, Kinyarwanda and Entrepreneurship), Mathematics, Integrated sciences, Social Studies and Creative Performance.

Table 5: Social Studies Education (SSE)

SN	SUBJECT	PERIODS PER WEEK		
		YEAR 1	YEAR 2	YEAR 3
1	Foundations of Education*	6	5	5
2	Social studies	11	0	0
3	Geography*		5	5
4	History *		5	5
5	Economics*		5	5
6	Religious education*	4	3	3
7	Creative Performance*	4	4	4
8	Physical Education	2	1	1
9	English*	5	4	4
10	Kinyarwanda*	2	2	2

11	Integrated Science	1	1	1
12	Mathematics	3	3	3
13	French	2	2	2
14	Entrepreneurship*	2	2	2
15	ICT	2	2	2
16	Teaching Methods and Practice (TMP)*	4	4	4
17	Special Needs and Inclusive Education (SN&IE)	2	2	2
18	Kiswahili	1	1	1
19	Co-curricular activities:	1	1	1
20	Individual Study	8	8	8
21	School Attachment			1stTerm
	TOTAL	60	60	60

Note: TMP includes TMP o Social Studies, Religious Educaation, Physical Education and Creative Arts.

At the end of year three, students in this option will take national exams in ten (10) subjects: Common subjects (Foundations of Education, Teaching Methods and Practice, English, Kinyarwanda and Entrepreneurship), Geography, History, Economics, Religious education and Creative Performance.

Table 6: Languages Education (LE)

SN	SUBJECTS	PERIODS PER WEEK		
		YEAR 1	YEAR 2	YEAR 3
1	Foundations of Education *	6	5	5
2	French*	7	7	7
3	English*	7	7	7
4	Kinyarwanda*	5	6	6

5	Creative performance (Music & Fine Arts)*	4	4	4
6	Physical education	1	1	1
7	Integrated Science	1	1	1
8	Mathematics	2	2	2
9	Kiswahili*	5	5	5
10	Entrepreneurship*	2	2	2
11	ICT	2	2	2
12	Teaching Methods and Practice (TMP)*	4	4	4
13	Special Needs Education (SNE)	2	2	2
14	Religious education	1	1	1
15	Social Studies	2	2	2
16	Co-Curricular activities (clubs, sports, public lectures)	1	1	1
17	Individual study (Research, library, Teaching Resource Center, etc)	8	8	8
	School Attachment			1 st Term
	Total	60	60	60

Note: TMP includes TPM of English, Kinyarwanda, French and Creative Arts.

At the end of year three, students in this option will take national exams in eight (8) subjects: common subjects (Foundations of Education, Teaching Methods and Practice, English, Kinyarwanda and Entrepreneurship), French, Kiswahili and Creative performance.

Table 7: Science and Mathematics Education (SME)

SN	SUBJECT	PERIODS PER WEEK		
		Y1	Y2	Y3
1	Foundations of Education *	6	5	5
2	Mathematics*	6	6	6
3	Integrated Sciences	11	0	0
4	Chemistry*	0	5	5
5	Biology*	0	5	5
6	Physics*	0	5	5
7	English*	5	4	4
8	Kinyarwanda*	2	2	2
9	Creative Performance (Music & Fine arts)	2	2	2
10	Physical Education	1	1	1
11	French	2	2	2
12	Entrepreneurship*	2	2	2
13	ICT	2	2	2
14	Teaching Methods and Practice (TMP)*	6	4	4
15	Special Needs Education (SNE)	2	2	2
16	Religious education	1	1	1
17	Kiswahili	1	1	1
18	Social studies	2	2	2
19	Co- Curricular	1	1	1
	Individual Study	8	8	8
	School Attachment			1 st Term
	TOTAL	60	60	60

Note: TMP includes TMP of Mathematics, SET and Physical Education.

At the end of year three, students in this option will take national exams in nine (9) subjects: Common subjects (Foundations of Education, Teaching Methods and Practice, English, Kinyarwanda and Entrepreneurship), Mathematics, Physics, Chemistry and Biology.

The assessment has two parts:

1. National examinations: In the national examinations there will be five common subjects across the options plus the core subjects in the specific options. The common subjects will be; Foundations of Education, TMP, English, Kinyarwanda and Entrepreneurship.

ECLPE: Common subjects + Mathematics, Integrated sciences, Social Studies and Creative Performance (Music and Fine Arts) (9)

SSE: Common subjects + Geography, History, Economics, Religious education and Creative Performance and Physical Education (10)

LE: Common subjects + Creative Performance (Music and Fine Arts), French and Kiswahili (8)

SME: Common subjects + Mathematics, Physics, Chemistry and Biology (9) The subjects with a star will be examined at the end of the three years in TTC(see the table above). Many of these subjects cover the theoretical part. This assessment will cover 70% of the overall assessment.

2. Professional practice: Professional practice is another type of assessment, which contributes 30% to the overall assessment. The student teacher is assessed gradually from year one to year three and records are kept until the completion of the college. The student teacher’s professional marks will be added to the marks obtained from national examinations to

form the overall assessment results.

Aspect of professional practice assessed from year I to Year 3 include:

- Observation : 2marks
- Microteaching:2marks
- Teaching practice in demonstration schools:5 marks
- Final lesson (conducted by the team of internal and external examiners):8 marks for 2 lessons
- School attachment and reflective practice (it should be assessed by both internal and external examiners):13 marks 3 for the report and 10 for actual teaching.

For the student teacher to be awarded the certificate of successful completion of the teacher education course, the overall results should obligatorily contain at least 21 marks from the professional practice assessment results (21/30) which is equivalent to 70%.

12.6 National Examination

The system and process in setting national examinations should be to encompass competence based assessment and to increase rigour in the robustness of outcomes. The examinations must be compatible with the content and the learning outcomes described in the subject syllabi. Special attention should be paid to item writing, standardization of scores and grading which all colleges should adapt for comparability of assessment results.

12.7 Item writing/setting questions

Before developing a question paper, the item writer must ensure that the test or examination questions are tailored towards competence based assessment by doing the following:

- Identify topic areas to be tested from the subject syllabus.
- Outline subject-matter content to be considered as the basis for the test.

- Identify learning outcomes to be measured by the test.
- Prepare a table of specifications.
- Ensure that the verbs used in the formulation of questions do not require memorization or recall answers only but test broad competences as stated in the syllabus.

12.8 Grid and a Blue Print

Assessment specification is a plan of examinations or tests, indicating the number of questions or items and their relative weight according to the learning outcomes across the syllabus.

A blueprint is the plan of the specific test indicating which questions test which concept in the three domains of learning (Cognitive, affective and psychomotor) and at what level of the Revised Bloom's taxonomy. A good blueprint should indicate the following:

- The proportion of test items in the final form that address each curriculum area.
- The proportion of items within a curriculum area that assess different skills, emphasizing higher order thinking skills,
- The proportion of structured, semi structured and open-ended questions.

In a competence based curriculum, questions related to HOTS of the Revised Bloom's Taxonomy should be given more weight than those related to knowledge and comprehension. It is proposed that each subject should have two theory papers. One paper with semi-structured and open-ended questions and one practical examination paper

12.9 Moderation of items or questions

Moderation is the process during which the reliability, correctness and validity of the examination question papers are checked and verified to ensure the standards of the examination questions and the marking scheme. Internal and external moderators should be appointed for each subject to ensure that item developers have abided by the rules of setting a balanced paper.

12.10 Standardization of raw scores and grading

Standardization is using statistical methods to transform raw scores into meaningful comparability among candidates, across different subjects and colleges. Grading is the process by which raw scores are distributed into mark bands within each band represent a particular letter grade. A grade boundary is the minimum mark required for the award of each grade or at which a letter grade can be achieved. The process of grading is an attempt to address inter-subject, inter-option examinations differences in the levels of difficulty and impose a common meaning to reported results. Although national examinations results are used for certification, for selection into the next level of education and for comparative performance, they are also used to measure the attainment level of individual candidates and assessment standards can be set against the criteria.

12.11 Record Keeping

Record keeping involves gathering facts and evidence from assessment instruments and using them to judge the student's performance by assigning an indicator against the set criteria or standard. All scores from all assessment procedures should be carefully recorded and stored in a portfolio because they will contribute to the final assessment of the students. Besides, it will serve as a verification tool for each student that she/he attended the whole learning before undergoing the summative assessment for the subject. Records of a student's performance are kept for remedial actions, for alternative instructional strategy and feed back to the student and to the parents to check the learning progress and to advice accordingly.

13. Rationale and Broad Subject Competences

To train competent teachers, Teacher Training Colleges provide the student teachers with basic, professional and generic competences through subject content. Each subject plays its role in the acquisition of the competences needed and in the mastery of the pre-primary

and primary curriculum. The rationale for each subject is given in the following section.

13.1. Biology

Rationale

Biology is the study of living organisms and it plays an important role in our everyday existence. It has many applications, both in the natural environment, in health and education.

Studying biology develops an understanding of living systems and how to apply learning in direct ways to maintain the health of humans, animals and plants. Biology enables us to understand the relationships between living organisms in ecosystem and to know what is beneficial and what is harmful. Technological advances in new areas, such as DNA and genetics, have made this varied discipline more exciting than ever. In addition, learning Biology in TTCs leads student teachers to different opportunities for higher learning and also enables them to teach SET in primary schools.

Broad competences

At the end of the learning process, the student teacher should be able to:

- Become confident citizens in a technological world, with an informed interest in scientific matters. .
- Be suitably prepared for studies in biological science beyond the Rwandan TTC.
- Protect themselves against common illnesses and fatal diseases including HIV/AIDS and Malaria.
- Develop attitudes and values relevant to biological science such as advocacy for personal, family and community health, hygiene and nutrition.
- Stimulate interest in and care for, the local and global environment and help learners to understand the need for conservation.
- Promote awareness that scientific theories and methods have

developed and continue to develop, as a result of groups and individuals working together, and that biological science overcomes national boundaries.

- Demonstrate awareness and concern for the environment, conservation and sustainability and act accordingly.

13.2 Chemistry

Rationale

Chemistry, one of the natural science subjects is an important discipline that has contributed significantly to the global socio economic transformation through discoveries on the part of chemists. This has led to new technologies in the production of small scale and industrial products that are beneficial to People and the environment. Chemistry is a worthwhile subject because it prepares students for the real world of work through career path ways like medicine, agriculture, pharmacy, chemical engineering, food science, teaching, environmental studies and many others to provide skills that guide the construction of theories and laws that help to explain natural phenomenon and manage people and the environment. In addition, learning Chemistry in TTCs leads student teachers to different opportunities for higher learning and also enables them to teach SET in primary schools.

Broad competencies

At the end of year 3, the student teacher should be able to:

- Analyse and explain scientific phenomena relating to real life experience;
- Use and experiment with a range of scientific and technological tools and equipment and draw appropriate conclusions;
- Demonstrate curiosity, research skills and creativity;
- Observe, analyse, evaluate, and interpret without prejudice and to make reasonable decisions;
- Use principles of scientific methods and experimental techniques to solve specific problems in daily life;

- Develop attitudes on which scientific investigations depend, such as honesty, persistence, critical thinking and tolerance of uncertainty.
- Appreciate the scientific, social, economic, environmental and technological implications of chemistry.
- Provide a foundation in chemistry subject matter that would enable the student teacher to develop attitudes relevant to science such as accuracy, precision and objectivity.

13.3 Creative Performance: Fine Art and Crafts

Rationale

Since the earliest history of man, Art has been regarded as a fundamental area for the development of intellectual abilities, cognitive faculties, manipulative skills and creative talent. Art has also been widely viewed as a therapeutic subject that facilitates mental calm. Research also shows that it can heal simple trauma and emotions especially through the use of colour and forms

Every child is born an artist with the ability of creativity, innovation and imitation. No work of Art is either right or wrong as long as the artist has interest in practice. Fine Art and Crafts therefore are central to all subjects, forming the basis of all creativity. This is a key reason why every student teacher in Rwandan colleges should have the opportunity to study and be trained to teach Fine Arts and Crafts. This will also satisfy the needs for those who complete this program since it will enable them to be job creators and not job seekers, hence reducing the problem of unemployment in Rwanda.

Fine Art and Crafts develops innovation, imitation and creativity in the student teacher which can reinforce a deep learning of other subjects. It encourages a love for beauty, nature, culture and tradition which can develop responsibility and cultural awareness coupled with and harmony in the student teacher and the society in general. In addition, learning Fine Arts and Crafts in TTCs enables the student teachers to teach Creative Arts in Preprimary and Primary schools.

Broad competencies

- Create various visual art works and crafts using different materials, tools and techniques to express feelings, to serve a utilitarian purpose or as decoration.
- Demonstrate certain decision making imitative and creative abilities in making various artworks and crafts
- Show ability to interpret, appreciate, imitate and give opinions on work of art and craft made by different people and at different times various circumstances.

13.4 Creative performance: Music

Rationale

Music provides opportunities to promote spiritual, moral, social and cultural development which are needed to help a student-teacher in his/her interrelation with other fellow student-teachers, and in his/her career as a teacher in a preprimary or primary school. It is worth noting that music is a subject taught in all levels of primary school and is used as a method of teaching other subjects. Besides, music is useful for relaxation and entertainment needed for children development.

Broad competencies

After completion of music program at TTC a student-teacher should:

- Gain knowledge and understanding of pioneers and importance styles of music through history Sol-fa music notes and perform
- Compose and perform pieces of music
- Play some traditional and modern music instruments to accompany a song
- Teach children some songs
- Teach children how to play some music instruments

13.5 Economics

Rationale

Economics is concerned with the study of how scarce resources of the society can be allocated in the best way in order to satisfy the unlimited wants of man. The study of economics helps student teachers as individuals or groups in their societies to make the best choices using their limited resources to improve the quality of life. Economics prepares student teachers with transferrable soft skills ready for the real world of work and provides useful foundation for further studies through career paths related to economics with education. It also gives student teachers the critical knowledge and skills to communicate ideas using the language and tools of the discipline of economics. Economics also prepares the student teachers to become good future policy makers at family, local and international levels especially when it comes to resource allocation.

In summary, the study of economics in TTCs seeks to equip student teachers with the basic tools necessary for understanding and interpretation of economic phenomena experienced by Rwandan people and for teaching and communicating intelligently and effectively on economic issues in the region and the wider international community.

Broad competences

- Identify and use basic concepts and principles as applied in economics
- Evaluate economic issues that affect their lives as workers, consumers and citizens
- Contribute to discussions on current economic issues and decisions that should be made to shape and strengthen national and regional institutions
- Critically analyze the economic decisions made by policy makers towards economic development
- Analyze the contribution of development strategies on the economy of Rwanda

- Assess the role of economic integration on the development of the economy

13.6 English

Rationale

The government of Rwanda decided in 2003 to have English language as official language along with French and the national and official language Kinyarwanda. Later on Kiswahili was included as the fourth official language. English is the medium of instruction from upper primary up to university education level. This was decided in 2008 and implemented in 2009.

English is also taught as a subject across all educational levels in Rwanda. These measures were taken in order for Rwanda to integrate in the region and the world as a whole. Rwanda is a member of the East African Community where English and Kiswahili are prominently used. Rwanda is also a member of the commonwealth as well as “Francophonie”.

Therefore the student teachers should learn the English language for their personal development as citizens of Rwanda who will be able to interact with people from the region and the world. They will be able to compete nationally and internationally. However as teachers to be, they will have to teach efficiently at upper primary in English or teach English from pre-primary and primary at both lower and upper primary.

Broad Competences

The student teachers should be able to:

- Effectively use the English language as a medium of instruction when teaching.
- Adapt language teaching to the level of primary school learners
- Express themselves clearly and coherently in all situations
- Write logically and legibly in correct English in teaching and other context
- Work effectively with people from diverse backgrounds: social,

cultural, political, linguistic and religious.

- Demonstrate listening and reading skills with fluency for both information and pleasure,
- Demonstrate an adequate command of vocabulary and language patterns in a written and oral complex texts to enable them to learn and communicate in English in different situations,
- Demonstrate ability to analyze, appreciate and comment on literary works in addition to English proficiency which will allow them to further their studies.

13.7 Entrepreneurship

Rationale

Entrepreneurship stimulates people to build successful lives and contribute to the development of their society by creating and managing income generating projects adapted to local realities.

It prepares young people for the uncertainties and complexities of the real business world where business opportunities exist. In entrepreneurship education, there is a key to drive to ensure that Rwandans actively create employment opportunities rather than having a mindset of relying on others. It will also help them to qualify for further studies in higher education in different programs under colleges of education for education career advancement.

Broad Competences

The overall goal of entrepreneurship education is to give student teachers the attitudes, knowledge, skills and values to act in an entrepreneurial way. In entrepreneurship a TTC student teacher upon completion of TTC, should be able to:

- Develop and implement a business plan for a viable business opportunity.
- Use the available resources properly and responsibly to implement business opportunities.
- Keep accounting records for her/his business properly.
- Analyze the impact of business activities on the environment.

- Exercise ethical behavior in business

13.8 French

Rationale

The French language is a communication tool in national and international relations. In Rwanda, it is one of the three official languages used in administrative documents and in the media. As member of Francophone countries organization, Rwanda needs French language to communicate with other member countries. For that, TTC students should acquire the four communication skills in French: oral comprehension (listening), oral expression (speaking), written comprehension (reading) and written expression (writing) so as to communicate fluently using the language.

In addition to that, students enrolled in Language Education shall be called to teach French language in primary schools. They need communicative and linguistic skills that will enable them to effectively teach the French language in elementary school in the competence-based approach.

Broad Competences

To the student teachers enrolled in the option of Language Education, French helps them to:

- Correctly use the French language to create a favorable learning environment and be much more flexible and tolerant in order to encourage communication and creativity in the learner, according to the communicative and actionable approaches.
- Establish a connection between the different areas of teaching / learning of French as a foreign language.
- Integrate into the teaching / learning of French as foreign language in cross-curricular skills and themes to train a citizen that meets the aspirations of the country and integrate into the world.
- Create learners' social interactions in specific circumstances and environments, in and out of class.
- Adopt a positive attitude towards learners with special needs

and help them according to specificities.

- Work for a harmonious society and with people of different cultural, social, political, linguistic and religious backgrounds.
- Use and integrate into the process of teaching / learning the new information technologies to make it more current and practical.
- Have the B2 (higher competence) language communication skills of the European system, and therefore able to integrate higher education into French-Education or another literary option.

For students enrolled in other options (non language), French language subject helps them to:

- Understand messages in French in concrete situations of everyday life;
- Communicate orally and in writing in the different situations of everyday life (at school, at home, at the hospital, at the market and in shops, at the restaurant, at the hotel, etc.)
- Be informed, by all means of communication (radio, newspaper, television, internet,) for an opening to the present world;
- Adopt a behavior of a cultivated person demonstrating an ability of analysis and discernment;
- Adopt to the sociolinguistic situation of our country where there are four languages taught (Kinyarwanda, English, French and Kiswahili) and these are official languages in Rwanda.
- Work for a harmonious society and with people of different cultural, social, political, linguistic and religious backgrounds.
- Have the level B1 (lower competence) language communication skills of the European system.

13.9 Foundations of education

Rationale

Foundations of education is a cross cutting course that encompasses educational topics that equip student teachers with basic principles theories and practices governing education. Teachers should have a

rich store of well organized knowledge about many specific situations of teaching. These includes knowledge about the subject they teach, their students and general teaching strategies but all these need to be driven by a strong knowledge in the field of ‘foundations of education’.

Quality of education requires teachers who are well grounded with both content and pedagogical knowledge, skills and attitudes; so that they are competent enough to effectively teach students assigned to them. The Foundations of Education will enable develop teachers competences to interpret knowledge and related historical, philosophical, ideological and social contexts in educational services delivery. This will enable teachers to develop critical perspectives on education in schools and beyond. The ultimate outcome is that the teachers can apply active learning pedagogy that can put the learner at the center of the teaching and learning process. Moreover it will enable student teachers to develop skills, attitudes and values that promote inclusivity, peace building and development capabilities in their learner. Student teachers will also develop key competences including interpretive, normative and critical perspectives on existing educational practices.

Broad competences:

- Describe the structure and guiding documents and policy orientation of Rwandan education system
- Apply different pedagogical theories and principles effectively to create a conducive, playful and learner-centered classroom setting.
- Create quality lesson plans with clear objectives, engaging techniques and a variety of materials that are interlinked with othe pedagogical documents.
- Use a variety of assessment toolsto determine a child’s developmental stage and design activities to build the learners competencies.
- Model good values and professional ethics in the teaching profession and corresponding environment
- Exhibit lifelong learning practices for personal and professional

development

- Work closely with educational stakeholders at different levels in order to manage and establish ECDE centers and primary schools and contribute to the general improvement of educational services provision
- Demonstrate advanced reflective skills on their own teaching practices and that of their peers.
- Recognise unique characteristics of individual learners and respond according to their physical, emotional and social/ educational needs/ traits.

13.10 Geography

Rationale

Geography is the study of the earth, including all the phenomena which make up the physical and human environment. Geography is one of the disciplines that are concerned with the real world in which the student-teachers live and are capable of solving problems and developing knowledge, skills, attitudes and values which are relevant to their present profession and future studies in geography with education.

Geography helps the student-teachers to understand physical and social environment in order to build unity in diversity. It also motivates the student-teachers to discover about the real world and enables them to recognize the importance of the sustainable development for the future of mankind. Geography also helps the student-teachers to develop generic competence skills, literacy and numerical skills to interpret the human and physical phenomena, maps, photographs and diagrams.

Broad competences

At the end of the learning process the student teacher should be able to:

- Demonstrate greater understanding of the basic concepts in physical and human geography.
- Categorise different physical geographical phenomena and

their impact on the sustainable development.

- Appreciate the relationships between the physical and human aspects in the world, and acquire a commitment to the sustainable development.
- Explain the correlation between the physical environment and man's modifications to it.
- Demonstrate an understanding of the global sustainable growth, conservation, reconstruction and development of the country in the regional and global context.
- Evaluate accurately the socio-economic problems of the world and how to solve them.
- Develop learners' abilities to gain more concrete understanding of the challenges to the development of Rwanda and other countries.
- Demonstrate a range of skills and techniques, necessary to carry out geographical research and interpretation of the geographical data and information.
- Read and interpret the maps and the photographs using the appropriate geographical techniques.
- Use field work procedures and methods in collecting the geographical data.
- Develop a variety of other skills, including those of the problem solving, critical thinking, communication and cooperation, investigation and how to present their conclusions in the most appropriate way.

13.11 History

Rationale

History is one of the social science subjects and is an important discipline that has contributed to the human activities, political and social transformation throughout the world.

History enables student-teachers to understand the past and the present so as to predict the future. It guides the interaction between the tutor and the student teacher in the learning process and highlights

the knowledge, skills, attitudes and the values that a student teacher should acquire at the end of each unit which helps him/her to be professionally competent and participate actively and critically in the society. This would enable the student- teacher to pursue history related courses with education in higher institutions of learning.

Broad competences

At the end the History course, student teachers should be able to:

- Live in harmony with others without any distinction, religious distinction or other form of discrimination and exclusion that have caused problems in the society like the genocide against the Tutsis in order to transform them into good citizens.
- Appreciate the Rwandan values, universal values of peace, respect human rights, rights of gender equality, democracy, justice, solidarity and good governance.
- Promote the moral, intellectual and social values through which the learners will improve their competence and skills that are essential for the sustainable development of the country.
- Develop a patriotic spirit, the sense of civic pride and the spirit of knowing what happens all over the world.
- Develop a sense of moral responsibility and commitment to social justice and gender equity.
- Promote the spirit of self – reliance, dignity and cooperation among the nations.

13.12 Information and Communication Technology (ICT)

Rationale

In Rwanda, ICT is penetrating every aspect of every day's life including service delivery. The country is going towards an intensive integration of ICT in education, which is a key player in the development of a country. ICT in education is to be used to enhance teaching and learning and to prepare citizens who will adapt in this newly created environment. Student teachers have to study ICT topics namely word processing, spreadsheet, internet, computer graphics and database

as they will develop in them inspiration and abilities to use ICT as a tool when they will be facilitating in primary school. This will ultimately allow them and their future pupils to actively participate in a world of communication, research and innovation for social and economic transformation.

Broad competences

- Apply acquired technological understanding for smooth working in ICT integrated environment and develop materials to address the society needs.
- Act as a role model in taking care of computers in the school environment or any other location and demonstrate ethical use of ICT tools.
- Develop critical thinking and logical reasoning through computer web designing as to come up with possible solutions in order to address different issues related to service delivery in the country and the region.
- Apply acquired technical knowledge, skills and attitudes in teaching and learning process and manage information efficiently, effectively and appropriately so as to create solutions to information problems using a range of application software.
- Plan for information searches, locate and access information and verify its integrity when investigating questions, topics or problems.

13.13 Integrated Science

Rationale

Teacher Training Colleges (TTCs) aim at producing qualified primary school teachers in Rwanda. This implies that the curricula of TTCs might cater for the courses to be taught in primary schools and how to teach them. The introduction of Science and Elementary Technology (SET) in primary schools needs appropriate curriculum which allows TTC leavers to be well equipped to teach SET subject. In order to enhance the teaching and learning of SET in Primary schools, the Integrated Science curriculum has been developed. This Integrated Science curriculum reflects that Sciences are not taught in isolation but as

integrated topics using real life situations to enhance life skills and the learning experience.

Broad competences

Upon completion of the course of Integrated Science in a Teacher Training College (SME and ECLPE options), the student-teacher should be able to:

- Teach Science and Elementary Technology (SET) at primary level;
- Teach the learning areas related to Science in preprimary,
- Master basic scientific concepts and use them correctly in solving related problems;
- Develop capacity to seek information for him/herself, to explore the unknown, analyze scientific data, state hypotheses and express himself in a good and clear language;
- Perceive the organization in nature, the necessity to respect it and to protect resources;
- Develop clear, logical and coherent thinking;
- Participate actively and with ease in the community life around him and develop a desire to improve its life conditions;
- Pursue further studies in Higher Learning Institutions and Universities

13.14 Kinyarwanda

Rationale:

The study of Kinyarwanda language is essential in our society. Kinyarwanda is thenational and official language spoken and understood by the vast majority of Rwandans. Kinyarwanda, as a mother tongue, is the language of teaching and learning in nursery and lower primary schools. Kinyarwanda is also taught as a subject at different levels of studies. There is strong link between Kinyarwanda language, culture identity, cultural values and heritage. Hence, Kinyarwanda is the language of basic literacy which requires to be well mastered by

TTC students. In addition, the rationale of the changes is to ensure that TTC leavers are qualified for job opportunities and further studies in Higher Education in different programs under for education career advancement.

Broad competences

Kinyarwanda language helps student-teachers to:

- Express themselves in the national language through speaking and writing, using correct vocabulary and grammar appropriate to their level and relevant to the everyday interactions;
- Listen to and interpret information effectively in Kinyarwanda;
- Read fluently and comprehend a variety of simple literacy and non-literacy texts;
- Communicate information, ideas and feeling appropriately and effectively in a range of different social settings and cultural context;
- Listen attentively and read fluently both for information and for pleasure by answering simple or complex questions or carrying out simple or complex spoken instructions.
- Write words and sentences correctly in cursive and print letters and in different types of texts;
- Explain and analyze the structure of different types of words and texts in simple and complex sentences.
- Reconstruct and produce simple or complex types of fiction and non-fiction literary texts.
- Plan and teach in Kinyarwanda different lessons from nursery to upper primary.

13.15 Kiswahili

Rationale

Kiswahili is a Bantu language spoken by many people in Africa. Rwandan community is surrounded by countries in which Kiswahili is among the communicative languages. In this case the Rwandans

need to communicate with fellow EAC members for different socio-economic, political and cultural reasons

Broad competences

In the process of learning, student teacher must be able to

- Communicate clearly in Kiswahili with people from other Kiswahili speaking nations;
- Express him/herself in Kiswahili through speaking and writing, using correct vocabulary and grammar appropriate to the level and relevant to every day interactions.
- Listen to and interpret information effectively in Kiswahili.
- Read confidently and comprehend a variety of simple literary and non-literary texts;
- Demonstrate a good command of vocabulary and language patterns in spoken and written Kiswahili.
- Use and express different Kiswahili literature styles or components in daily life.
- Use Kiswahili literature genres as one of the generating income activities.

13.16 Mathematics in SME&ECLPE

Rationale

Mathematics plays an important role in the society through abstraction, modeling and logic, counting and calculation, measurement, systematic study of shapes and motion. Thus mathematical knowledge is an essential tool for learning other subjects for example statistics and probability play an important role in game theory, in the national census process, in scientific research and trigonometric theories play a big role in construction and air navigation. Learning of Mathematics enhances critical thinking and problem solving skills and enables student-teachers to be systematic, creative and self-confident in using mathematical language and techniques to reason deductively. Mathematics equips student -teachers with knowledge, skills, values and attitudes necessary to enable them to succeed in an era of rapid technological growth and socio-economic development as well as in

effective teaching of Mathematics in Primary Education or pursuing tertiary education.

Broad competences

Mathematics helps student- teachers to:

- Work in systematic way to develop clear, logical, coherent and creative reasoning and imagination;
- Express clearly, comprehensibly, correctly and precisely in verbal and/or in written form all the reasons and calculations leading to the required result whenever finding a solution to any given exercise;
- Apply mathematical concepts, principles and processes in real life situations/ experiences or problem solving as well as applying them to other subjects
- Use ICT tools (such as calculators and mathematical software) in teaching and learning mathematics in sense of research, curiosity and creativity to explore Mathematical concepts and facts;
- Use the acquired Mathematical knowledge and skills to teach at primary Education or pursue further studies;
- Describe, explain, present, analyze, interpret, draw logical conclusions, and make predictions and decisions on scientific data;

13. 17 Mathematics in Languages Education (LE)

Rationale

Mathematics subject in the options of Languages Education (LE) is designed to provide mathematical concepts with statistical aspects and logics in order to help student-teachers to demonstrate critical thinking, problem solving and decision making skills.

The syllabus concentrates on mathematical concepts that are useful tools for a student-teacher who intends to: teach in primary school, collaborate with others to solve real life problems in knowledge based economy society and undertake further studies at higher education. Particularly, statistical skills are needed for primary teachers to help

them elaborate students' school reports, interpret them and other statistical data from different reference books, journals and relevant scientific documents.

Broad competences

At the end of three years in TTC, the student teacher from the LE option should be able to:

- **Recognize** and describe the role played by mathematics and appreciate its social and economic implications in daily life;
- Apply statistical skills to elaborate and interpret students' school reports and statistical data from different reference books, journals and relevant scientific documents.
- Use acquired skills to express logical statements and take appropriate decisions.

13.18 Mathematics in SSE

Rationale

Mathematics subject in the options of Social Studies Education (SSE) is designed to provide Mathematical concepts with statistical aspects, basics of arithmetic, basics of functions and graphs, equations and inequalities, basics of calculus and the application of these concepts in solving simple problems in economics and other social sciences.

The syllabus concentrates on Mathematical concepts that are useful tools for a student-teacher who intends to: teach in primary school, collaborate with others to solve real life problems in knowledge based economy society and undertake further studies at higher education. Topics were chosen to help the student-teacher to well perform economics lessons where Mathematical concepts are essential. The Mathematics content for SSE are linked to real life situations and student's experiences to enhance life skills.

Broad Competences

At the end of three years in TTC, the student teacher from the SSE option should be able to:

- Describe the role played by mathematics and appreciate its social and economic implications in daily life.
- Apply statistical skills to elaborate students' school reports, interpret them and any other statistical data from different reference books, journals and relevant scientific documents.
- Apply mathematical concepts, principles and processes in real life situations/ experiences or problem solving as well as applying them to other subjects.
- Use ICT tools (such as calculators and mathematical software) in teaching and learning Mathematics in sense of research, curiosity and creativity to explore Mathematical concepts and facts;

13.19 Physical Education

Rationale

The primary purpose of physical education is to develop in young people an understanding of the positive impact and active lifestyle will have on their lives. The developmentally appropriate programme also provides a unique learning environment where affective, psychomotor and cognitive skills can be developed. In addition good health practices, sportsmanship, self control, self expression and opportunity for positive social interaction with peers are fostered. Physical education and sports reinforces knowledge learnt in/across the curriculum and serves as a laboratory for application of content in science, social studies, communication skills and literacy.

Physical Education and sports develops student teachers' physical competence and confidence, and their ability to use and apply them to perform in a range of physical activities in teaching in the teaching and learning process. Student teacher learns how to plan, perform and evaluate actions, how to be creative and face up to different challenges both as individuals and as team members in groups. Students learn how to think critically in different ways to suit a variety of creative, competitive and challenging activities.

Broad competences

After completion of Teacher Training College Education, the student teacher should be able to:

- develop the physical, social, emotional and intellectual aspects;
- demonstrate personal competences in the games and sports skills and apply them in teaching and learning process;
- develop methodological approaches of facilitating and assessing the progress of learners in physical education;
- identify different injuries and accidents that can happen during practical PE lesson and provide first aid accordingly.

13.20 Physics

Rationale

Physics is one of the natural science subjects and contributes significantly to global socio-economic transformation through its discoveries. Applications of Physics theories are evident in various domains including industries engineering, transport (automobiles, trains, and flights), medicine, Information and Communication Technology (ICT).

This is in line with the ambition of the Government of Rwanda of developing a knowledge-based economy by promoting science and technology throughout all levels of the Education System.

The Physics Curriculum will equip student-teachers with appropriate knowledge, skills and attitudes needed to meet the challenges of living in a technologically advanced society and allow them help students in widening their scientific understanding through systematic and scientific inquiry, help them pursue further studies in scientific areas and become more competitive both at regional and global job markets. In addition, learning Physics in TTCs leads student teachers to different opportunities for higher learning and also enables them to teach SET in primary schools.

Broad Competences

During and at the end of learning process, the student-teacher should be able to:

- Analyze and explain scientific phenomena relating to life experience;
- Use and experiment with a range of scientific and technological tools and equipment and draw appropriate conclusions;
- Demonstrate curiosity, research skills and creativity;
- Apply knowledge of Physics to technology and scientific investigation
- Observe, analyze, evaluate, and interpret without prejudice and make reasonable decisions;
- Appreciate the scientific, social, economic, environmental and technological implications of physics;
- Identify the safe and appropriate techniques used in the preparation, storage, dispensing and supervision of materials used in science instructions.

13.21 Religious studies

Rationale

Religious Education deals with a thorough explanation of religious beliefs. The major aspects include religious doctrinal teachings, practices worship and their influence on human kind. Religious Education provides an explanation of the role of faith in enabling people to find meaning in life and guidance relating to the path to righteousness. Religious Education subject encourages student teachers to live religiously, spiritually and morally. Religious Education helps student teachers to become informed, caring and contributing members of society, they appreciate their own beliefs and values as well as the beliefs and values of others, hence, appreciating the intrinsic worth of each religion in the society.

The Religious Education syllabus will contribute to the moral and spiritual development of student teachers by developing values such

as faithfulness, generosity, honesty, goodness, respect, responsibility, self-control, self-esteem and accountability that will help them to make good decisions and sound judgment about personal behavior, moral and life issues. Furthermore, Religious Education will help student teachers to be professionally confident in helping pupils to solve problems and issues pertaining to behavior, meaning of life and worship in their daily life.

Broad competences

- Promote a sense spiritual, moral, cultural, mental and emotional/ social development among learners to them and prepares them for the opportunities, responsibilities and experiences of adult life;
- Show commitment in practicing one's belief and respect religious and cultural diversity across the world.
- Appreciate the importance of religion as a significant factor which has shaped our social, political and spiritual and cultural heritage;
- Explore features of religious beliefs, traditions and practices across the world;
- Appreciate religious sacred texts teaching on various aspect of human life.
- Become confident in using wide range of skills, attitudes and techniques necessary to facilitate learners in social and religious studies subject in primary schools locally, regionally and internationally.

12.22 Social Studies

Rationale

Social studies subject deals with human beings, the world they live in, their behavior, growth and development, organization, relationships and resources. It is a vital subject for student-teachers in Rwanda which provides them with the basic knowledge, skills, values and attitudes for their profession, continue for further studies in education related courses, make informed decisions and positively participate in society.

Social studies is also designed to increase various skills and abilities such as critical and analytical examination of the causes and effects of economic, geographical and historical phenomena both locally and globally. It has the ability to challenge student-teachers in various current political, socio economic and geographical issues to which they propose solutions as active members of the society. For example, they understand how different societies are structured, managed and governed, thus appreciate their place in the world by developing universal understanding of their environment and the interrelationship which exists between the natural and human habitats. Hence, it prepares them to be productive and successful citizens.

Broad competences

At the end of the course in teacher education, the student teacher should be able to:

- Grow up as active, competent, responsible, and reflective members of society.
- Demonstrate perfect awareness of issues affecting society, locally, regionally and internationally and take positive actions to provide solutions as responsible citizens.
- Develop a strong curiosity about the real world concerns and be proactive in solving historical, geographical and economic issues.
- Appreciate the Rwandan socio-cultural heritage and take positive actions to maintain the Rwanda image across the world.
- Discern and provide well-reasoned opinions and explain their reasons on issues of historical, geographical and economical phenomena.
- Be creative and innovative in addressing common issues and challenges pertaining to the rapidly advancing technology and science for sustainable development
- Become competent with a wide range of skills and active techniques necessary to teach social studies subject in primary schools in local, regional and international education contexts.

13.23 Special Needs and Inclusive Education

Rationale

Special Needs and Inclusive Education is a new stand-alone subject that has been introduced in TTC's curriculum to prepare the pre-service teachers to teach inclusively by being able to cater for the needs of each learner in the classroom. This subject has 6 topic areas with 27 subtopic areas and 33 units. Briefly, it gives an overview regarding the general concepts used in special need and inclusive education, historical background of inclusive education and its legal policies/frameworks, categories of learners with special needs and disabilities, approaches to assess their needs, and teach them. The special needs and inclusive education programme has been deliberately tailored to enable student teachers to participate and cultivate values and attitudes of inclusion within the school and the neighbourhood communities, expected to positively change stigmatization levelled at Rwandan people with disabilities and other disadvantaged groups and paving away for ultimate equal participation in the development of the Country.

Broad competences

At the end of the course in teacher education, the student teacher should be able to have:

- Positive attitudes towards all categories of educationally disadvantaged learners, including those with disabilities and other SEN,
- Non-discriminatory and inclusive behaviors within the school and the general community
- Knowledge of different categories of learners with SEN, related educational disadvantaged groups and what is pedagogically required for them to learn effectively
- Ability to identify learners with SEN, assess their individual limitations or needs and strengths; apply inclusive and/or special educational pedagogical approaches (Including IEP)
- Appropriate, accessible learning and teaching environment

- Knowledge on curriculum differentiation to respond to the variations in performance and/or in response to the SEN assessment and IEP of learners
- Ability to adapt teaching, learning and assessment approaches
- Ability to use alternative communication (Rwandan Sign Language (RSL) and at least Grade 1 Braille)
- Ability to advocate for and engage communities on issues related to inclusion of people with disabilities and other SEN.
- Ability to be a perennial searcher and creator of new pedagogical methods and approaches, adaptations, resources and technologies that may suit inclusive and Special Needs Education developments in Rwanda.
- Awareness of existing organizations of people with disabilities and other partners working in area of special needs and inclusive education

13.24 Teaching Methods and Practice

Rationale

Within 3 years of Teacher Education student teachers are prepared to teach in pre-primary and primary schools and to accomplish some other activities related to education. For them to achieve the standards of a teacher and become competent enough to teach their students effectively, they are given subject content related to the option, Pedagogical Content Knowledge (PCK) skills and attitudes developed through TMP subject. In general, student teachers' coursework focuses primarily on the subjects of their specialization in addition to general education courses for secondary students.

For the sake of progression in acquiring pedagogical skills, attitudes and values, student teachers should be exposed to teaching experiences from year 1 through observation of experienced teachers in demonstration schools, reporting on the lesson observed, micro-teachings, teaching practice and finally school attachment in year 3.

Foundations of Education equips student teachers with essential general education theories, general principles and methods used to

enable students' learning. These general principles and methods of teaching are not sufficient to make students competent teachers. They also need PCK through TMP. Teaching methods and practice is crucial to complete and to apply theories and skills gained from Foundations of education. This subject focuses on understanding of specific features and requirement for each subject taught in preprimary and primary education such as syllabus content, teaching methods techniques and strategies, as well as suitable teaching and learning resources. It also provides student teachers with opportunities to develop professional skills in a progressive way through observation and analysis of lessons (Real lessons or by Video) and Micro teaching, teaching practice in the real classes on a weekly basis and during school attachment.

Broad competences

At the end of the course, according to their area of specialization, the student teacher should be able to:

- Use a variety of educational methods and strategies to meet current and future pupils' needs and expectations and provide necessary guidance and support to accommodate learners with special educational needs
- Effectively use a variety of teaching methods, techniques and strategies to teach concepts in ways that engage learners and encourage them to perceive learning as interesting and meaningful.
- Plan and facilitate lessons in a way that develops generic competences and integrates cross cutting issues
- Provide learning opportunities through learning and assessment tasks to prepare young people who are flexible, creative and proactive who can solve problems, make decisions and think critically, communicate ideas effectively and work efficiently within teams and groups.
- Appropriately use the syllabus, textbooks and other learning and teaching resources
- Produce or create teaching and learning resources using low or non cost materials
- Integrate ICT and other multimedias in the teaching and

- learning process;
- Create and maintain an effective classroom environment that encourages positive social interaction, selfmotivation and active engagement in purposeful learning
 - Manage the resources of time, space, activities and attention to engage learners individually and in groups in productive tasks
 - use a range of appropriate monitoring and assessment strategies and instruments to identify learning needs, to evaluate progress, to provide evaluative feedback to help pupils in their progress, and to take follow-up action
 - cultivate knowledge with subject mastery, reflective thinking, analytic thinking, initiative, creative teaching and a future focus
 - facilitate and guide the learners' holistic development taking into account the individual differences and (special) educational needs;
 - organize and manage lessons and school activities effectively to maximize instructional time and student learning;
 - collect and analyze assessment data, adjust teaching in response and share the data with colleagues and parents;

13. 25 School Attachment

Rationale

The Teacher Education programme can only be complete if it has the practical component, to make the student teachers more effective when they graduate from the colleges. The school attachment is an opportunity for student teachers to be in a school environment and begin to see how the theory and skills they have been learning can be applied.

Broad Competences

During the school attachment, the student teacher is expected to:

- Develop awareness, understanding and capacity in the specific roles and responsibilities of a teacher in their subject specializations and, as far as possible, to effectively participate

in these roles and responsibilities;

- Understand through an intensive experience the nature of schools as workplaces and their associated values, routines and cultures;
- Further develop and refine their skills and professional capacity for classroom teaching in their subject specialization, including those involving student management, pastoral care and relationships with parents/guardians and the wider community;
- Create a network of contacts with school administration, TTC tutors, colleagues and school environment;
- Demonstrate the ability to plan, implement, and evaluate effective teaching and learning strategies;
- Demonstrate the ability to assess and report on student achievement;
- Demonstrate an understanding of professional and ethical practice;
- Put into practice theories and principles of teaching by implementing the existing curriculum;
- Reflect actively on what they have been practicing in their fields and experiences from classroom, school and community;
- Make meaningful of acquired knowledge in day to day teaching.
- Change individual perceptions in the right direction regarding teaching and learning for better outcomes.
- Take leadership in some extra-curricular activities (such as, leading a club, speaking at assembly and supervising other school activities).

Researches on pre-service teacher practicum suggest that a strong teacher education program should have a well thought, spread out, supervised teaching practicum that begin early and provide immediate application of theory to real classroom situations. There should be a closer connection between the pre-service teacher education program, demonstration schools where student teachers teach and rigorous selection of cooperating teachers who are supported professionally (Levine, 2006; Darling-Hammond, 2006). Strong teacher programs

put emphasis on a student practicum with a clear professional development process embedded in the program, in which pre-service student teachers see growth as they consolidate their knowledge, skills and attitudes that they require to become effective teachers.

At the end of year 3, student teachers are equipped with necessary teaching skills acquired especially through Foundations of Education and Teaching Methods Practice. During the first term of Year 3, the student teachers go for School Attachment as a professional learning bridge between the ending of pre-service professional preparation and the first year of teaching. Under the supervision and guidance of TTC tutors and teachers from demonstration schools, they consolidate their knowledge and experience across all facets of the role of a teacher in the school. School attachment will provide them with an opportunity to further develop skills in teaching and to be mentored in preparing themselves as thoroughly as possible for their early experiences of teaching.

The School Attachment duration is one term. During the first week student teachers spend days in class observing all aspects of teaching and learning processes. Lesson observation forms shall be completed and a lesson reflection report completed.

For the following two weeks, student teachers take on added responsibility of planning and delivering a portion of the daily lessons – progressively increasing over the weeks, with the support of the class teacher. Student teachers write a lesson plan for each lesson they will teach but only have to write a reflection report for 1 lesson per week.

During the remaining Weeks, student teachers should take full responsibility for all daily lessons in the assigned class – preparing lesson plans, creating materials, delivering lessons, and assessing learning. Student teachers should continue to write a reflection report for 1 lesson per week.

The scheme of work, all lesson plans, reflection reports, and feedback forms should be kept together in a file which forms the student teacher’s portfolio. At the end of school attachment, the student teachers should write a final report.

During the school attachment, TTC tutors should regularly visit student teachers to check on their progress and give feedback, especially on lesson preparation and delivery. Demonstration school teachers should make a regular follow up. The final evaluation of the whole attachment is done by TTC tutors, together with demonstration school teachers who will be involved in the supervision of the student teachers. The pass mark should be 60%.

13.26 Final Lesson

During the third term of year 3, every student teacher takes the final lesson exam. That exam is organized by the Teaching Practice coordinator and the evaluation is done by internal and external evaluators including demonstration school teachers. The pass mark is 60%.

14. Implementation of the Curriculum

Implementation is a critical issue in any curriculum development or review process because the curriculum can only succeed if effectively implemented. The change to a competence-based curriculum is about transformation, ensuring that learning is deep, enjoyable and habit-forming, leading to high standards and levels of achievement. There is need to prepare the tutors to accept the paradigm shift and be facilitators in the learning process.

14.1 Teaching and Learning Methodology

Tutors need to shift from traditional methods of instruction and adopt participatory and interactive methods that engage student teachers in the learning process, both in groups and as individuals. This ensures that learning is active, participative and engaging rather than passive. It is also personalised, addressing the student's individual needs and expectations. This learner-centred approach should involve diverse learning experiences, including but not limited to individual, paired and group work, oral questioning, discussions, debates, role play, presentations, projects, practical work, investigations, problem solving, assignments, field visits, tests and quizzes.

14.2 Language of Instruction

According to the national policy, English is the language of instruction from P1 onwards, it is therefore essential that the student teachers are prepared well in English to be able to affectively teach in the primary schools. The standard of English for every student teacher should be high to enhance their efficiency. This calls for the tutors to do their best in encouraging the students to use English at all times while in the college.

14.3 Inclusion

The UNESCO Policy Guidelines on Inclusion in Education (2009) set out justifications for working towards inclusive practices and educating all learners together. Inclusiveness will be achieved by training the student teachers to acknowledge each learner's abilities and needs and how to meet them. Student teachers will use teaching methods that encourage all learners to participate actively in the learning process, irrespective of their gender, disability, physical appearance, levels of performance, or social or economic background.

There is therefore need for high-quality teachers who are equipped to meet the needs of all learners in order to provide not only equal opportunities for all, but also education for an inclusive society. Reynolds (2009) says that it is the knowledge, beliefs and values of the teacher that are brought to bear in creating an effective learning environment for learners, making the teacher a critical influence in education for inclusion and the development of the inclusive school. The tutors in colleges should also make learning inclusive for all student teachers without any discrimination.

The competence based teacher education curriculum has included Special Needs and Inclusive Education as one of the subjects to be studied by all teacher trainees. This will provide the best means of creating a new generation of world class teachers who will ensure the successful implementation of inclusive policies and practices. This review will prepare teachers to engage with learner diversity arising from age, gender, ethnic, cultural or religious backgrounds, socio-economic status, disability or special educational need. . Good practice in terms of inclusion is an important element of teacher training, both pre-service and in-service.

The nation's commitment to the education of learners with special educational needs is well articulated by the Ministry of Education and is consistent with Article 40 of the Constitution of Rwanda 2003. The national ambition to achieve middle income status depends upon all Rwandans having the attributes they need to make a significant contribution as productive citizens. This will only be possible if every young person, whatever their ability, completes school and is

challenged and enabled to achieve at the highest possible level

14.4 Teaching and Learning Resources

There is need to develop curriculum support materials to be used by the curriculum implementers and the student teachers. Teachers' Guides should be developed to facilitate the implementation of the Curriculum. These provide subject tutors with advice and guidance on effective strategies for teaching their subjects and for optimising students' progress in terms of subject knowledge, skills, attitudes and competences. They offer valuable advice on assessment for learning, continuous assessment and the assessment of competences. Printed copies of curriculum framework and subject syllabi (all subjects) should be provided to all the colleges. All the resources mentioned cannot be of benefit without the human resource. There is need to have competent tutors to effectively implement the curriculum. They should be properly oriented before implementation. With the introduction of TMP in the colleges as a stand-alone subject there is need to assign a specific tutor to be in charge of the subject including the school attachment in third year. He/She will be responsible for coordinating the professional aspect of teacher education in consultation with the other college staff.

14.5 Demonstration Schools

With the revised TTC Competence Based Curriculum there will be need for each college to have well equipped demonstration schools, having complete pre-primary and primary levels with adequate classrooms. They should also have qualified, competent and experienced teachers, who can effectively implement the competence based curriculum. The demonstration schools should be located near the colleges. The schools should be equipped with adequate teaching and learning resources for all subjects. They should double up as the model schools in the country. This will provide the student teachers with conducive environments for practice. The schools will also be used when training inservice teachers.

There should be a memorandum of understanding between the colleges and the demonstration schools to avoid inconveniences.

14.6 TTC Curriculum Implementation Plan

This curriculum will be tried out for 3 Years starting 2019 to 2021. During this period data will be collected from the colleges to allow its evaluation. By addressing the eventual weaknesses and challenges, the final curriculum will be rolled out in 2022.

a) Major changes in TTC Curriculum.

Throughout 2016, the University of Rwanda-College of Education (URCE) worked with Development Partners to revise the TTC curriculum to be competency-based in line with the basic education curriculum. The TTC curriculum framework and draft versions of subject syllabi were developed and are being implemented in 16 TTCs since 2017

During the workshop on finalization of the TTC framework, the following changes were made and need to be taken into consideration in the implementation plan:

- A new subject was added in all TTC options: Special Need Education
- Religious Education was separated from Social studies
- Teaching Methods & Practice for pre-primary and primary subjects were separated from TTC subject content;
- The school attachment is only in year 3. The year 2 school attachment was replaced by Teaching practice conducted on weekly basis;
- The length of period has been reduced from 50 to 40 minutes.
- Weekly time allocation from 40 periods of 50 minutes to 60 periods of 40 minutes
- Separation of General Science and Mathematics in SST and LE options
- Opening up in year 2 and 3 by the introduction of Biology, Chemistry and Physics in SME and Economics, Geography and History in SSE

Moreover, reports of desk review of the 15 draft subject syllabi under experimentation conducted by REB in a workshop organized in Kayonza in September, 2018 highlighted weaknesses in some syllabi. That is why, REB took the decision to review those syllabi during the mentioned workshop.

b) Phasing in/ Phasing out strategies

Considering the changes highlighted above, it is necessary to think about the implementation strategy between the draft syllabi which are in use, in the TTCs and the revised versions.

To facilitate a smooth transition from the current syllabi in use to the revised versions, Rwanda Education Board proposes a progressive implementation starting by year one in 2019. This will take 3 years to fill gaps and address issues identified during the desk review, such as low level of subject content and competences in some subjects.

It will involve phasing in the revised TTC competence based curriculum in year one in 2019, as the draft syllabi will be phased out. It will take a longer time but it is more orderly and gives time for thorough monitoring and corrections during the implementation. There will be a summative evaluation of the curriculum at the end of the cycle in 2021.

Table 8: Phasing in/Phasing out Implementation Strategy

Table 8 shows the implementation strategy in 3 years from 2019 to 2021:

Academic year	Which Curriculum to be used		
	Year 1	Year 2	Year 3
2019	REB revised version	Year 2 to continue with the UR-CE draft syllabi	Year 3 to continue with the UR-CE draft syllabi
2020	REB revised version	Year 2 REB revised version	Year 3 to continue with UR-CE draft syllabi
2021	REB revised version	Year 2 REB revised version	Year 3 REB revised version

c) Availability of Textbooks and Other Learning and Teaching Materials

Based on major changes in the TTC curriculum, it is recommended to start using those syllabi in 2019 even if all required teaching and learning materials like textbook and teacher's guide are not available. The tutors will be trained and provided with some reference books to be used while waiting for textbook and teacher's guide related to each subject.

d) Availability of Tutors

- Tutors for SN&IE are graduates from UR-CE/ School of Special Need Education to be recruited
- The TMP as a stand alone subject will also require tutors

14.7: Monitoring and Evaluation.

The implementation of the TTC curriculum will be closely monitored so as to get feedback and improvements done to specific areas before long. At agreed intervals the impact of the curriculum will be evaluated. Responsibility for monitoring and evaluation lies at every level of the education system from individual tutors through to the Ministry of Education.

The following principles apply to the monitoring framework for the implementation of the TTC curriculum:

- Monitoring indicators are to be collected and reported regularly, through existing structures: colleges, sector and district quality assurance or inspection units;
- The indicators will focus on learning and teaching methodology, assessment approaches, utilization of instructional materials and the intended impact on the overall learning process;
- The national department in charge of quality assurance or inspection will be responsible for the coordination of monitoring activities and ensuring regular evaluation of the monitoring reports;

- During the initial stages the focus of monitoring and evaluation will necessarily be based upon student teachers' and tutors' perceptions of the impact of the curriculum on learning and attitudes to learning. Once the curriculum has been in operation for a full cycle it will be possible to judge the impact of the curriculum by comparing outcomes using hard outcome measures.

Initially the focus will be on the extent to which the curriculum:

- engages the student teachers;
- presents all student teachers with an appropriate degree of challenge;
- motivates students to strive for higher levels of performance;
- increases student teachers' sense of responsibility;
- builds students' confidence in their learning skills and positive attitudes to learning.

The monitoring and evaluation will also focus on the extent to which:

- tutors feel they have the skills to deliver the new curriculum;
- students and tutors value the curriculum support materials.

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ANNEXES

Annex 1: Number of subject syllabi developed according to the revised weekly time allocation of 60 periods per week.

There are 37 subject and 11TMP syllabi developed as shown in the table below:

SN	Subject	Number of Periods							Number of Syllabi	Comments	
		ECLPE		SSE		SME		LE			
		Y1	Y2&3	Y1	Y2&3	Y1	Y2&3	Y1	Y2&3		
1	Foundations of Education	6	6	6	5	6	5	6	5	1	For all options
2	English	5	5	5	4	5	4	7	7	3	1 for SSE & SME, 1 for ECLPE & 1 for LE
3	Kinyarwanda	5	5	2	2	2	2	5	6	3	1 for SSE&SME, 1 for ECLPE& 1 for LE
4	Mathematics	3	3	3	3	6	6	2	2	4	1 for each option
5	Integrated Science	4	4	1	1	11	1	1	0	3	1 for ECLPE, 1 for SME and 1 for LE&SSE
6	Physics	0	0	0	0	0	0	0	0	1	1 Syllabus for SME

SN	Subject	Number of Periods							Number of Syllabi	Comments	
		ECLPE		SSE		SME		LE			
		Y1	Y2&3	Y1	Y2&3	Y1	Y2&3	Y1	Y2&3		
7	Biology	0	0	0	0	0	5	0	0	1	1 Syllabus for SME
8	Chemistry	0	0	0	0	0	5	0	0	1	1 Syl for SME labus
9	Social Studies	4	4	11	0	2	2	2	2	3	1 Syllabus. For ECLPE, 1 for SSE and 1. for SME&LE
10	History	0	0	0	5	0	0	0	0	1	1 Syllabus for SSE
11	Geography	0	0	0	5	0	0	0	0	1	1 Syllabus for SSE
12	Economics	0	0	0	5	0	0	0	0	1	1 Syllabus for SSE
13	Creative Performance (Music and Fine Arts)	4	4	4	4	2	2	4	4	4	1 Syllabus for ECLPE, SSE&LE and 1 syllabus SME (2 for music and 2 for fine arts)
14	Physical Education	1	1	2	1	1	1	1	1	1	1 Syllabus for all options

Note:

1) 11 specific Teaching Methods were developed:

- Teaching methods for pre-primary (six learning areas)
- Teaching Methods for primary Mathematics (Lower and upper)
- Teaching methods for primary SET (Lower and upper)
- Teaching methods for primary Social studies (Lower and upper)
- Teaching methods for primary Music (Lower and upper)
- Teaching methods for primary Fine Art and crafts (Lower and upper)
- Teaching methods for primary PES (Lower and upper)
- Teaching methods for primary English (Lower and upper)
- Teaching methods for primary French (upper primary)
- Teaching methods for primary Kinyarwanda (Lower and upper)
- Teaching methods for primary Religious Education (Lower and upper)

2) No syllabus is needed for Sport, Cultural Activities, Debates, Drama, Clubs and Research in Library.

3) School attachment and Reflective Practice guidelines are in a separate document.

Annex 2: Subject Syllabus Format

1. General Introduction
2. Rwanda Education Sector Objectives
3. Level Competences of Preprimary and Primary Teacher Education in Rwanda
4. Background to the syllabus review
5. Rationale of teaching and learning the subject
6. The subject and society
7. The subject and learners
8. Professional Standards and Competences
9. Broad Subject Competences
10. Subject and Developing Competences
11. Pedagogical approaches
12. Role of the student teachers
13. Role of the tutor as a facilitator
14. Strategies to address special education needs
15. Assessment approaches
16. Record keeping
17. Resources
18. Syllabus units
19. References
20. Annexes

STRUCTURE OF THE SUBJECT SYLLABUS

Subject:			Year:	
Topic Area:		Sub Topic:		
Unit:			No. of Periods	
Key Unit Competence:				
Learning Objectives			Content	Teaching/ Learning Activities
Knowledge and Understanding	Skills	Attitudes and Values		
----- -----	----- ----- ----- --	----- -----	----- ----	----- ---
Assessment Criteria:				
Link to other subjects and to Primary content:				
Resource Materials:				

Annex 3: Subject Overviews for TTC Subjects

1. Biology (SME)
2. Chemistry (SME)
3. Creative Performance-Fine Arts and Craft: (ECLPE, SME & LE)
4. Creative Performance-Fine Arts and Craft: (SSE)
5. Creative Performance-Music (ECLPE, SSE and LE)
6. Creative Performance-Music (SME)
7. Economics (SSE)
8. English (LE)
9. English (ECLPE)
10. English (SME and SSE)
11. Entrepreneurship (All Options)
12. French (LE)
13. French (ECLPE)
14. French (SME & SSE)
15. Foundations of Education (All Options)
16. Geography (SSE)
17. History (SSE)
18. Information and Communication Technology (ICT) (All Options)
19. Integrated Science (SME)
20. Integrated Science (ECLPE)
21. Integrated Science (SSE and LE)
22. Kinyarwanda (LE)

23. Kinyarwanda (ECLPE)
24. Kinyarwanda (SSE & SME)
25. Kiswahili (LE)
26. Kiswahili (SME, SSE & ECLPE)
27. Mathematics (ECLPE)
28. Mathematics (SME)
29. Mathematics (SSE)
30. Mathematics (LE)
31. Physical Education (All Options)
32. Physics (SME)
33. Religious Education (SSE)
34. Religious Education (SME, ECLPE & LE)
35. Social Studies (SSE)
36. Social Studies (SME & LE)
37. Social Studies (ECLPE)
38. Special Needs and Inclusive Education (All Options)

NOTE:

The subject overviews depict the vertical and horizontal progression of the various topics and competences in the respective subjects.

In Teacher Education there are some subjects having topics which are only taught in year 1, others in year 2 and some in year 3, this explains those subjects where there may be no indicated competences for certain years in the overview. In other subjects there are topics which are taught progressively from year 1 to year 3 and in such cases there are competences indicated for all the years in the overview.

SUBJECT OVERVIEWS

1 Biology (SME Option)

TOPIC AREAS	SUB-TOPIC AREA	Competences		
		Year 1	Year 2	Year 3
		INTEGRATED SCIENCE	BIOLOGY	BIOLOGY
1. Ecology and conservation	Environmental biology	-----	Explain components of an ecosystem, biogeochemical cycles and how energy flows in an ecosystem.	Describe the factors affecting population size and the importance of natural resources
2. Biodiversity and Classification (new unit for integrated)	Biodiversity Classification of living things	Explain how diversity is threatened by climate change and human activities Apply the basic knowledge of classification to group living organisms into the three domains	-----	-----

TOPIC AREAS	SUB-TOPIC AREA	Competences		
		Year 1	Year 2	Year 3
		INTEGRATED SCIENCE	BIOLOGY	BIOLOGY
3. Health, diseases and Hygiene	Wellness and cleanliness	Implement ways of promoting health and preventing common diseases and hygiene related issues.	-----	-----
4. Organization and maintenance of life	Response and Coordination in organisms	-----	Describe the structure of neurons and explain the mechanisms of impulse transmission and to identify the location and function of endocrine glands in the body.	-----
	Cell structure	Describe the structure and function of cells in an organism.	-----	-----

TOPIC AREAS	SUB-TOPIC AREA	Competences		
		Year 1	Year 2	Year 3
		INTEGRATED SCIENCE	BIOLOGY	BIOLOGY
	Cell division	Describe the structure of a chromosome and how DNA is folded in a chromosome and describe the stages of cell cycle, the significance of cell and nuclear division in organisms	Explain nucleic acids, DNA replication, and the process of protein synthesis in eukaryotes.	-----
	Nutrition	Describe the process of photosynthesis and explain the various environmental factors that influence the rate of photosynthesis.	Describe the process of photosynthesis and explain the various environmental factors that influence the rate of photosynthesis.	-----

TOPIC AREAS	SUB-TOPIC AREA	Competences		
		Year 1	Year 2	Year 3
		INTEGRATED SCIENCE	BIOLOGY	BIOLOGY
	Biological molecules	Explain the use of biological molecules in living organisms and test for their presence in variety of contexts.		
	Histology	-----	Describe different specialized plant and animal tissues and adaptation of tissues.	-----
	Movement in and out of the cell	-----	Explain the physiological processes by which materials move in and out of cells and the significance of these processes in the life of organisms.	-----

TOPIC AREAS	SUB-TOPIC AREA	Competences		
		Year 1	Year 2	Year 3
		INTEGRATED SCIENCE	BIOLOGY	BIOLOGY
	Support and locomotion	-----	Explain the modes of locomotion in protists, insects, birds and amphibians, and the structure of muscles in mammals and the relation to movement.	-----
	Gaseous exchange and smoking	-----	Describe structures of gaseous exchange organs in plants.	-----
	Transport in plant and animals.	-----	Describe the structure of the transport tissues in plants and the mechanisms by which substances	-----

TOPIC AREAS	SUB-TOPIC AREA	Competences		
		Year 1	Year 2	Year 3
		INTEGRATED SCIENCE	BIOLOGY	BIOLOGY
		-----	the structures of the circulatory and lymphatic systems to their functions in human.	-----
	Energy and respiration	-----	-----	Describe the structure and importance of ATP, and outline the roles of the coenzymes NAD, FAD and coenzyme A during cellular respiration and the process of cellular respiration.
	Homeostasis	-----	Explain general principles of homeostatic mechanisms, excretion and osmoregulation.	Explain the mechanism of the regulation of blood glucose levels and regulation of temperature in living organisms.

TOPIC AREAS	SUB-TOPIC AREA	Competences		
		Year 1	Year 2	Year 3
		INTEGRATED SCIENCE	BIOLOGY	BIOLOGY
5. Microbiology and biotechnology	Microorganisms	-----	Describe the structure and characteristics of microorganisms and explain the process of culturing microorganisms and the factors affecting their population growth.	-----
	Biotechnology	-----	Explain the biotechnology involved in the production of ethanol, biogas and bread making	-----
6. Genetics and its applications	Genetics	-----	Explain the role of genes in inheritance and how genetic disorders occur and describe the types, causes and effects of mutation in organisms.	-----

TOPIC AREAS	SUB-TOPIC AREA	Competences		
		Year 1	Year 2	Year 3
		INTEGRATED SCIENCE	BIOLOGY	BIOLOGY
	Gene technology	-----	-----	Explain the principles of gene technology and evaluate how gene technology is applied in areas of medicine, forensic science and agriculture.
7.Reproduction	Reproduction in plants and animals	Explain modes of reproduction in plants and apply various methods of asexual reproduction as means of increasing crop yield.	Relate the structures of the human reproductive system to their functions and describe gamete formation and explain the role of hormones in human reproduction, stages of pregnancy, contraceptive methods and foetal development	-----

TOPIC AREAS	SUB-TOPIC AREA	Competences		
		Year 1	Year 2	Year 3
		INTEGRATED SCIENCE	BIOLOGY	BIOLOGY
8. Selection and evolution	Variation and selection	-----	-----	Explain variation and mutation as a source of biodiversity, the role of artificial and natural selection in the production of varieties of animals and plants with increased economic importance.
	Evolution	-----	-----	Analyze the relevance of theories of evolution and explain the process of speciation.
Total periods			180	120

2 Chemistry (SME Option)

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		YEAR 1	YEAR 2	YEAR 3
		INTEGRATED SCIENCE	CHEMISTRY	CHEMISTRY
1. ATOMISTICS	Periodic table	<p>Use atomic structure and electronic configuration to demonstrate the trends in the physical properties of elements and how the nature of the bonding is related to their properties</p> <p>Compare the physical properties of elements and their compounds in relation to their position in the Periodic Table (transferred from year 2 and added content)</p>	<p>Compare the chemical properties of the Group 13 elements and their compounds in relation to their position in the Periodic Table (newly added unit)</p> <p>Describe the trends in chemical properties of s block elements and their compounds</p>	-----

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		YEAR 1	YEAR 2	YEAR 3
		INTEGRATED SCIENCE	CHEMISTRY	CHEMISTRY
		-----	Compare the chemical properties of the Group 14 elements and their compounds in relation to their position in the Periodic Table	-----
			Explain the chemical properties of group 17 and their compounds	-----
			Explain the variation of Period 3 elements and their compounds in relation to their positions in the Periodic Table.	-----

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		YEAR 1	YEAR 2	YEAR 3
		INTEGRATED SCIENCE	CHEMISTRY	CHEMISTRY
		<p>Describe and Demonstrate how the nature of the bonding is related to the properties of covalent compounds and molecular structures. (part transferred from year and increased content hence periods)</p>	-----	-----
		<p>Describe and demonstrate how properties of ionic compounds and metals are related to the nature of their bonding</p>	<p>Explain the properties and uses of transition metals</p>	-----

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		YEAR 1	YEAR 2	YEAR 3
		INTEGRATED SCIENCE	CHEMISTRY	CHEMISTRY
	Radioactivity	-----	-----	Explain the importance and dangers of radioisotopes in everyday life
2. Organic compounds and materials	Aliphatic compounds	-----	Apply IUPAC rules to name organic compounds and explain the types of their isomers	-----
		-----	Relate the chemical properties of alkanes to their reactivity and uses and explain their physical properties.	-----

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		YEAR 1	YEAR 2	YEAR 3
		INTEGRATED SCIENCE	CHEMISTRY	CHEMISTRY
		-----	Relate the chemical properties of alkenes and alkynes to their reactivity and uses and explain their physical properties	-----
		-----	Relate the physical and chemical properties of halogenoalkanes to their reactivity and uses.	-----
		-----	Compare the physical and chemical properties of alcohols and ethers and explain their preparation methods, reactivity and uses.	-----
		-----	Compare the chemical nature of carbonyl compounds to their reactivity and uses.	-----

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		YEAR 1	YEAR 2	YEAR 3
		INTEGRATED SCIENCE	CHEMISTRY	CHEMISTRY
		-----	Compare the chemical nature of carboxylic acids and acid halides to their reactivity.	-----
		-----	Relate the functional groups of esters, acid anhydrides, amides and nitriles to their reactivity and uses, and describe their preparation methods	-----
		-----	Relate the chemical nature (structure) of amines and amino acids to their properties, uses and reactivity.	-----

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		YEAR 1	YEAR 2	YEAR 3
		INTEGRATED SCIENCE	CHEMISTRY	CHEMISTRY
	Aromatic compounds	-----	-----	Relate the chemistry and uses of benzene to its nature and structure.
		-----	-----	Compare and explain chemical reactivity of aromatic ketones, aldehydes, carboxylic acids and amines.
	Polymerization	-----	-----	Relate the types of polymers to their structures, properties and uses.
3. Reaction kinetics	Factors that affect the rate of reactions	-----	-----	Explain the factors that affect the rate of reactions.(newly added unit)

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		YEAR 1	YEAR 2	YEAR 3
		INTEGRATED SCIENCE	CHEMISTRY	CHEMISTRY
4. Equilibrium	Chemical equilibrium	-----	Deduce how concentration, pressure, catalyst and temperature affect chemical processes in industry.	-----
		-----	Write expressions of equilibrium constant K_c and K_p , calculate and interpret their values in relation to the yield of the products in reversible reactions.	-----
	Ionic equilibrium	-----	Explain the acid-base theories (Arrhenius, Bronsted-Lowry, Lewis)	Prepare solutions, measure and calculate their pH, explain the concept of buffer solution, and its applications.

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		YEAR 1	YEAR 2	YEAR 3
		INTEGRATED SCIENCE	CHEMISTRY	CHEMISTRY
5. Solution and solubility			-----	in manufacturing and biological processes
	Determination of concentration of solutions	Prepare standard solutions and use them to determine concentration of other solutions by titration	-----	-----
		-----	-----	Calculate the solubility product constant of sparingly soluble salts and deduce the applications of common ion effect in industry.

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		YEAR 1	YEAR 2	YEAR 3
		INTEGRATED SCIENCE	CHEMISTRY	CHEMISTRY
6. Electrochemistry	Electrolysis and electrochemical cells	-----	-----	Explain the concept of reduction and oxidation and balance equations for redox reactions. (increased content hence periods)
		-----	-----	Explain the working of electrochemical cells and their industrial applications.
7. Chemical energetics	Enthalpy change of chemical reaction	-----	Explain the concept of energy changes and energy profile diagrams for exothermic and endothermic reactions.	Design an experimental procedure to verify the enthalpy changes in a chemical reaction
8. Total number of periods		396	180	120

3 Creative Performance: Fine Art and Craft (SME Option)

Topic Area	Subtopic	Competences		
		Year One	Year Two	Year Three
FINE ARTS	1. History and theory of art and crafts	<ul style="list-style-type: none"> - Describe the key concepts of Fine Arts and Crafts - Describe the components and importance of Fine Arts and Crafts 	<ul style="list-style-type: none"> - Identify the development of art through the ages and works of renowned artists in Rwanda and East Africa. 	<ul style="list-style-type: none"> - Identify the development of art through the ages and works of renowned on the level of Africa and the world in general.
	2. Drawing and painting still life and nature	<ul style="list-style-type: none"> - Draw still life and nature objects/ things by applying elements, principles of art using different tools and techniques. 	<ul style="list-style-type: none"> - Paint still life and nature objects/ things by applying elements, principles of art and techniques of painting using different media (wet or dry). 	<ul style="list-style-type: none"> - Draw and paint still life and nature objects/ things using electronic devices.
VISUAL ART				

Topic Area	Subtopic	Competences		
		Year One	Year Two	Year Three
	3. Print Making	<ul style="list-style-type: none"> - Design motifs and patterns from different sources of inspiration. 	<ul style="list-style-type: none"> - Apply motifs and patterns on surface using different techniques and tools. 	<ul style="list-style-type: none"> - Create different motifs and patterns and use them to decorate different essential items and surfaces.
	4. Graphic Design	<ul style="list-style-type: none"> - Write and use lower and upper-case letters. 	<ul style="list-style-type: none"> - Create various designs (poster) with illustrations and different letters styles. 	<ul style="list-style-type: none"> - Create various designs with illustrations and different letters styles using digital devices.
CRAFTS	5. Sculpture and Ceramic	<ul style="list-style-type: none"> - Model simple clay forms 	<ul style="list-style-type: none"> - Build clay figures using different techniques. 	<ul style="list-style-type: none"> - Decorate clay figures and forms.

4 Creative Performance: Fine Art and Craft (SSE, ECLPE ans LE Options)

TOPIC AREA	SUBTOPIC	COMPETENCES		
		YEAR ONE	YEAR TWO	YEAR THREE
FINE ARTS	1. HISTORY AND THEORY OF ART AND CRAFTS	<ul style="list-style-type: none"> - Describe the key concepts of Fine Arts and Crafts - Describe the components and importance of Fine Arts and Crafts 	<ul style="list-style-type: none"> - Identify the development of art through the ages and works of renowned artists in Rwanda and East Africa 	<ul style="list-style-type: none"> - Identify the development of art through the ages and works of renowned artists on the level of Africa and the world in general.
	2. DRAWING AND PAINTING STILL LIFE AND NATURE	<ul style="list-style-type: none"> - Draw still life and nature objects/things by applying elements, principles of art using different tools and techniques. - Identify and classify types of drawings made with the use of different tools and materials by other artists. 	<ul style="list-style-type: none"> - Use different types of painting media/materials (wet or dry) to paint still life and nature objects/things by applying elements, principles of art and techniques. 	<ul style="list-style-type: none"> - Draw and paint still life and nature objects/things using electronic devices
VISUAL ART				

TOPIC AREA	SUBTOPIC	COMPETENCES		
		YEAR ONE	YEAR TWO	YEAR THREE
	3. PRINT MAKING	<ul style="list-style-type: none"> - Design motifs and patterns from different sources of inspirations. 	<ul style="list-style-type: none"> - Apply motifs and patterns on surface using different techniques and tools. 	<ul style="list-style-type: none"> - Create different motifs and patterns and use them to decorate different essential items and surfaces.
	4. GRAPHIC DESIGN	<ul style="list-style-type: none"> - Write and use lower and upper case letters in two dimensions (2D). 	<ul style="list-style-type: none"> - Create various designs with illustrations and different letters styles in three dimensions (3D). 	<ul style="list-style-type: none"> - Create various designs with illustrations and different letters styles in 2D and 3D using digital devices.
	5. COLLAGE AND MOSAIC	<ul style="list-style-type: none"> - Use different tools materials and techniques to make the major types of collage works. 	<ul style="list-style-type: none"> - Make collage works with colouring technique. 	<ul style="list-style-type: none"> - Make simple mosaic works using different materials, tools and techniques.

TOPIC AREA	SUBTOPIC	COMPETENCES		
		YEAR ONE	YEAR TWO	YEAR THREE
CRAFTS	6. SCULPTURE AND CERAMIC	<ul style="list-style-type: none"> - Prepare clay and model simple forms. 	<ul style="list-style-type: none"> - Build clay figures using different techniques. 	<ul style="list-style-type: none"> - Decorate clay figures and forms.
	7. WEAVING	<ul style="list-style-type: none"> - Make wefts and warps for weaving 	<ul style="list-style-type: none"> - Weave different materials by applying different techniques. 	<ul style="list-style-type: none"> - Decorate weaved materials
	8. EMBROIDERY	<ul style="list-style-type: none"> - Use different tools and materials to create simple motifs in embroidery 	<ul style="list-style-type: none"> - Identify different embroidery techniques and use them to create patterns 	<ul style="list-style-type: none"> - Make different design patterns on cloth or other surfaces

5 Creative Performance: Music (ECLPE, SSE and LE Options)

TOPIC AREA	SUBTOPIC AREA	Competences		
		Y1	Y2	Y3
Performing Music	Music theory	<ul style="list-style-type: none"> ➤ Appraise the history of music ➤ Describe music symbols and appreciate their importance 	Classify key signatures on the music staves	Use dynamics and tempos in pieces of music
	Sol-fa practices	Sing a melody consisting of three notes (DO MI SOL) with semi breve, minim and crotchets	Sing a melody consisting of all notes of the scale including dotted notes	Sing a melody consisting of mixture of all notes of the scales including dotted notes, using semi quavers, in both major and minor modes
Composing	Compose a simple melody without music notation	Write a musical phrase	Construct a music phrase not exceeding five lines	Produce music phrases consisting of more than five lines

TOPIC AREA	SUBTOPIC AREA	Competences		
		Y1	Y2	Y3
	Compose a simple melody with music notation	In C scale, compose a melody consisting of a mixture of three notes (do, mi sol) with lyrics in G clef	In C, G and F scales, compose a melody consisting of a mixture of all notes of the scale with lyrics in G and F clefs	In any scale compose a melody consisting of a mixture of all notes of the scale with lyrics using grand staff
Musical instruments (modern traditional)	Theory	Arrange modern and traditional musical instruments.	Demonstrate finger transition	Show relationship of primary chord fingering
	Practice	<ul style="list-style-type: none"> ➤ Use fingering techniques to play the piano (playing five notes) ➤ Accompany a song with Ingoma and shakers 	<ul style="list-style-type: none"> ➤ Use fingering techniques playing the piano (playing the whole scale) ➤ Use umuduri to accompany a melody 	<ul style="list-style-type: none"> ➤ Playing primary chords using both hands ➤ Use umwirongi, iningiri to accompany a melody

TOPIC AREA	SUBTOPIC AREA	Competences		
		Y1	Y2	Y3
Rwanda traditional dance	Theory	Explain characteristics of <i>umushayayo</i> and <i>igishakamba</i>	Describe characteristics of <i>ikinimba</i>	Discover the characteristics of <i>umudiho</i> , <i>umuhamirizo</i> and <i>intore</i> dances
	Practice	Execute <i>umushayayo</i> , and <i>igishakamba</i> dances	Perform <i>ikinimba</i>	Execute <i>umudiho</i> , <i>umuhamirizo</i> , <i>intore</i> dance.

6 Creative Performance – Music (SME Option)

TOPIC AREA	SUBTOPIC AREA	Competences		
		Year One	Year Two	Year Three
Performing	Music theory	Describe music symbols and appreciate their importance	Classify key signatures on the music staves	Use dynamics and tempos in pieces of music
	Sol-fa practices	Sing a melody consisting of three notes (DO MI SOL) with semi breve, minim and crotchets	Sing a melody consisting of all notes of the scale including dotted notes	Sing a melody consisting of mixture of all notes of the scales including dotted notes, using semi quavers, in both major and minor modes
Composing	Compose a simple melody without music notation	Write a musical phrase	Construct a music phrase not exceeding five lines	Produce music phrases consisting of more than five lines
	Compose a simple melody with music notation	In C scale, compose a melody consisting of a mixture of three notes (do, mi sol) with lyrics in G clef	In C, G and F scales, compose a melody consisting of a mixture of all notes of the scale with lyrics in G and F clefs	In any scale compose a melody consisting of a mixture of all notes of the scale with lyrics using grand staff

TOPIC AREA	SUBTOPIC AREA	Competences		
		Year One	Year Two	Year Three
Musical instruments (modern traditional)	Theory	<p>Arrange modern and traditional musical instruments.</p> <ul style="list-style-type: none"> ➤ Use fingering techniques to play the piano (playing five notes) ➤ Accompany a song with Ingoma and shakers 	<p>Demonstrate finger transition</p> <ul style="list-style-type: none"> ➤ Use fingering techniques playing the piano (playing the whole scale) ➤ Use umuduri to accompany a melody 	<p>Show relationship of primary chord fingering</p> <ul style="list-style-type: none"> ➤ Playing primary chords using both hands ➤ Use umwirongi, iningiri to accompany a melody
	Practice			

7 ECONOMICS.

TOPIC AREA	SUBTOPIC AREA	Competences	
		YEAR 2	YEAR 3
1. MACROECONOMICS	1.1 National Income	Analyse the importance of measuring national income in an economy	Explain the impact of national income statistics in international trade and balance of payment position of an economy.
	1.2 Money and Financial Institutions	Describe the role of Money and Financial Institutions in an economy.	Explain how demand and supply of currencies influences exchange rates.
	1.3 Inflation	Describe the impact of inflation on an economy.	Determine the impact of inflation on the development process of an economy.
	1.4 Unemployment problem	Assess the impact of unemployment on economic development.	Examine the contribution of different sectors of Rwandan economy towards solving the unemployment problem.
	1.5 Public finance and fiscal policy	Analyse the role of public finance towards economic development of Rwanda.	Analyze the importance of government expenditure and revenues in promoting economic growth and development.

TOPIC AREA	SUBTOPIC AREA	Competences	
		YEAR 2	YEAR 3
2. INTERNATIONAL ECONOMICS	1.6 Population, labour and wages	Analyse the impact of population growth on economic development.	Examine how population growth affects economic growth and development.
	2.1 International trade	Examine the contribution of foreign commercial banks on international trade.	Analyse the importance of international trade to the development process of Rwanda.
	2.2 Globalization	Assess the impact of financial institutions in promoting globalization	Analyse the impact of Globalization on developing countries.
3. DEVELOPMENT ECONOMICS	3.1 Economic growth and development	Examine the impact of population growth on economic growth and development	Analyse the determinants and indicators of economic growth and development in an economy.
	3.2 Development process and strategies	Examine the impact of population growth on development process and strategies	Evaluate the contribution of different development strategies on an economy.

TOPIC AREA	SUBTOPIC AREA	Competences	
		YEAR 2	YEAR 3
	3.3 Economic planning	describe how inflation and unemployment hinder successful planning in LDCs.	Examine the importance of economic planning in an economy.
	3.4 Structure of Rwanda's economy	Discuss the role of financial institutions in promoting sectors of Rwandan economy.	Describe the structure of Rwandan economy.

8 ENGLISH (LE Option)

Topic area	Sub Topic areas	COMPETENCES		
		Y1	Y2	Y3
Oral and written communication	Listening and speaking	<p>Convey information respectfully in different contexts.</p> <p>Grasp and simulate the main points of authentic spoken texts or conversations involving one or more speakers.</p> <p>Convey relevant information confidently in different set ups including classroom activities.</p>	<p>Analyse the main points of authentic texts and conversations in a range of different contexts.</p> <p>Recognize attitudes, emotions and new information in a spoken passage.</p> <p>Give presentations on a range of themes and persuasively argue a particular point of view to defend opinions.</p>	<p>Initiate conversations and infer meaning from a range of authentic texts and conversations spoken at or near to, native speaker speed.</p> <p>Analyse, judge and criticize the spoken words in oral sessions.</p> <p>Sequence ideas logically when summarizing, draw conclusions from speeches, videos, radio programs, dialogues, and conversations.</p> <p>Acting out imaginary roles on the stage and conveying the message meant.</p>

Topic area	Sub Topic areas	COMPETENCES		
		Y1	Y2	Y3
		<p>Initiate and sustain conversation at ease when using language relevant to the context.</p> <p>Give a presentation on a chosen theme organizing ideas and responding spontaneously to questions to financial concepts.</p> <p>Respond to specific questions and make comments that contribute to the discussion and link to the remarks of others.</p>	<p>Narrate a story using language relevant to the topic confidently.</p> <p>Present information coherently from personal and other peoples' points of view</p> <p>Interpret specific questions and make comments that contribute to the discussion and link to the remarks of others for enrichment</p>	<p>Exchanging ideas relating to a variety of situations and topics, taking the initiative where appropriate.</p> <p>Compose and present ICT related stories based on the inspirational texts, reactions and messages from various passages/text/stories</p> <p>Draw conclusions from the given data (graphs, figures, tables, diagrams and symbols) and present their findings.</p>

Topic area	Sub Topic areas	COMPETENCES		
		Y1	Y2	Y3
	Reading & writing	Read and scan a range of texts involving more complex language, analyzing meaning and summarizing in speech or writing.	Read, skim and analyse a wide variety of factual and imaginative texts expressing different points of view issues and concerns including some formal and official materials. Summarize the main points.	Evaluate a range of authentic texts of some degree of complexity. Paraphrase to feedback essential points.

Topic area	Sub Topic areas	COMPETENCES		
		Y1	Y2	Y3
	Reading and Writing	<p>Communicate ideas on a range of topics and in an appropriate style of writing for the task.</p> <p>Argue and justify a point of view in an appropriate way.</p>	<p>Write coherent texts on a wide range of topics in different styles to interest, persuade and /or entertain</p> <p>Read pictures and provide feedback in coherent texts</p>	<p>Invent extended texts on a range of topics using a wide range of language, vocabulary and a variety of styles and registers appropriately.</p> <p>Identify and analyse literary works</p> <p>Dramatize literary works</p>
Knowledge of language	Vocabulary	<p>Use prior knowledge to interpret new concepts accordingly.</p> <p>Recognize and explore new vocabulary, expressions and language structures.</p>	<p>Use prior knowledge to simulate new concepts accordingly</p> <p>Analyse new vocabulary, expressions and language structures used in a range of situations.</p>	<p>Use new words to write extensive texts in accordance with the given context</p> <p>Simulate situations in which newly acquired vocabulary, expressions and language structures are used.</p> <p>Analyse literary works</p>

Topic area	Sub Topic areas	COMPETENCES		
		Y1	Y2	Y3
	Grammar	Use parts of speech in various texts properly Comment on complex and descriptive texts using varied vocabulary, language structures and knowledge of different writing genres and use text books profitably.	Analyse the use of parts of speech in a range of texts. Summarize complex and descriptive texts using varied vocabulary, language structures and knowledge of different writing genres and use text books profitably	Create complex and descriptive texts using varied vocabulary, language structures and knowledge of different writing genres and use text books profitably.
	Sound and spelling	Recognize and pronounce sounds in words, use rhythm and spell words correctly.	Recognize and pronounce sounds in words, use rhythm and spell words correctly Group words containing common sounds	Recognize and pronounce sounds in words, use rhythm and spell words correctly. Group words containing common sounds and distinguish exceptions in sounds

9. ENGLISH (ECLPE Option)

Topic area	Sub Topic areas	COMPETENCES		
		Y1	Y2	Y3
Oral and written communication	Listening and speaking	Convey information respectfully in different contexts. Grasp and simulate songs and audio games or stories Convey relevant information confidently in different set ups including classroom activities. Compose short age appropriate songs	Analyse the main points of authentic texts and conversations in a range of different contexts. Recognize attitudes, emotions and new information in a spoken passage. Give presentations on a range of themes and persuasively argue a particular point of view to defend opinions.	Initiate conversations and infer meaning from a range of authentic texts and conversations spoken at or near to, native speaker speed. Analyse, judge and criticize the spoken words in oral sessions. Sequence ideas logically when summarizing, draw conclusions from speeches, videos, radio programs, dialogues, and conversations.

Topic area	Sub Topic areas	COMPETENCES		
		Y1	Y2	Y3
		<p>Initiate and sustain conversation at ease when using language relevant to the context.</p> <p>Give a presentation on a chosen theme organizing ideas and responding spontaneously to questions to financial concepts.</p> <p>Respond to specific questions and make comments that contribute to the discussion and link to the remarks of others.</p>	<p>Narrate a story using language relevant to the topic confidently.</p> <p>Present information coherently from personal and other peoples' points of view</p> <p>Interpret specific questions and make comments that contribute to the discussion and link to the remarks of others for enrichment</p>	<p>Exchanging ideas relating to a variety of situations and topics, taking the initiative where appropriate.</p> <p>Compose and present stories based on the inspirational texts, reactions and messages from various passages/text/stories</p> <p>Draw conclusions from the given data (graphs, figures, tables, diagrams and symbols) and present their findings.</p>

Topic area	Sub Topic areas	COMPETENCES		
		Y1	Y2	Y3
	Reading & writing	<p>Read and scan a range of texts involving more complex language, analyzing meaning and summarizing in speech or writing.</p> <p>Interpret learning pictures</p>	<p>Read, skim and analyse a wide variety of factual and imaginative texts expressing different points of view issues and concerns including some formal and official materials.</p> <p>Summarize the main points.</p>	<p>Evaluate a range of authentic texts of some degree of complexity.</p> <p>Paraphrase to feedback essential points.</p> <p>Create learning pictures</p> <p>Write short age appropriate stories</p>

		COMPETENCES		
Topic area	Sub Topic areas	Y1	Y2	Y3
	Reading and Writing	<p>Communicate ideas on a range of topics and in an appropriate style of writing for the task.</p> <p>Argue and justify a point of view in an appropriate way.</p>	<p>Write coherent texts on a wide range of topics in different styles to interest, persuade and /or entertain</p> <p>Read pictures and provide feedback in coherent texts</p>	<p>Invent extended texts on a range of topics using a wide range of language, vocabulary and a variety of styles and registers appropriately.</p>
Knowledge of language	Vocabulary	<p>Use prior knowledge to interpret new concepts accordingly.</p> <p>Recognize and explore new vocabulary, expressions and language structures.</p>	<p>Use prior knowledge to simulate new concepts accordingly</p> <p>Analyse new vocabulary, expressions and language structures used in a range of situations.</p>	<p>Use new words to write extensive texts in accordance with the given context</p> <p>Simulate situations in which newly acquired vocabulary, expressions and language structures are used.</p>

Topic area	Sub Topic areas	COMPETENCES		
		Y1	Y2	Y3
	Grammar	Use parts of speech in various short age appropriate texts Comment on complex and descriptive texts using varied vocabulary, language structures and knowledge of different writing genres and use text books profitably.	Analyse the use of parts of speech in a range of texts. Summarize complex and descriptive texts using varied vocabulary, language structures and knowledge of different writing genres and use text books profitably	Create complex and descriptive texts using varied vocabulary, language structures and knowledge of different writing genres and use text books profitably.
	Sound and spelling	Recognize and pronounce sounds in words, use rhythm and spell words correctly.	Recognize and pronounce sounds in words, use rhythm and spell words correctly Group words containing common sounds	Recognize and pronounce sounds in words, use rhythm and spell words correctly. Group words containing common sounds and distinguish exceptions in sounds

10. ENGLISH (SME & SSE Options)

Topic area	Sub Topic areas	COMPETENCES		
		Y1	Y2	Y3
Oral and written communication	Listening and speaking	<p>Convey information respectfully in different contexts.</p> <p>Grasp and simulate the main points of authentic spoken texts or conversations involving one or more speakers.</p> <p>Convey relevant information confidently in different set ups including classroom activities.</p>	<p>Analyse the main points of authentic texts and conversations in a range of different contexts.</p> <p>Recognize attitudes, emotions and new information in a spoken passage.</p> <p>Give presentations on a range of themes and persuasively argue a particular point of view to defend opinions.</p>	<p>Initiate conversations and infer meaning from a range of authentic texts and conversations spoken at or near to, native speaker speed.</p> <p>Analyse, judge and criticize the spoken words in oral sessions.</p> <p>Sequence ideas logically when summarizing, draw conclusions from speeches, videos, radio programs, dialogues, and conversations.</p>

Topic area	Sub Topic areas	COMPETENCES		
		Y1	Y2	Y3
		<p>Initiate and sustain conversation at ease when using language relevant to the context.</p> <p>Give a presentation on a chosen theme organizing ideas and responding spontaneously to questions related to financial concepts.</p> <p>Respond to specific questions and make comments that contribute to the discussion and link to the remarks of others.</p>	<p>Narrate a story using language relevant to the topic confidently.</p> <p>Present information coherently from personal and other peoples' points of view</p> <p>Interpret specific questions and make comments that contribute to the discussion and link to the remarks of others for enrichment.</p>	<p>Exchanging ideas relating to a variety of situations and topics, taking the initiative where appropriate.</p> <p>Compose and present stories based on the inspirational texts, reactions and messages from various passages/text/stories</p> <p>Draw conclusions from the given data (graphs, figures, tables, diagrams and symbols) and present their findings.</p>

Topic area	Sub Topic areas	COMPETENCES		
		Y1	Y2	Y3
	Reading & writing	<p>Read and scan a range of texts involving more complex language, analyzing meaning and summarizing in speech or writing.</p>	<p>Read, skim and analyse a wide variety of factual and imaginative texts expressing different points of view issues and concerns including some formal and official materials. Summarize the main points.</p>	<p>Evaluate a range of authentic texts of some degree of complexity. Paraphrase to feedback essential points.</p>

COMPETENCES			
Topic area	Sub Topic areas	Y1	Y2
	Reading and Writing	<p>Communicate ideas on a range of topics and in an appropriate style of writing for the task.</p> <p>Argue and justify a point of view in an appropriate way.</p>	<p>Write coherent texts on a wide range of topics in different styles to interest, persuade and /or entertain</p> <p>Read pictures and provide feedback in coherent texts</p>
			<p>Invent extended texts on a range of topics using a wide range of language, vocabulary and a variety of styles and registers appropriately.</p>
Knowledge of language	Vocabulary	<p>Use prior knowledge to interpret new concepts accordingly.</p> <p>Recognize and explore new vocabulary, expressions and language structures.</p>	<p>Use prior knowledge to simulate new concepts accordingly</p> <p>Analyse new vocabulary, expressions and language structures used in a range of situations</p>
			<p>Use new words to write extensive texts in accordance with the given context</p> <p>Simulate situations in which newly acquired vocabulary, expressions and language structures are used.</p>

Topic area	Sub Topic areas	COMPETENCES		
		Y1	Y2	Y3
	Grammar	Use parts of speech in various texts properly Comment on complex and descriptive texts using varied vocabulary, language structures and knowledge of different writing genres and use text books profitably.	Analyse the use of parts of speech in a range of texts. Summarize complex and descriptive texts using varied vocabulary, language structures and knowledge of different writing genres and use text books profitably	Create complex and descriptive texts using varied vocabulary, language structures and knowledge of different writing genres and use text books profitably.
	Sound and spelling	Recognize and pronounce sounds in words, use rhythm and spell words correctly.	Recognize and pronounce sounds in words, use rhythm and spell words correctly Group words containing common sounds	Recognize and pronounce sounds in words, use rhythm and spell words correctly. Group words containing common sounds and distinguish exceptions in sounds

11 Entrepreneurship (All Options)

Topic Area	Sub-topics Area	Competences		
		YEAR 1	YEAR 2	YEAR 3
Entrepreneurial Culture	Entrepreneurship as a career	Exhibit desirable qualities of an entrepreneur Make rational career choices and decisions	-----	-----
	Entrepreneurial goals	Set achievable entrepreneurial goals	-----	-----
	Business startup process	-----	Generate viable business ideas and opportunities	Prepare a business plan for the business they are running or intend to start
Business legal aspects	contracts in business operations	-----	Make valid contracts in business operations	
	Taxes and Customs procedures	-----	Analyze the role of taxes towards economic development of a country and pay taxes	Develop an ethical behavior towards customs system

Topic Area	Sub-topics Area	Competences		
		YEAR 1	YEAR 2	YEAR 3
Business growth and sustainable development	Standardization culture	Justify the need for standards and its role in business	Maintain effective quality compliance system in business	
	Business Market research	Conduct market research for business startup and growth Analyze the factors that lead to business growth and development	-----	-----
	Technology in business operations	-----	Be aware of how new technologies can affect their business activities	-----
	Agri-business in Socio-economic development and Environment	-----	-----	Develop agri-business activities and their contribution towards socio-economic development

Topic Area	Sub-topics Area	Competences		
		YEAR 1	YEAR 2	YEAR 3
	-----	-----	-----	Prepare Environmental Impact Assessment (EIA) report as a tool for preventing negative effect of business activities on the environment
Business operations and management	Business organization	Classify different forms of businesses Design business organization structure	-----	-----
	Financial management	-----	Manage their money responsibly and keep financial records Choose suitable financial institutions for business transactions	-----

Topic Area	Sub-topics Area	Competences		
		YEAR 1	YEAR 2	YEAR 3
	Accounting	-----	Recognize the value of accounting in managing the business	-----
Employment Readiness	Rights and responsibilities at work place	-----	Demonstrate rights and responsibilities of employees at work place	-----
	Leadership in business	-----	-----	Demonstrate a good leadership strategy for leading teams in the business.
	Employees resourcing	-----	-----	Design a strategy for recruiting workers in their businesses and prepare for job opportunities in the community

12 Descripteurs des compétences en français par niveaux au TTC : Option littéraire

Domaine de communication	Sous-domaine	COMPÉTENCES		
		Première année	Deuxième année	Troisième année
Compréhension et expressionnelles	Ecouter	<ul style="list-style-type: none"> - Interpréter des messages relatifs aux situations simples et concrètes de la vie quotidienne. 	<ul style="list-style-type: none"> - Analyser des documents, des textes courants sur des sujets familiers. 	<ul style="list-style-type: none"> - Analyser des documents, des textes sur des sujets complexes.
	Parler	<ul style="list-style-type: none"> - Participer activement à une conversation sur des situations simples et concrètes de la vie quotidienne. - Exprimer ses goûts et préférences. 	<ul style="list-style-type: none"> - S'exprimer aisément sur des sujets familiers. - Raconter ses expériences, ses rêves, ses espoirs ou ses projets. 	<ul style="list-style-type: none"> - S'exprimer aisément sur des sujets complexes. - Présenter et défendre ses opinions.

<p>Compréhension et Expression écrite</p>	<p>Lire</p>	<ul style="list-style-type: none"> - Lire des récits simples, des documents instructifs, des dialogues en vue de porter un jugement objectif. - Lire la littérature de jeunesse pour développer son esprit critique en vue de faire face aux problèmes de la jeunesse. 	<ul style="list-style-type: none"> - Lire des textes courants sur des sujets familiers et faire un commentaire /débat - Lire un récit, un roman, afin d'en découvrir ses différents moments (exposition, nœud et dénouement) et exprimer son appréciation. 	<ul style="list-style-type: none"> - Lire avec aisance les différents types de textes (descriptif, narratif, informatif, argumentatif, explicatif) et en dégager le sens (fiche de lecture, commentaire composé) - Lire les œuvres littéraires (pièces de théâtre, poèmes,..) pour enrichir ses connaissances, s'épanouir, se divertir, affirmer sa personnalité et ses performances.
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	Ecrire	<ul style="list-style-type: none"> - Rédiger des messages simples et courts sur un thème donné. - Ecrire un texte cohérent sur des sujets familiaux. - Ecrire une lettre amicale, une carte de vœux ou d'invitation et un communiqué. 	<ul style="list-style-type: none"> - Rédiger un texte descriptif sur une situation ou un événement relatif à un environnement concret et immédiat. - Ecrire une lettre administrative (demande de permission, de reclassement, d'information,...) - Rédiger un résumé clair et cohérent, conforme au texte original. - Rédiger une fiche de lecture 	<ul style="list-style-type: none"> - Ecrire une lettre administrative (une demande d'emploi, une demande de bourse d'études,...). - Rédiger un curriculum vitae - S'exprimer par écrit de façon claire et détaillée sur des sujets relatifs à ses centres d'intérêt (l'emploi, l'amour et le mariage, ...) - Exprimer par écrit son opinion, ses réserves et son jugement. - Rédiger un poème.
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<p>Connaissance de la langue</p>	<p>Vocabulaire</p>	<p>- Utiliser dans des situations simples le vocabulaire relatif à la famille, au marché, aux fêtes et loisirs et aux contraintes de l'éducation.</p>	<p>- Utiliser dans des situations variées le vocabulaire relatif à la vie professionnelle, au travail et chômage, à la religion et à l'actualité, aux médias et technique d'information et communication en éducation.</p>	<p>- Utiliser dans des situations simples et complexes le vocabulaire relatif à la vie conjugale, à l'urbanisme et technologie.</p>
	<p>Grammaire</p>	<p>- Utiliser les temps de l'impératif et de l'indicatif, du conditionnel, du subjonctif, le gérondif, les substituts relatifs simples, les propositions, les phrases simples, pour produire un message clair et cohérent.</p>	<p>- Utiliser les temps de l'indicatif, du subjonctif, de l'infinitif, du conditionnel et du participe, le gérondif, la nominalisation et la localisation temporelle, les adverbes, les connecteurs logiques, les phrases complexes dans des situations variées.</p>	<p>- Utiliser la concordance des temps, les comparatifs des verbes et de l'adverbe, la créativité lexicale les pronoms relatifs composés, les articulateurs logiques, et le discours rapporté dans des situations simples et complexes.</p>

	Style	<ul style="list-style-type: none"> - Distinguer et utiliser le sens propre et le sens figuré des mots et des expressions. - Utiliser des termes comparatifs dans des situations simples et familières. 	<ul style="list-style-type: none"> - Distinguer et utiliser la métaphore et la métonymie dans des situations simples et variés. - Distinguer et utiliser les citations des grands auteurs et les proverbes liés aux contextes. - Identifier les différents niveaux de langue 	<ul style="list-style-type: none"> - Utiliser les figures de style courantes dans des situations simples et complexes. - Analyser les citations des grands auteurs et les proverbes liés aux contextes. - Analyser et utiliser les différents niveaux de langue - Distinguer et utiliser les éléments de la poésie et du théâtre.
Orthographe et Phonétique		<ul style="list-style-type: none"> - Utiliser l'intonation pour distinguer les types de phrase. - Utiliser l'accentuation, le rythme, le volume de la voix, l'intonation, les liaisons pour produire un message simple, clair et audible. 	<ul style="list-style-type: none"> - Utiliser l'accentuation, le rythme, le volume de la voix, l'intonation, les liaisons pour produire un message complexe, clair et audible. 	

		<ul style="list-style-type: none"> - Distinguer et utiliser convenablement les sons du français. - Distinguer et utiliser convenablement les signes orthographiques du français. 	<ul style="list-style-type: none"> - Distinguer et utiliser convenablement les sons du français, les homophones et homographes. - Distinguer les accents et les autres signes orthographiques et les utiliser convenablement. - Faire convenablement le découpage des mots en syllabes - Distinguer l'orthographe particulière dans la conjugaison de certains verbes du premier groupe. 	<ul style="list-style-type: none"> - Utiliser les sons oraux et nasals en les distinguant. - Distinguer l'orthographe particulière dans la conjugaison des verbes irréguliers.
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13. Descripteurs des compétences en français par niveaux au TTC : ECLPE

Domaine de communication	Sous-domaine	COMPÉTENCES		
		Première année	Deuxième année	Troisième année
Compréhension et expression orales	Ecouter	<ul style="list-style-type: none"> - Interpréter des situations simples et concrètes de la vie quotidienne. - Ecouter et différencier les sons et les mélodies des chansons enfantines. 	<ul style="list-style-type: none"> - Analyser des textes courants sur des situations concrètes de la vie quotidienne. - Ecouter et différencier les chansons enfantines et les comptines. 	<ul style="list-style-type: none"> - Analyser des textes courants sur des sujets familiaux. - Ecouter et appliquer les règles des jeux enfantins.
	Parler	<ul style="list-style-type: none"> - Exprimer ses goûts et préférences - Chanter des chansons enfantines - Réciter des comptines - Dramatiser des dialogues relatifs aux situations simples et concrètes de la vie quotidienne. 	<ul style="list-style-type: none"> - Participer activement à une conversation sur des situations simples et concrètes de la vie quotidienne. - Créer et dramatiser des dialogues relatifs aux situations simples et concrètes de la vie quotidienne. 	<ul style="list-style-type: none"> - S'exprimer sur des sujets familiaux. - S'exprimer dans un contexte lié au domaine personnel et éducationnel. - Raconter un événement relatif aux thèmes de la vie courante .

Compréhension et Expression écrites	Lire	<ul style="list-style-type: none"> - Lire des textes informatifs (note de service, note d'emploi, dépliant,...) et répondre aux questions de compréhension. - Lire de façon expressive des chansons et des comptines. - Lire un article de journal pour ouverture au monde actuel. - Lire la littérature de jeunesse pour développer l'esprit critique en vue de faire face aux problèmes de la jeunesse. 	<ul style="list-style-type: none"> - Raconter de manière simple ses expériences, ses rêves, ses espoirs ou ses buts. - Lire un texte narratif pour en tirer une leçon morale pouvant le guider dans la vie courante. - Lire et rédiger un résumé pour développer l'esprit critique et la capacité de bien agencer les idées. - Lire de façon expressive de courts poèmes et des comptines. 	<ul style="list-style-type: none"> - Expliquer les règles des jeux des enfants et les pratiquer - Lire des textes courants afin de pouvoir exprimer son opinion personnelle et ses projets d'avenir. - Lire une histoire afin d'en découvrir ses différents moments (exposition, nœud et dénouement) et exprimer ses réactions.
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	Ecrire	<ul style="list-style-type: none"> - Exprimer par écrit ses goûts et ses préférences. - Ecrire des messages simples (cartes postales, carte d'invitation, de vœux, des messages électroniques, ...) - Composer des comptines 	<ul style="list-style-type: none"> - Ecrire une lettre privée pour communiquer avec ses familiers. - Rédiger un texte narratif simple exprimant ses rêves, ses espoirs, ses expériences, ses buts. - Ecrire un texte simple et cohérent sur des sujets familiers. - Composer de courts poèmes pour enfants. 	<ul style="list-style-type: none"> - Elaborer une fiche de lecture - Ecrire une lettre administrative (une demande d'emploi). - Rédiger un curriculum vitae. - S'exprimer par écrit de façon claire sur des sujets relatifs à ses centres d'intérêt (l'amour et le mariage, les droits et devoirs du citoyen...)
Connaissance de la langue	Vocabulaire	<ul style="list-style-type: none"> - Utiliser dans des situations simples et concrètes de la vie quotidienne le vocabulaire relatif à la famille, aux sports, loisirs, à la nature et à l'environnement. 	<ul style="list-style-type: none"> - Utiliser dans des situations concrètes de la vie quotidienne le vocabulaire relatif à la vie scolaire, à la vie professionnelle et aux médias. 	<ul style="list-style-type: none"> - Utiliser dans des situations variées le vocabulaire relatif à l'amour, au mariage, aux droits et devoirs du citoyen.

	Grammaire	<ul style="list-style-type: none"> - Utiliser les temps de l'impératif, de l'indicatif et du conditionnel ainsi que les pronoms, les prépositions et les comparatifs dans des situations simples et concrètes de la vie quotidienne. 	<ul style="list-style-type: none"> - Utiliser les temps de l'impératif, de l'indicatif et du conditionnel ainsi que les pronoms, les prépositions, les comparatifs et les connecteurs logiques dans des situations concrètes de la vie quotidienne 	<ul style="list-style-type: none"> - Utiliser dans des situations variées les temps de l'impératif, de l'indicatif, du subjonctif et du conditionnel ainsi que les pronoms, les prépositions, les comparatifs et les connecteurs.
Style	Utiliser des termes comparatifs dans des situations simples et familières.	<ul style="list-style-type: none"> - Utiliser les sons oraux et nasals en les distinguant. - Utiliser convenablement les signes orthographiques. 	Distinguer et utiliser le sens propre et le sens figuré des mots et des expressions.	Distinguer et utiliser les différents niveaux de langue
	<ul style="list-style-type: none"> - Utiliser l'intonation pour distinguer les types de phrase. - Utiliser convenablement la ponctuation et les lettres majuscules. 	<ul style="list-style-type: none"> - Utiliser l'intonation pour distinguer les types de phrase. - Utiliser convenablement la ponctuation et les lettres majuscules. 	<ul style="list-style-type: none"> - Utiliser les sons oraux et nasals en les distinguant. - Utiliser convenablement les signes orthographiques. 	<ul style="list-style-type: none"> - Utiliser l'accentuation, le rythme, le volume de la voix, l'intonation pour produire un message clair et audible.

	Orthographe et phonétique			<ul style="list-style-type: none">- Faire convenablement le découpage des mots.- Distinguer les accents et les autres signes orthographiques et les utiliser convenablement.
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14 Descripteurs des compétences en français par niveaux au TTC : SME. SSE

Domaine de communication	Sous-domaine	COMPÉTENCES		
		Première année	Deuxième année	Troisième année
Compréhension et expression orales	Ecouter	Interpréter des situations simples et concrètes de la vie quotidienne	Analyser des textes courants sur des situations concrètes de la vie quotidienne	Analyser des textes courants sur des sujets familiers.
	Parler	- Exprimer ses goûts et préférences	- Participer activement à une conversation sur des situations simples et concrètes de la vie quotidienne. - Raconter de manière simple ses expériences, ses rêves, ses espoirs ou ses buts.	- S'exprimer sur des sujets familiers. - S'exprimer dans un contexte lié au domaine personnel et éducationnel.

Compréhension et Expression écrites	Lire	<ul style="list-style-type: none"> - Lire et des textes informatifs (note de service, note d'emploi, dépliant,...) et répondre aux questions de compréhension. - Lire un article de journal pour ouverture au monde actuel. - Lire la littérature de jeunesse pour développer l'esprit critique en vue de faire face aux problèmes de la jeunesse. 	<ul style="list-style-type: none"> - Lire un texte narratif pour en tirer une leçon morale pouvant le guider dans la vie courante. - Lire et rédiger un résumé pour développer l'esprit critique et la capacité de bien agencer les idées. 	<ul style="list-style-type: none"> - Lire des textes courants afin de pouvoir exprimer son opinion personnelle et ses projets d'avenir. - Lire une histoire afin d'en découvrir ses différents moments (exposition, nœud et dénouement) et exprimer ses réactions.
	Ecrire	<ul style="list-style-type: none"> - Exprimer par écrit ses goûts et ses préférences. - Ecrire des messages simples (cartes postales, carte d'invitation, de vœux, des messages électroniques, ...) 	<ul style="list-style-type: none"> - Ecrire une lettre privée pour communiquer avec ses familiers. - Rédiger un texte narratif simple exprimant ses rêves, ses espoirs, ses expériences, ses buts. 	<ul style="list-style-type: none"> - Elaborer une fiche de lecture - Ecrire une lettre administrative (une demande d'emploi). - Rédiger un curriculum vitae.

<p>Connaissance de la langue</p>	<p>Vocabulaire</p>	<p>- Utiliser dans des situations simples et concrètes de la vie quotidienne le vocabulaire relatif à la famille, aux sports, loisirs, à la nature et à l'environnement.</p>	<p>- Utiliser dans des situations concrètes de la vie quotidienne le vocabulaire relatif à la vie scolaire, à la vie professionnelle et aux médias.</p>	<p>- Ecrire un texte simple et cohérent sur des sujets familiers.</p>	<p>- S'exprimer par écrit de façon claire sur des sujets relatifs à ses centres d'intérêt (l'amour et le mariage, les droits et devoirs du citoyen...)</p>
	<p>Grammaire</p>	<p>- Utiliser les temps de l'impératif, de l'indicatif et du conditionnel ainsi que les pronoms, les prépositions et les comparatifs dans des situations simples et concrètes de la vie quotidienne.</p>	<p>- Utiliser les temps de l'impératif, de l'indicatif et du conditionnel ainsi que les pronoms, les prépositions, les comparatifs et les connecteurs logiques dans des situations concrètes de la vie quotidienne</p>	<p>Utiliser dans des situations variées les temps de l'impératif, de l'indicatif, du subjonctif et du conditionnel ainsi que les pronoms, les prépositions, les comparatifs et les connecteurs.</p>	<p>Utiliser dans des situations variées le vocabulaire relatif à l'amour, au mariage, aux droits et devoirs du citoyen.</p>

Style		Utiliser des termes comparatifs dans des situations simples et familières.	Distinguer et utiliser le sens propre et le sens figuré des mots et des expressions.	Distinguer et utiliser les différents niveaux de langue	
Orthographe et phonétique		<ul style="list-style-type: none"> - Utiliser l'intonation pour distinguer les types de phrase. - Utiliser convenablement la ponctuation et les lettres majuscules. 	<ul style="list-style-type: none"> - Utiliser les sons oraux et nasals en les distinguant. - Utiliser convenablement les signes orthographiques. 	<ul style="list-style-type: none"> - Utiliser l'accentuation, le rythme, le volume de la voix, l'intonation pour produire un message clair et audible. - Faire convenablement le découpage des mots. - Distinguer les accents et les autres signes orthographiques et les utiliser convenablement. 	

15 Foundations of Education (All Options)

Topic area	Sub topic	Competences		
		Year one	Year two	Year three
Education system and stakeholders	Rwandan education system	Define key terms related to education in general and describe historical development of Rwandan education system in particular	Use ICT tools during teaching and learning process as well as research	Lead and manage ECD centers and primary schools according to policies and strategies of Rwandan education system
		Assess with evidence the pre and primary competence based curriculum	Justify the relevance of the Rwandan teacher training education policies	-----
	Equity in teaching and learning	-----	Apply strategies to meet different needs of learners, protect child rights, and advocate for appropriate services for children	-----

Topic area	Sub topic	Competences		
		Year one	Year two	Year three
	Community and parental involvement in education	-----	-----	Work closely with educational stakeholders at different levels in order to solve school related problems
	Teacher's ethics, rights and professional responsibilities	-----	-----	Act as a role model in order to uphold the values and standards of the teaching profession at school and in the community
Pedagogy	General teaching methods, approaches and techniques	Apply different approaches and games and describe how they contribute to holistic learning and development of competences	Design opportunities for young children to engage in different types of play and interact with them as they play to build their thinking and language skills (for ECLPE)	-----

Topic area	Sub topic	Competences		
		Year one	Year two	Year three
	Learning objectives	Formulate SMART instructional objectives based on a chosen topic for different learning domains	-----	-----
	Teaching and learning resources	Demonstrate creativity and commitment when making and using teaching and learning resources	-----	-----
	Pedagogical documents	Create a quality lesson plan with clear objectives, engaging techniques and a variety of materials	Make a variety of pedagogical documents properly	-----
	Reflective practice	Assess a lesson taught by a fellow teacher, referring to specific criteria	-----	-----

Topic area	Sub topic	Competences		
		Year one	Year two	Year three
	Assessment	-----	Select appropriate methods of assessment and create assessment tools, based on the competences to be measured	-----
	Organization of learning environment	-----	Use preventative and responsive classroom management strategies to create a conducive, peaceful and safe environment	-----
Psychology	Developmental psychology	Design activities which support the progression of skills from one developmental stage to another and take into account a child's current abilities	-----	-----

Competences			
Topic area	Sub topic	Year one	Year two
		Year one	Year two
	Educational psychology	-----	Incorporate and translate learning theories when planning and facilitating lessons
	Personality	-----	Identify different learners' personality types and cater for individual differences when planning and facilitating lessons
	Social psychology	-----	Apply the knowledge of social psychology in the school context
	Guidance and counseling	-----	Use theories and principles of guidance and counseling to understand learner's emotions and deal with behavioral problems

16. Geography (SSE)

TOPIC AREAS	SUBTOPIC AREAS	Year 2	Year 3
		<p>Practical geography</p>	<p>Statistics</p>	Interpret statistical data. Construct statistical graphs, diagrams and maps.	-----
	<p>Map work interpretation</p>	<p>Calculate distances and areas on a map. Analyse the relationship between physical aspects and human activities on maps.</p>	<p>-----</p>
	<p>Photographic Interpretation</p>	<p>To explain the relationship between the physical aspects and human activities on maps.</p>	<p>To interpret physical aspects and human activities on photographs, video and images</p>

TOPIC AREAS	SUBTOPIC AREAS	Year 2	Year 3
Physical Geography	Understanding the earth and universe	Distinguish between the components of the universe and the Solar system. Discuss the theories for origin of the earth and the effects of its movements.	Discuss the theories for origin and distribution of the continents.
	Landform and evolution and processes	Describe the Internal processes responsible for the evolution of different relief landforms and associated features.	Describe the external processes responsible for the evolution of different relief landforms and associated features. Categorize different features resulting from wave action and their relationships with human activities.
	Rocks and minerals	-----	Assess the economic importance of rocks and minerals.

TOPIC AREAS	SUBTOPIC AREAS	Year 2	Year 3
		Soils	Analyze different constituents and morphological properties of soil.	Explain the processes for the formation of soil, the causes and effects of soil erosion and soil conservation measures.
	Weather and Climate	Appreciate the importance of the atmosphere, weather and the impact of climate on the environment and human activities in the world.	Discuss the climate change and its impact on Rwanda and other countries.
	Vegetation	Appreciate the distribution of different vegetation types in the world.	-----
	Drainage	-----	Analyze the economic importance of the global drainage system and the reason for its conservation

TOPIC AREAS	SUBTOPIC AREAS	Year 2	Year 3
		Human and Economic Geography	<p>Population</p> <p>Settlement and Urbanization</p> <p>Economic activities</p>

17 History

TOPIC AREAS	SUB TOPIC AREAS	Y3 (History)	
		Y2 (History)	Y3 (History)
History of Rwanda	PRE- COLONIAL RWANDA	-----	-----
	COLONIAL RWANDA	-----	-----
	Independent Rwanda	<ul style="list-style-type: none"> - Examine the achievements and failures of the 1st and the 2nd Republics in Rwanda - Assess the causes and consequences of the Liberation war of 1990-1994 in Rwanda - Analyze the achievements and challenges of the Rwandan Government in post genocide period. 	-----

TOPIC AREAS	SUB TOPIC AREAS	Y3 (History)	
		Y2 (History)	Y3 (History)
	History of Genocide	<ul style="list-style-type: none"> - Compare different genocides (genocide against Tutsi and Holocaust / Shoah) - Analyze the forms of genocide denial and genocide ideology in Rwanda and abroad - Suggest ways of preventing genocide from happening again in Rwanda and elsewhere 	-----
Citizenship		-----	- Explore different major measures of home grown solutions to solve conflicts (Abunzi, Gacaca)
	Dignity and Self-Reliance	- Critique how home-grown solutions contribute to self-reliance (Girinka, Ubudehe, Akarima k'igikoni, Kuremera, Umuganda, Agaciro, Imihigo, Itorerero, community policing)	-----

TOPIC AREAS	SUB TOPIC AREAS	Y2 (History)		Y3 (History)	
History of Africa	History of Ancient Africa	<ul style="list-style-type: none"> - Analyze the reasons for the rise and decline of West African empires - Assess the expansion of Islam in Africa and its consequences - Analyze Islamic political movements in Africa (Jihad movements) 			
	European exploration and colonization	<ul style="list-style-type: none"> - Discuss the role of colonial agents in the conquest of Africa (Christian missionaries, Chartered Companies and explorers) 		<ul style="list-style-type: none"> - Analyze the causes of African nationalism, the means used to regain independence in Africa and its impact on African society 	
WORLD HISTORY	Ancient world civilizations	<ul style="list-style-type: none"> - Analyze the contribution of the main civilizations of the World to the development of the society 			
	The First and the Second world wars and their effects			<ul style="list-style-type: none"> - Analyze the political, economic and social changes in the world after the two World Wars Judge the international relations after the effects of the World Wars 	

18 Information and Communication Technology (ICT) (All Options)

TOPIC AREA	SUBTOPIC AREA	Competences		
		YEAR I	YEAR II	YEAR III
XO Laptop	Introduction to XO laptops	Identify different features of XO laptops and use them	-----	-----
COMPUTER MAINTENANCE	Computer maintenance	* Identify and describe elements of the computer box and their roles * Evaluate the capacities of processor and RAM for required computer capabilities * Apply computer maintenance principles to ensure it is in good working condition	-----	-----

TOPIC AREA	SUBTOPIC AREA	Competences		
		YEAR I	YEAR II	YEAR III
ADVANCED OFFICE		* Apply diagnostics principles to identify computer issues and Install computer software	-----	-----
	Advanced Word processing	* Apply advanced skills and concepts to create suitable word documents	-----	-----
	Advanced Spreadsheet	* Demonstrate the ability to use advanced features and functions of spreadsheet tools to record and analyze data	Apply appropriate techniques in formatting, manipulating and protecting of data	-----

TOPIC AREA	SUBTOPIC AREA	Competences		
		YEAR I	YEAR II	YEAR III
	Power Point presentation	-----	Create a power point presentation and appreciate its importance in addressing a bigger audience	-----
		-----	Demonstrate the way of Inserting movies, audio and screen recording in slide presentations	-----
	Database	-----		* Identify how databases work and how they are implemented in business and organizations * Collect and organize data to manipulate reports, and queries

TOPIC AREA	SUBTOPIC AREA	Competences		
		YEAR I	YEAR II	YEAR III
		-----		* Appreciate the importance of having a computerized database
GRAPHIC DESIGN	Computer graphics	-----	Use graphic tools in capturing and editing images	
INTERNET	Web designing	-----	-----	* Design static web pages * Discuss the difference between static and dynamic web pages
	Internet use	* Use the internet efficiently and effectively	* Exhibit awareness of electronic commerce and apply it in every daily life	-----

19 Integrated Science (SME Year 1)

TOPIC AREAS	SUB -TOPIC AREA	Competences for Year 1
1. Introduction to Integrated Science and measurements	Introduction to the concept of Integrated Science and measurements of physical quantities	Use appropriate materials to measure different physical quantities in sciences.
2. Biodiversity and Classification	Biodiversity	Explain how diversity is threatened by climate change and human activities.
	Classification of living things	Apply the basic knowledge of classification to group living organisms into the three domains
3. Solutions and Solubility	Determination of Concentration of Solutions	Prepare standard solutions and use them to determine concentration of other solutions by titration.
4. Light	Geometrical optics	Interpret and solve problems related to thin lenses and glass prism
	Optical instruments	Describe and use simple and compound optical instruments.
	Waves	Interpret the propagation of waves and solve related problems
5. Health and Hygiene	Wellness and cleanliness	Implement ways of promoting health and preventing common diseases and hygiene related issues.

TOPIC AREAS	SUB -TOPIC AREA	Competences for Year 1
6. Organization and maintenance of life	Cell structure	Describe the structure and function of cells in an organism.
	Cell division	<ul style="list-style-type: none"> - Describe the structure of a chromosome and how DNA is folded in a chromosome. - Describe the stages of cell cycle and explain the significance of cell and nuclear division in organisms.
	Nutrition	Describe the process of photosynthesis and explain the various environmental factors that influence the rate of photosynthesis.
	Biological molecules	Explain the use of biological molecules in living organism and test for their presence in variety of context.
7. Electricity	Electric Circuit	Interpret and solve problems using Kirchhoff's laws in electric circuits
8. Reproduction	Reproduction in plants	Explain modes of reproduction in plants and apply various methods of asexual reproduction as means of increasing crop yield.
9. Atomistic	Atomic and electronic structure	Interpret simple mass spectra and use them to calculate R.A.M. of different elements.

TOPIC AREAS	SUB -TOPIC AREA	Competences for Year 1
		Relate Bohr's model of the atom with hydrogen spectrum and energy levels, practice writing electronic configurations using s, p, d, f orbitals and interpret graphical information in relation to ionization energy of elements
	Periodicity of properties of elements	Describe how properties of ionic compounds and metals are related to the nature of their bonding.
		Use atomic structure and electronic configuration to explain the trends in the physical properties of the elements.
	Covalent bonding	Demonstrate how the nature of the bonding is related to the properties of covalent compounds and molecular structures.
10. Mechanics	Statics	Explain the principle of moments and apply it the equilibrium of a body.
	Dynamics	Analyze and solve problems related to projectile and circular motion.
11. Astrophysics	Earth and Space	Illustrate and describe the general structure of the solar system
Total number of periods		396

20 Integrated Science (ECLPE)

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		Year 1	Year 2	Year 3
Introduction to Integrated science and measurements of physical quantities	The concept of Integrated science and measurements of physical quantities	Explain the concept of Integrated science and Use appropriate materials to measure different physical quantities.	-----	-----
Health and Hygiene	Health and Hygiene	Implement strategies of diagnosing, preventing and dealing with Common diseases and hygiene related issues.	-----	-----
Atomistics	Atomic and electronic structure	Calculate R.A.M. of different elements	-----	-----
	Electronic structure	Relate Bohr's model of the atom with hydrogen spectrum and energy levels, practice writing electronic configurations using s, p, d, f orbitals.	-----	-----

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		Year 1	Year 2	Year 3
	Periodicity of properties of elements	<ul style="list-style-type: none"> - Demonstrate how the nature of the bonding is related to the properties of covalent compounds. - Describe how properties of ionic compounds and metals are related to the nature of their bonding. 	-----	-----
	Periodic table	-----	Use atomic structure and electronic configuration to explain the trends in the physical properties of the elements	-----
Mechanics		Analyse and solve problems related to circular motion.	-----	-----

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		Year 1	Year 2	Year 3
Organization and maintenance of life	Dynamics	-----	Explain the gravitational field potential and its application in planet motion	-----
	Statics	-----	Explain the principle of moments and apply it the equilibrium of a body.	-----
	Cell structure	Distinguish between the types of microscopy and their principle uses and relate the structure of cell to their functions.	-----	-----
	Cell division	Describe the stages of the cell cycle and explain the significance of cell and nuclear division in organisms.	-----	-----

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		Year 1	Year 2	Year 3
	Nutrition	Explain photosynthesis as an energy transfer process, its limiting factors and adaptations	-----	-----
	Biological molecules	Explain the use of biological molecules in living organism	-----	-----
	Response and Coordination in organisms	-----	- Describe the structure of neurons and explain the mechanisms of impulse transmission - identify the location and function of endocrine glands in the body	-----
Electricity	Current electricity	Analyse complex electric circuits using Kirchoff's laws	-----	-----

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		Year 1	Year 2	Year 3
Light	Geometrical optics	Explain the properties of lenses and image formation by lenses		-----
	Waves		Evaluate the photoelectric effect	-----
Reproduction	Reproduction in plants	Describe modes of reproduction in plants and apply various methods of asexual reproduction as means of increasing crop yield.	-----	-----
	Reproduction in animals	-----	-----	- Relate the structures of the human reproductive system to their functions and describe gamete formation. - Apply the methods of birth control in their daily life situation

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		Year 1	Year 2	Year 3
Ecology and conservation	Environmental biology	-----	Explain complex relationships between organisms within their environment	-----
Microbiology and Biotechnology	Microorganisms	-----	Describe the structure and characteristics of microorganisms and its applications	-----
Organic compounds and materials	Aliphatic compounds	-----	Apply IUPAC rules to name organic compounds and explain the types of isomers for organic compounds.	-----
		-----	-----	Relate the physical and chemical properties of the alkanes to the preparation methods, uses and isomerism.

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		Year 1	Year 2	Year 3
		-----	-----	Relate the physical and chemical properties of the alkenes and alkynes to their reactivity and uses.
		-----	-----	Compare the physical and chemical properties of alcohols to their preparation methods, reactivity and uses
		-----	-----	Compare the chemical nature of carbonyl compounds to their reactivity and uses
		-----	-----	Analyze the chemical nature of the carboxylic acids to their reactivity

TOPIC AREAS	SUB-TOPIC AREA	COMPETENCES		
		Year 1	Year 2	Year 3
		-----	-----	Relate the functional groups of esters to their reactivity, preparation methods and uses.
	Greenhouse Effect	-----	-----	Evaluate climate change and greenhouse effect
Genetics	Genetics	-----	- Explain the role of genes in inheritance - Explain the role of genes in inheritance and how genetic disorders occur.	-----
Total number of periods		144	144	96

21. Integrated Science (SSE and LE)

TOPIC AREA	SUB-TOPIC AREA	Competences		
		Y1	Y2	Y3
Organization and maintenance of life	Maintenance of life	Explain the concept of integrated science, prepare and serve a healthy diet	-----	-----
	Organization of life	Distinguish between the structure of animal and plant cells.	Describe the stages of cell cycle and explain the significance of cell and nuclear division in organisms.	Explain the cellular respiration and photosynthesis.
Atoms and molecules	Atomic structure	Describe the structure of an atom, calculate relative atomic mass and practice writing electronic configuration using s, p, d orbitals.	-----	-----
Mechanics	Kinematics	Apply equations of motion on a straight line to solve real life problems.	-----	-----

TOPIC AREA	SUB-TOPIC AREA	Competences		
		Y1	Y2	Y3
Atoms and molecules	Molecules	Explain how the nature of the bonding is related to the properties of compounds and molecular structures.	-----	-----
Electricity	Current electricity	-----	Apply Kirchoff's law in electrical circuit analysis.	-----
Health and disease	Infectious and non infectious diseases	-----	Explain symptoms of diseases, their treatment and prevention.	-----
Biodiversity and classification	Biodiversity	Explain how biodiversity on the earth is threatened by climatic change and human activities.	-----	-----
	Classification of living organisms	Apply the basic knowledge of classification to group living organisms in three domains	-----	-----

TOPIC AREA	SUB-TOPIC AREA	Competences		
		Y1	Y2	Y3
Ecology and Conservation	Applied ecology	-----	Evaluate the effects of human population size, resource use, and technology on environmental quality.	-----
Mechanics	Dynamics	-----	Differentiate work, energy and power and criticize the management of energy and natural resources.	-----
Reproduction	Reproduction in animals	-----	-----	Explain the role of human reproductive hormones, stages of pregnancy and family planning methods.
Information technology	Analogue and digital system	-----	Compare analogue and digital signal systems	-----
Environment	Environment and fertilizers	-----	-----	Analyze the components of quality fertilizers and their benefits, effects of misuse and dangers associated with substandard fertilizers.

22. Kinyarwanda: Ishami Ry'Indimi N'uburezi (IKINYARWANDA)

IMBUMBANY-IGISHO	INYIGISHO	UBUSHOBOZI BUGAMIJWE		
		Umwaka wa 1	Umwaka wa 2	Umwaka wa 3
Kumva no kuvuga ururimi	Kumva	<p>- Gukurikira neza ibivugwa kugira ngo agereranye ndetse atandukanye ingingo z'ingenzi zikubiye mu myandiko inyuranye yasomewe cyangwa yisomeye.</p> <p>- Kumva no gutandukanya inganzo mu ngeri zinyuranye z'ubuvanganzo no gusesengura ingingo zizikubiyemo.</p>	<p>- Gukurikira mu buryo bw'inyurabwenge ibivugwa kugira ngo agereranye ndetse atandukanye ingingo z'ingenzi zikubiye mu myandiko inyuranye asomewe cyangwa yisomeye.</p> <p>- Gushungura ibyo yumvise akabishingiraho ahamya ihuriro n'itandukaniro ry'ibitekerezo byatanzwe ku ngingo runaka.</p>	<p>- Kugaragaza mu buryo bwimbitse ibyo ashima n'ibyo anenga mu gihe asesengura imyandiko inyuranye yasomewe cyangwa yisomeye.</p>

UBUSHOBOZI BUGAMIJWE			
	Umwaka wa 1	Umwaka wa 2	Umwaka wa 3
IMBUMBANY-IGISHO			
INYIGISHO			
Kuvuga	<ul style="list-style-type: none"> - Kuvuga ashize amanga, assekaza mu gihe atanga ibitekerezo ku nsanganyamatsiko zinyuranye kandi yubaha n'ibya bangezi be. - Kuvuga muri make ibikubiye mu byo yasomye cyangwa yasomewe. - Gukina assekaza yigana abanyarubuga bavugwa mu mwandiko yasomye cyangwa yasomewe. 	<ul style="list-style-type: none"> - Kuyobora ibiganiro no gukora inshamake y'ibitekerezo byatanzwe. - Gukina yigana abanyarubuga bavugwa mu mwandiko yasomye cyangwa yasomewe kandi akabikora assekaza. 	<ul style="list-style-type: none"> - Kuvuga akoresha ikeshamvugo mu buryo buboneye kandi buhimbaza abamwumva. - Gutanga ibiganiro ku nsanganyamatsiko zitandukanye

		UBUSHOBOZI BUGAMIJWE		
INYIGISHO		Umwaka wa 1	Umwaka wa 2	Umwaka wa 3
IMBUMBANY-IGISHO	Gusoma no kwandika ururimi	<p>Gusoma adategwa kandi asesekaza.</p> <p>- Gutoranya ingingo cyangwa amagambo mu byo yasomye kugira ngo bimufashe gusobanura uko abona ibintu.</p>	<p>- Gusoma adategwa kandi asesekaza no gutanga ibitekerezo ku myandiko yasomye.</p> <p>- Kugereranya cyangwa gutandukanya ingeri zinyuranye z'imyandiko yasomye .</p>	<p>- Gusoma adategwa kandi asesekaza no gutanga ibitekerezo ku myandiko yisomeye.</p> <p>- Kunononsora imyandiko yahanze cyangwa yahanzwe n'abandi kugira ngo irusheho kunoga.</p>
	Kwandika	<p>- Kwandika inyandiko isomeka yubahiriza amabwiriza y'imyandikiye y'lkinyarwanda.</p> <p>- Guhanga imyandiko ku nsangamatsiko zitandukanye.</p>	<p>- Guhanga imyandiko ku nsanganyamatsiko zitandukanye yumvikanisha neza ibitekerezo bye.</p>	<p>- Gutegura ibiganiro ku nsanganyamatsiko zinyuranye.</p> <p>- Guhanga imyandiko ku nsanganyamatsiko zinyuranye, akurikiranya neza ingingo mu buryo bw'inurabwenge,</p>

IMBUMBANY-IGISHO	INYIGISHO	UBUSHOBOZI BUGAMIJWE		
		Umwaka wa 1	Umwaka wa 2	Umwaka wa 3
		-----	-----	akoresha iminozangano n'inzego z'ururimi ziboneye.
Ubumenyi bw'ururimi	Iyigandimi	- Kwandika yubahiriza ubutinde n'amasaku. - Kwandika mu nyandiko nyejwi na nyemvugo.	- Gusoma no kwandika yubahiriza ubutinde n'amasaku. - Gusoma no kwandika mu nyandiko nyejwi na nyemvugo.	- Gusesengura imiterere y'iby'indimi mu Rwanda. - Gusobanura ururimi n'ubwumvane.
	Ikibonezamvugo	- Gusobanura, gusesengura no gukoresha bumwe mu bwoko bw'amagambo	- Gusobanura, gusesengura no gukoresha bumwe mu bwoko bw'amagambo.	- Gutandukanya no gusobanura ubwoko bunyuranye bw'interuro.
	Ikeshamvugo	- Gukoresha imvugo yabugenewe ku bantu no ku bintu binyuranye.	- Gukoresha imvugo yabugenewe ku bantu no ku bintu binyuranye.	- Gukoresha iminozangano mu bihangano binyuranye.

UBUSHOBOZI BUGAMIJWE			
IMBUMBANY-IGISHO	INYIGISHO	Umwaka wa 1	Umwaka wa 3
	Inyunguramagambo	- Gusobanura no gukoresha inyunguramagambo.	- Gusobanura no gukoresha inyunguramagambo mu mvugiro zitandukanye.
	Ubuvanganzo	- Gusobanura ingeri z'ubuvanganzo nyarwanda no gusesengura zimwe mu ngeri z'ubuvanganzo bwa rubanda na zimwe mu ngeri z'ubuvanganzo nyandiko.	- Gusesengura zimwe mu ngeri z'ubuvanganzo nyarwanda na zimwe mu ngeri z'ubuvanganzo nyandiko. - Guhanga no kujora inyandiko z'ubuvanganzo nyandiko.

23. Kinyarwanda: Ishami Ryo Kwigisha Mu Mashuri Y'inshuke N'ikicro Cya Mbere Cy'amashuri Abanza

IMBUMBANYI GISHO	INYIGISHO	UBUSHOBOZI BUGAMIJWE		
		Umwaka wa 1	Umwaka wa 2	Umwaka wa 3
Kumva no kuvuga ururimi	Kumva	<ul style="list-style-type: none"> - Gukurikira neza ibivugwa kugira ngo agereranye ndetse atandukanye ingingo z'ingenzi zikubiye mu myandiko inyuranye yasomewe cyangwa yisomeye. - Kumva no gutandukanya zimwe mu ngeri z'ubuvanganzo no gusesengura ingingo zizikubiyemo. 	<ul style="list-style-type: none"> - Gukurikira mu buryo bw'inyurabwenge ibivugwa kugira ngo agereranye ndetse atandukanye ingingo z'ingenzi zikubiye mu myandiko inyuranye asomewe cyangwa yisomeye. - Gushungura ibyo yumvise akabishingiraho ahamya ihuriro n'itandukaniro ry'ibitekerezo byatanzwe ku ngingo runaka. 	<ul style="list-style-type: none"> - Kugaragaza ibyo ashima n'ibyo anenga mu gihe asesengura imyandiko inyuranye yasomewe cyangwa yisomeye.

IMBUMBANYI GISHO	INYIGISHO	UBUSHOBOZI BUGAMIJWE		
		Umwaka wa 1	Umwaka wa 2	Umwaka wa 3
	Kuvuga	<p>- Kuvuga ashize amanga, assekaza mu gihe atanga ibitekerezo ku nsanganyamatsiko zinyuranye kandi yubaha n'ibya bangenzi be.</p> <p>- Kuvuga muri make ibikubiye mu byo yasomye cyangwa yasomewe.</p> <p>- Gukina assekaza yigana abanyarubuga bavugwa mu mwandiko yasomye cyangwa yasomewe.</p>	<p>- Kuyobora ibiganiro no gukora inshamake y'ibitekerezo byatanzwe.</p> <p>- Gukina assekaza yigana abanyarubuga bavugwa mu mwandiko yasomye cyangwa yasomewe.</p>	<p>- Kuvuga ashize amanga imbwirwaruhame, akoresha ikeshamvugo mu buryo buboneye kandi buhimbaza abamwumva.</p> <p>- Gutanga ibiganiro ku nsanganyamatsiko zitandukanye.</p>

UBUSHOBOZI BUGAMIJWE			
	Umwaka wa 1	Umwaka wa 2	Umwaka wa 3
IMBUMBANYI GISHO Gusoma no kwandika ururimi	INYIGISHO Gusoma	- Gusoma adategwa yubahiriza utwatuzo n'isekekaza. - Gutoranya ingingo cyangwa amagambo mu byo yasomye kugira ngo bimufashe gusobanura uko abona ibintu.	- Gusoma adategwa yubahiriza utwatuzo n'isekekaza anatanga ibitekerezo ku myandiko yasomye. - Kunononsora imyandiko yahanze cyangwa yahanzwe n'abandi kugira ngo irusheho kunoga.
	Kwandika	- Kwandika inyandiko isomeka yubahiriza amabwiriza y'imyandikire y'ikinyarwanda.	- Guhanga imyandiko ku nsanganyamatsiko zinyuranye. - Guhanga imyandiko ku nsanganyamatsiko zinyuranye, akurikiranya neza ingingo mu buryo bw'inurabwenge,

IMBUMBANYI GISHO	INYIGISHO	UBUSHOBOZI BUGAMIJWE		
		Umwaka wa 1	Umwaka wa 2	Umwaka wa 3
Ubumenyi bw'ururimi		- Guhanga imyandiko ku nsangamatsiko zitandukanye.		akoresha ikeshamvugo riboneye.
	Iyigandimi	- Kwandika yubahiriza ubutinde n'amasaku. - Kwandika mu nyandiko nyejwi na nyemvugo.	- Gusoma no kwandika yubahiriza ubutinde n'amasaku. - Gusoma no kwandika mu nyandiko nyejwi na nyemvugo.	- Gusesengura imiterere y'iby'indimi mu Rwanda. - Gusobanura ururimi n'ubwumvane.
	Ikibonezamvugo	- Gusobanura, gusesengura no gukoresha bumwe mu bwoko bw'amagambo.	-Gusobanura, gusesengura no gukoresha bumwe mu bwoko bw'amagambo.	- Gutandukanya no gusobanura ubwoko banyuranye bw'interuro.
	Ikeshamvugo	- Gukoresha imvugo yabugenewe ku bantu no ku bintu binyuranye.	-Gukoresha imvugo yabugenewe ku bantu no ku bintu binyuranye.	- Gukoresha iminozangano mu bihangano binyuranye.

IMBUMBANYI GISHO	INYIGISHO	UBUSHOBOZI BUGAMIJWE		
		Umwaka wa 1	Umwaka wa 2	Umwaka wa 3
	Inyunguramaga- mbo	- Gusobanura no gukoresha inyunguramagambo.	-Gusobanura no gukoresha inyunguramagambo.	- Gusobanura no gukoresha inyunguramagambo mvujiro zitandukanye.
	Ubuvanganzo	-Gusobanura ingeri z'ubuvanganzo nyarwanda no gusesengura zimwe mu ngeri z'ubuvanganzo bwa rubanda na zimwe mu ngeri z'ubuvanganzo nyandiko.	- Gusesengura zimwe mu ngeri z'ubuvanganzo nyabami na zimwe mu ngeri z'ubuvanganzo nyandiko. - Guhanga yigana zimwe mu ngeri z'ubuvanganzo nyandiko.	- Gusesengura zimwe mu ngerzi z'ubuvanganzo nyarwanda na zimwe mu ngeri z'ubuvanganzo nyandiko. - Guhanga no kujora inyandiko z'ubuvanganzo nyandiko.

24. Kinyarwanda: Ishami Ry'uburezi na Siyansi N'iry'uburezi N' Imbonezamubano

IMBUMBANYIGISHO	INYIGISHO	UBUSHOBOZI BUGAMIJWE		
		Umwaka wa 1	Umwaka wa 2	Umwaka wa 3
Kumva no kuvuga ururimi	Kumva	<ul style="list-style-type: none"> - Gukurikira neza ibivugwa kugira ngo agereranye ndetse atandukanye ingingo z'ingenzi zikubiye mu myandiko inyuranye yasomewe cyangwa yisomeye. - Kumva no gutandukanya zimwe mu ngeri z'ubuvanganzo nyarwanda. 	<ul style="list-style-type: none"> - Kugaragaza byo ashima n'ibyo anenga mu gihe asesengura imwe mu myandiko yasomewe cyangwa yisomeye. 	<ul style="list-style-type: none"> - Gushungura ibyo yumvise akabishingiraho ahamya ihuriro n'itandukaniro ry'ibitekerezo byatanzwe ku ngingo runaka.
	Kuvuga	<ul style="list-style-type: none"> - Kuvuga ashize amanga kandi asesekaza mu gihe atanga ibitekerezo mu biganiro kandi 	<ul style="list-style-type: none"> - Kuyobora ibiganiro no gukorainshamake y'ibitekerezo byatanzwe. 	<ul style="list-style-type: none"> - Kuvuga akoresha ikeshamvugo mu buryo buboneye kandi buhimbaz abamwumva.

IMBUMBANYIGISHO	INYIGISHO	UBUSHOBOZI BUGAMIJWE		
		Umwaka wa 1	Umwaka wa 2	Umwaka wa 3
Gusoma no kwandika ururimi		yubaha n'ibya bangenzi be. - Gukina asesekaza yigana abanyarubuga bavugwa mu mwandiko yasomye cyangwa yasomewe.	- Gukina asesekaza yigana abanyarubuga bavugwa mu mwandiko yasomye cyangwa yasomewe.	- Gutanga ibiganiro ku nsanganyamatsiko zitandukanye.
	Gusoma	- Gusoma adategwa yubahiriza utwatuzo n'isesekaza.	- Gusoma adategwa yubahiriza utwatuzo n'isesekaza anatanga ibitekerezo ku myandiko yasomye.	- Gusoma adategwa yubahiriza utwatuzo n'isesekaza anatanga ibitekerezo ku myandiko yasomye.
	Kwandika	- Kwandika inyandiko isomeka kandi yubahiriza amabwiriza y'inyandikire y'inkinyarwanda. - Guhina imyandiko inyuranye yasomye cyangwa yasomewe.	- Guhanga imyandiko inyuranye ku nsanganyamatsiko yumvikanisha neza ibitekerezo bye.	- Gutegura ibiganiro ku nsanganyamatsiko zinyuranye. - Guhanga imyandiko ku nsanganyamatsiko zinyuranye, akoresha ikeshamvugo riboneye.

		UBUSHOBOZI BUGAMIJWE		
		Umwaka wa 1	Umwaka wa 2	Umwaka wa 3
IMBUMBANYIGISHO	INYIGISHO			
Ubumenyi bw'ururimi	Iyigandimi	- Kwandika yubahiriza ubutinde n'amasaku.	- Gusoma no kwandika yubahiriza ubutinde n'amasaku.	- Gusesengura imiterere y'iby'indimi mu Rwanda.
	Ikibonezamvugo	- Gusobanura, no gukoresha bumwe mu bwoko bw'amagambo mu mvugo no munyandiko.	- Gusobanura, gusesengura no gukoresha bumwe mu bwoko bw'amagambo,	- Gutandukanya no gusobanura bumwe mubwoko bw'interuro.
	Ikeshamvugo	- Gukoresha imvugo yabugenewe ku bantu no ku bintu binyuranye.	- Gukoresha imvugo yabugenewe ku bantu no ku bintu binyuranye.	- Gukoresha imvugo yabugenewe ku bantu no ku bintu binyuranye. - Gukoresha imwe mu minozangano mu bihangano binyuranye.

		UBUSHOBOZI BUGAMIJWE		
		Umwaka wa 1	Umwaka wa 2	Umwaka wa 3
IMBUMBANYIGISHO	INYIGISHO	- Gusobanura no gukoresha inyunguramagambo.	- Gusobanura no gukoresha inyunguramagambo.	- Gusobanura no gukoresha inyunguramagambo mu mvugiro zitandukanye.
	Inyunguramagambo	- Gusobanura zimwe mu ngeri z'ubuvanganzo nyarwanda no kuzisesengura.	- Gusesengura zimwe mu ngeri z'ubuvanganzo nyarwanda.	- Gusesengura zimwe mu ngeri z'ubuvanganzo nyarwanda.
	Ubuvanganzo			

25. KISWAHILI [LE]

Mada kuu	Mada ndogo	Uwezo		
		Mwaka wa 1	Mwaka wa 2	Mwaka wa 3
1. Matumizi ya lugha katika mazingira mbalimbali	1.1 Matumizi ya Kiswahili shuleni	Kuzungumza na kuandika kwa ufasaha matini fupifupi kwa kutumia msamiati unaofaa katika mazingira ya shuleni	-----	-----
	1.2 Matumizi ya Kiswahili Nyumbani	Kuzungumza na kuandika kwa ufasaha matini fupifupi kwa kutumia msamiati unaofaa katika mazingira ya nyumbani	-----	-----
	1.3 Matumizi ya Kiswahili hospitalini	Kuzungumza na kuandika kwa ufasaha matini fupifupi kwa kutumia msamiati unaofaa katika mazingira ya hospitalini	-----	-----

Mada kuu	Mada ndogo	Uwezo		
		Mwaka wa 1	Mwaka wa 2	Mwaka wa 3
	1.4 Matumizi ya Kiswahili katika maeneo ya utawala	Kuzungumza na kuandika kwa ufasaha matini fupifupi kwa kutumia msamiati unaofaa katika mazingira ya utawala	-----	-----
	1.5 Kiswahili katika shughuli za kibiashara	Kuzungumza na kuandika kwa ufasaha matini fupifupi kwa kutumia msamiati unaofaa katika shughuli za kibiashara	-----	-----
2. Ukuzaji wa lugha kimazungumzo	2.1 Ugizaji	Kuigiza mazungumzo mbalimbali kwa kutumia Kiswahili sanifu	-----	-----
	2.2 Midahalo		Kushiriki ipasavyo katika midahalo, kuongoza na kutoa hoja kwa kutetea au/na kupinga mawazo yaliyotolewa	-----

Mada kuu	Mada ndogo	Uwezo		
		Mwaka wa 1	Mwaka wa 2	Mwaka wa 3
	2.2 Mijadala	-----	Kuwasiliana kwa ufasaha kwa njia ya majadiliano kuhusu mada mbalimbali	-----
3. Ukuzaji wa Kiswahili kimaandishi	3.1 Utungaji wa barua za kirafiki, mwaliko na matangazo	-----	Kutunga barua za kirafiki, mwaliko na matangazo kulingana na mazingira mbalimbali	-----
	3.2 Utungaji wa barua za kikazi	-----	-----	Kutunga kwa ufasaha barua za kikazi kulingana na mazingira mbalimbali
	3.3 Utungaji wa insha za insha	Kutunga insha za masimulizi kwa kuzingatia kanuni za utungaji.	Kutunga insha za maelezo zenye aya mbalimbali kwa kuzingatia kanuni za utungaji.	Kutunga insha za ziara zenye urefu wowote kwa kuzingatia kanuni husika.
	3.4 Ufahamu na ufupisho	-----	Kufupisha matini fupifupi za Kiswahili kulingana na kanuni husika.	Kufupisha matini zenye urefu wowote kulingana na kanuni zinazohusika

Mada kuu	Mada ndogo	Uwezo		
		Mwaka wa 1	Mwaka wa 2	Mwaka wa 3
	3.5 Hotuba	-----	-----	Kuandaa hotuba juu ya mada mbalimbali na kuzisimulia hadharani
	3.6 Utungaji wa Ripoti	-----	Kuandika ripoti za mikutano mbalimbali	Kuandika ripoti kuhusu mafunzo ya wanafunzi wanaojiandaa kumaliza masomo yao ya ualimu
4. Lugha na jamii	4.1 Dhima ya lugha katika jamii	Kuelezea lugha kama chombo cha mawasiliano katika jamii	-----	-----
	4.2 Historia ya Kiswahili	-----	Kueleza asili ya lugha ya Kiswahili, kukua na kuenea kwa lugha hii katika nchi za Afrika Mashariki	-----
5. Lugha na mawasiliano	5.1 Kiswahili katika jamii	-----	Kuwasiliana kwa ufasaha kwa kutumia Kiswahili sanifu kulingana na mazingira husika	-----

Mada kuu	Mada ndogo	Uwezo		
		Mwaka wa 1	Mwaka wa 2	Mwaka wa 3
	5.2 Kiswahili na tekinolojia	-----	Kutumia msamiati maalumu katika uwanja wa kitekinolojia	-----
6. Kiswahili na Fasihi simulizi	6.1 Sanaa katika jamii	-----	Kutofautisha aina za sanaa kwa ujumla na kuonyesha nafasi ya sanaa katika jamii	-----
	6.2 Umuhimu wa fasihi katika jamii	-----	Kueleza umuhimu wa tanzu mbalimbali za fasihi katika jamii	-----
	6.3 Uhakiki wa kazi za fasihi Simulizi	-----	-----	Kueleza aina za fasihi simulizi na kuhakiki kazi zake mbalimbali
7. Kiswahili na Fasihi Andishi	7.1 Tanzu za fasihi andishi	-----	-----	Kueleza tanzu za fasihi andishi na kuonyesha umuhimu wake
	7.2 Uhakiki wa kazi za fasihi andishi	-----	-----	Kuhakiki kazi mbalimbali za fasihi andishi

26. KISWAHILI [SME, SSE, ECLPE]

Mada kuu	Mada ndogo	Uwezo		
		Mwaka wa 1	Mwaka wa 2	Mwaka wa 3
1. Matumizi ya lugha katika mazingira mbalimbali	1.1 Matumizi ya Kiswahili shuleni	Kuzungumza na kuandika kwa ufasaha matini fupifupi kwa kutumia msamiati unaofaa katika mazingira ya shuleni	-----	-----
	1.2 Matumizi ya Kiswahili nyumbani	Kuzungumza na kuandika kwa ufasaha matini fupifupi kwa kutumia msamiati unaofaa katika mazingira ya nyumbani	-----	-----
	1.3 Matumizi ya Kiswahili hospitalini	Kuzungumza na kuandika kwa ufasaha matini fupifupi kwa kutumia msamiati unaofaa katika mazingira ya hospitalini	-----	-----
	1.4 Kiswahili katika shughuli za kibiashara	Kuzungumza na kuandika kwa ufasaha matini fupifupi kwa kutumia msamiati unaofaa katika shughuli za kibiashara	-----	-----

Mada kuu	Mada ndogo	Uwezo		
		Mwaka wa 1	Mwaka wa 2	Mwaka wa 3
	1.4 Matumizi ya Kiswahili katika maeneo ya utawala	-----	Kuzungumza na kuandika kwa ufasaha matini fupifupi kwa kutumia msamiati unaofaa katika mazingira ya utawala	-----
2. Kiswahili na Fasihi simulizi	2.1 Hadithi	-----	Kusoma na kusimulia hadithi za masimulizi	-----
	2.2 Methali na semi fupifupi	-----	Kutumia methali na semi fupifupi katika maisha ya kila siku	-----
	2.3 Mijadala	-----	Kusikiliza kwa makini maoni kutoka washiriki wa mijadala na kutoa hoja kwa kutetea au kupinga mawazo ya wengine.	-----
3. Ukuzaji wa Kiswahili kimaandishi	3.1 Utungaji wa insha za masimulizi	-----	Kutunga insha fupifupi za masimulizi kwa kuzingatia kanuni za utungaji	-----

Mada kuu	Mada ndogo	Uwezo		
		Mwaka wa 1	Mwaka wa 2	Mwaka wa 3
	3.2 Utungaji wa barua za kirafiki, mwaliko na matangazo	-----	-----	Kuandika barua za kirafiki, mwaliko na matangazo kwa watu mbalimbali
	3.3 Utungaji wa barua za kikazi	-----	-----	Kuandika barua za kikazi kwa ufasaha
	3.4 Midahalo	-----	-----	Kuandaa na kuongoza midahalo juu ya masuala mtambuka mbalimbali

27. MATHEMATICS (ECLPE)

Topic area	Sub topic area	Competences		
		YEAR 1	YEAR 2	YEAR 3
I. ARITHMETIC	1. SETS	Classify numbers into natural, integers, rational and irrational.	-----	-----
	2. RATIOS AND PROPORTIONS	Solve problems that involve Set operations using Venn diagram.	-----	-----
	3. SEQUENCES (PROGRESSIONS)	Apply ratios, proportions and multiplier proportion change to solve real life related problems.	-----	-----

Topic area	Sub topic area	Competences		
		YEAR 1	YEAR 2	YEAR 3
II. ALGEBRA		-----	Extend the concept of arithmetic and geometric progression to sequences and series. Apply concepts of sequences and series to solve related problems.	-----
	2.1. ELEMENT OF LOGIC	Use Mathematical logic as a tool of reason and argumentation in daily lifesituation.		
	2.2. POLYNOMIALS			
	2.3. EQUATIONS AND INEQUALITIES			
	2.4. POWERS ,INDICES, RADICALS AND LOGARITHMS			

Topic area	Sub topic area	Competences		
		YEAR 1	YEAR 2	YEAR 3
		Perform operations on polynomials and solve related problems.	-----	-----
		Solve algebraically or graphically linear and quadratic equations or inequalities. Solve and discuss parametric equations of second degree. Solve problems related to powers, indices, radical and common logarithms.	-----	-----
III. GEOMETRY	3.1. EUCLIDIAN PLANE GEOMETRY.		Determine an equation of a line and a circle.	-----

Topic area	Sub topic area	Competences		
		YEAR 1	YEAR 2	YEAR 3
IV. TRIGONOMETRY	4.1. TRIGONOMETRIC CIRCLE, RATIOS AND IDENTITIES	Apply trigonometric concepts in solving problems on triangles and real life situation.	-----	-----
V. STATISTICS	5.1. DESCRIPTIVE STATISTICS.	Extend understanding, analysis and interpretation of data arising from problems and questions in daily life to the standard deviation.	Extend understanding, analysis and interpretation of bivariate data to correlation coefficients and regression lines.	-----
VI. CALCULUS	6.1 LIMITS; DIFFERENTIATION OF REAL FUNCTIONS	-----	- Apply the concepts and definitions of functions to determine the domain of rational and irrational functions.	- Evaluate correctly domain of definition and limit of a function and determine asymptote to related function.

Topic area	Sub topic area	Competences		
		YEAR 1	YEAR 2	YEAR 3
		<p>Use concepts and definitions of functions to determine the domain of polynomial functions and represent them graphically in simple cases(plotting linear and quadratic functions)</p>	<ul style="list-style-type: none"> - Evaluate correctly limit of function and deduce asymptotes of a real function. - Differentiate a real function and apply derivatives to sketch the graphs. 	<ul style="list-style-type: none"> - Differentiate a real function and apply derivatives to sketch the graphs of the given functions. - Extend the use of concepts and definitions of functions to determine the domain and sketch the graphs of natural logarithmic and exponential function

Topic area	Sub topic area	Competences		
		YEAR 1	YEAR 2	YEAR 3
VII. LINEAR ALGEBRA	7.1. MATRICES AND SYSTEM OF LINEAR EQUATIONS.	-----	-----	Solve problems involving the system of linear equations using matrices: (Cramer's methods, Gaussian elimination methods and inverse matrix)

28. MATHEMATICS: SME

Topic area	Sub topic area	Competences		
		YEAR 1 NUMBER OF UNITS "TWELVE" (11)	YEAR 2 (NUMBER OF UNITS) "EIGHT" (8)	YEAR 3 NUMBER OF UNIT "SEVEN" (7)
I.ARITHMETIC	1.1.SETS	Classify numbers into natural, integers, rational and irrationals	-----	-----
	1.2.RATIOS AND PROPORTIONS	Solve problems that involve Set operations using Venn diagram.	-----	-----
	1.3.SEQUENCES AND SERIES (PROGRESSIONS)	Apply ratios and proportions properties to solve related problems including problems in real life involving multiplier proportion change	-----	-----

Topic area	Sub topic area	Competences		
		YEAR 1 NUMBER OF UNITS "TWELVE" (11)	YEAR 2 (NUMBER OF UNITS) "EIGHT" (8)	YEAR 3 NUMBER OF UNIT "SEVEN"(7)
II.ALGEBRA		-----	Extend the concept of arithmetic and geometric progression to sequences and series.	-----
	2.1.POLYNOMIALS	Perform operations on polynomials and solve related problems.	-----	-----
	2.2.ELEMENT OF LOGIC	Use Mathematical logic as a tool of reason and argumentation indaily life situation.	-----	-----
	2.3 EQUATIONS AND INEQUALITIES			

Topic area	Sub topic area	Competences		
		YEAR 1 NUMBER OF UNITS "TWELVE" (11)	YEAR 2 (NUMBER OF UNITS) "EIGHT" (8)	YEAR 3 NUMBER OF UNIT "SEVEN" (7)
	2.4. POWERS ,INDICES, RADICALS AND LOGARITHMS	Solve algebraically or graphically daily life problems using linear, quadratic equations, parametric equations or inequalities.	-----	-----
		Solve problems related to powers, indices, radical and common logarithms.	-----	-----
	2.5. COMPLEX NUMBERS.	-----	-----	Extend understanding on the set of numbers to complex numbers and solve equations in set of complex numbers.

				Competences		
Topic area	Sub topic area	YEAR 1 NUMBER OF UNITS "TWELVE" (11)	YEAR 2 (NUMBER OF UNITS) "EIGHT" (8)	YEAR 3 NUMBER OF UNIT "SEVEN" (7)		
III.GEOMETRY	3.1. EUCLIDIAN PLANE GEOMETRY.	Determine an equation of a line and a circle.				
	3.2 EUCLIDIAN SPACE GEOMETRY		-Extend understanding and use geometric presentations of lines and planes, locate points and determine equation of a line and plane in 3D.			
IV.TRIGONOMETRY	4.1. TRIGONOMETRIC CIRCLE, RATIOS AND IDENTITIES	Apply trigonometric concepts in solving problems on triangles and real life situation.				

Topic area	Sub topic area	Competences		
		YEAR 1 NUMBER OF UNITS "TWELVE" (11)	YEAR 2 (NUMBER OF UNITS) "EIGHT" (8)	YEAR 3 NUMBER OF UNIT "SEVEN"(7)
	4.2. TRANSFORMATION FORMULA E ,TRIGONOMETRIC EQUATION		Solve trigonometric equations, and related problems using trigonometric identities and transformation formulas.	
V.STATISTICS AND PROBABILITY	5.1. DESCRIPTIVE STATISTICS.	Extend understanding, analysis and interpretation of data arising from problems and questions in daily life to the standard deviation.	Extend understanding, analysis and interpretation of bivariate data to correlation coefficients and regression lines.	

Topic area	Sub topic area	Competences		
		YEAR 1 NUMBER OF UNITS "TWELVE" (11)	YEAR 2 (NUMBER OF UNITS) "EIGHT" (8)	YEAR 3 NUMBER OF UNIT "SEVEN" (7)
	5.2. COMBINATORY ANALYSIS AND PROBABILITY			Apply formulae of combinatory analysis to count possible outcomes of a random experiment. -Determine probability of occurrence of an event from random experiment and Apply Bayes' theorem.
VI.CALCULUS	6.1 LIMITS; DIFFERENTIATION AND INTEGRATION OF REAL FUNCTIONS	Use concepts and definitions of functions to determine the domain of polynomial functions and represent them	-Apply the concepts and definitions of functions to determine the domain of rational, irrational and trigonometric functions.	Extend the use of concepts and definitions of functions to determine the domain and sketch the graphs of logarithmic and exponential functions.

Topic area	Sub topic area	Competences		
		YEAR 1 NUMBER OF UNITS "TWELVE" (11)	YEAR 2 (NUMBER OF UNITS) "EIGHT" (8)	YEAR 3 NUMBER OF UNIT "SEVEN"(7)
		graphically in simple cases.(plotting linear and quadratic functions)	-Evaluate correctly limit of function and apply them to determine asymptotes of a real function. -Differentiate a real function and apply derivatives to sketch the graphs and Solve problems involving optimization	Determine correctly integration as the inverse of differentiation or limit of a sum and apply it to find area of plane surfaces, volumes of solid of revolution and lengths of curved lines.
	6.2. DIFFERENTIAL EQUATIONS			Usedifferential equations to solve related problems that arise in a variety of practical contexts.

Competences				
Topic area	Sub topic area	YEAR 1 NUMBER OF UNITS "TWELVE" (11)	YEAR 2 (NUMBER OF UNITS) "EIGHT" (8)	YEAR 3 NUMBER OF UNIT "SEVEN"(7)
VII. LINEAR ALGEBRA	7.1. MATRICES AND SYSTEM OF LINEAR EQUATIONS.		Solve problems involving the system of linear equations using matrices: (Cramer's method, Gaussian Elimination methods and inverse matrix).	

29. MATHEMATICS (SSE)

Topic area	Sub topic area	Competences		
		YEAR 1	YEAR 2	YEAR 3
I. Algebra	1.1. ARITHMETIC	Apply arithmetic operations to simple economic problems		
	1.2. Equations and inequalities	Model and solve daily life problems using linear, quadratic equations or inequalities		
	1.3. Sequences and series		Apply arithmetic and geometric sequences to solve problems in financial mathematics	
II. ANALYSIS	2.1. Graphs and functions	Apply graphical representation of function in Economics models		

Topic area	Sub topic area	Competences		
		YEAR 1	YEAR 2	YEAR 3
	2.2. : Limits of functions	Evaluate correctly limits of functions and apply them to solve related problems		
	2.3 Derivative of functions and their applications	Use the concepts of derivative to solve and interpret related problems in various contexts		
	2.4 LOGARITHMIC AND EXPONENTIAL FUNCTIONS		Solve equations involving logarithms or exponentials and apply them to model and solve related problems.	Apply logarithmic and exponential functions to model and solve problems about interest rates, population growth
	2.5 INTEGRATION			Use integration as the inverse of differentiation to solve problems related to marginal and total cost

Topic area	Sub topic area	Competences		
		YEAR 1	YEAR 2	YEAR 3
	2.6 ORDINARY DIFFERENTIAL EQUATIONS			Use ordinary differential equations of first order to model and solve related problems in Economics
III.LINEAR ALGEBRA	3.1. Matrices and determinants of order 2 and 3.		Use matrices and determinants of order 2 and 3 to solve other related problems such as organization of data in a shopping, in Cryptography	
IV.STATISTICS AND PROBABILITY	4.1. DESCRIPTIVE STATISTICS	Analyse and interpret statistical data from daily life situations		

Topic area	Sub topic area	Competences		
		YEAR 1	YEAR 2	YEAR 3
	4.2 Bivariate statistics		Extend understanding, analysis and interpretation of bivariate data to correlation coefficients and regression lines	
	4.3 : Elementary probability	Use combinations and permutations to determine probabilities of occurrence of an event		
	4.4 Conditional probability		Apply rules of probability to solve problems related to dependent and independent events	

30. MATHEMATICS (LE)

TOPIC AREA	SUB-TOPIC AREA	Competences		
		Y1	Y2	Y3
Algebra	Numbers and operations	Apply arithmetic operations to solve simple real life problems		
Algebra	Equations and inequalities	Model and solve daily life problems using linear, quadratic equations or inequalities		
Analysis	Functions		Apply graphical representation of function to model economical and financial problems	
Geometry	Plane geometry		Determine Algebraic representations of lines and calculate the area of geometric shapes in 2D.	

TOPIC AREA	SUB-TOPIC AREA	Competences		
		Y1	Y2	Y3
Algebra	Logics		Use logical statements to express appropriate decisions.	
Statistics and probability	Descriptive statistics	Analyze and interpret simple statistical data from daily life situations.		Extend understanding, analysis and interpretation of bi-variate data to correlation coefficients and regression lines.
Statistics and probability	Probability			Use counting techniques and concepts of probability to determine the probability of possible outcomes of events occurring in real life

31. PHYSICAL EDUCATION AND SPORTS (ALL OPTIONS)

TOPIC AREA	SUB-TOPIC AREA	COMPETENCES		
		YEAR 1	YEAR 2	YEAR 3
1. Understanding Physical Education and Sports activities	✓ Concepts related to PES	✓ Use different concept related to PES.		
	✓ Basic physical education exercises.	✓ Perform basic physical education exercises.		
2. Sports	✓ Individual sports	✓ Perform basic gymnastics exercises. ✓ Perform running races exercise in athletics.	✓ Perform jumping exercises in athletics.	✓ Perform throwing exercises in athletics.

	<p>✓ Collective and Inclusive sports.</p>	<p>✓ Perform basic techniques used in playing football, volleyball, basketball, handball and netball.</p> <p>✓ Perform different basics techniques used in playing sitting volleyball and goal ball.</p>	<p>✓ Perform basic tactics used in playing Football, volleyball, basketball, handball and netball.</p> <p>✓ Perform different tactics used in playing sitting volleyball and goal ball.</p>	<p>✓ Perform basic technical-tactics used in playing football, volleyball, basketball, handball and netball in game situation adhering to the rules.</p> <p>✓ Organize different sports events.</p> <p>✓ Perform different technical-tactics used in playing sitting volleyball and goal ball adhering to rules.</p> <p>✓ Organize different competitions in inclusive sports.</p>
<p>1. Basic First aid</p>	<p>✓ Principles and practices of first aid.</p>			<p>✓ Provide first aid to the victims.</p>

32. PHYSICS

TOPIC AREAS	SUB-TOPIC AREA	Competences		
		Y1	Y2	Y3
1. Light	1.1. Optical instruments	INTEGRATED SCIENCE	PHYSICS	PHYSICS
		Interpret and solve problems solving in thin lenses and glass prism. Design and interpret the manipulation of simple and compound optical instruments.		
2. Oscillations and waves.	1.2. Nature of light		Compare the nature of light	
	2.1. Energy changes in simple harmonic motion		Illustrate energy changes in Simple harmonic motion.	

TOPIC AREAS	SUB-TOPIC AREA	Competences		
		Y1	Y2	Y3
		INTEGRATED SCIENCE	PHYSICS	PHYSICS
3. Energy, Power and Climate Change	2.2. Waves.	Interpret propagation of waves and solve related problems.	Interpret and solve problems in mechanical waves.	Evaluate the effects of Sound waves in elastic medium
	3.1. Greenhouse effect		Justify the effects of fossil and non fossil fuel in power production	Prepare and evaluate the environmental survey conducted on climate change and greenhouse effect
4. Motion in fields	4.1. Planetary motion		Apply Newton's law of gravitation and Kepler's laws to explain planetary motion.	
5. Atomic physics	5.1. Quantum physics		Interpret the atomic model and photoelectric effect and solve related problems.	

TOPIC AREAS	SUB-TOPIC AREA	Competences		
		Y1	Y2	Y3
		INTEGRATED SCIENCE	PHYSICS	PHYSICS
6. Digital Technology.	6.1. Analog and digital signals.		Evaluate the application of analog and digital signals in telecommunication systems.	Evaluate the application of optic fibre transmission and other transmitting systems.
7. Relativity and particle physics	7.1. Concepts and postulates of special relativity		Explain relativity Concepts and postulates of special relativity	
	7.2. Particles and interactions			Classify the nature of particle and their interactions.
8. Astrophysics	8.1. Earth and space.		Explain stellar distance and radiation	

TOPIC AREAS	SUB-TOPIC AREA	Competences		
		Y1	Y2	Y3
9. Electromagnetic waves	9.1. X-rays 9.2. LASER 9.3. Medical imaging 9.4. Radiation	INTEGRATED SCIENCE	PHYSICS	PHYSICS
				Suggest and criticize possible effects of x-rays.
				Point out effects of LASER beam.
				Generate the processes in medical imaging.
				Categorize hazards and safety precautions of radiation in medicine.
Total number of periods			144	96

33. RELIGIOUS EDUCATION [SSE]

Topic area	Sub-topic area	Competences		
		Year I	Year II	Year III
RELIGIOUS PRACTICES AND WORSHIP	Religious Doctrines	Appraise the importance of religion in shaping person's and societal values.	Investigate how mosaic religious doctrines influence the development of moral values.	Explore and examine various non theistic beliefs (Buddhism, Hinduism and Confucianism) in order to appreciate their moral teachings on human behaviour
		Explore and examine various theistic (Judaism, Islam and Christianity) beliefs in order to appreciate their religious teaching on different themes	Explore the consequences of sins as highlighted in different religions and adopt attitudes of repentance to maintain relationship with Creature	Appraise the moral and social values from the teachings of non-theistic religions and their impact on the society self-control, sharing, Love, humility, respect, empathy, forgiveness and responsibility as human and a believer.

Topic area	Sub-topic area	Competences		
		Year I	Year II	Year III
Religious teaching, culture and Society	Prayer	Appreciate importance of prayer in human life	Appraise different forms of prayer in different religions	
	Worship	Investigate various forms of worship in different religions	Manifest an positive attitudes as a fruit repentance and worship	
	Religion and social change	Analyze the influence of Christianity and Islam on African traditional religions and on Rwanda traditional belief in general	Analyze and prevent current social problems basing positive values imbedded in religious teachings	Appreciate the gif of human sexuality taking moral and responsible decisions in life. Analyze the impact of Science and technology on moral and spiritual behaviours in the society.
	Feasts and celebrations	Evaluate the Rwandan traditional belief and their practices in shaping Cultural identity	Appraise the major religious and cultural feasts in Rwanda and their importance	

Topic area	Sub-topic area	Competences		
		Year I	Year II	Year III
	Peace and Society	Appreciate and show concern about the values of Love, peace, Unity and reconciliation in the society	Explore the efforts in promoting values of Justice and peace in the world and Rwanda in particular	

34. RELIGIOUS EDUCATION (SME, ECLPE & LE)

TOPIC AREA	SUBTOPIC AREA	COMPETENCES		
		YEAR I	YEAR II	YEAR III
Holy Scriptures and beliefs	Revelation of God and religious scriptures	Describe the structure of the sacred books and highlight their importance in spiritual growth and Worship.	Explore deeply the God's plan for the salvation of humanity and values related to God's revelation.	Examine different theistic views on the nature of God and the related lessons to enhance unity, solidarity and mutual respect.
	Belief and history of salvation	investigate the origin of Christianity and Islam.	Describe the growth and expansion of Christianity and Islam teachings and their contribution to social life in the course of time.	Evaluate the unity and peaceful co-existence among religious beliefs and propose adequate solutions.
Spiritual and moral values	Spiritual growth	Assess the practice of the supreme commandment and the Golden rule in various life circumstances.	Examine the importance and practice of cardinal virtues in life	Explain the link between religious conviction and responsibility in life and in society.

TOPIC AREA	SUBTOPIC AREA	COMPETENCES		
		YEAR I	YEAR II	YEAR III
	Faith, worship and society	Explain the fundamental elements of faith in Judaism, Christianity and Islam.	Describe different worship practices in Judaism, Christianity and Islam.	Assess importance of moral values that believers draw from worship practices
Faith and life	Society, Peace and religious values	Evaluate the contribution of Religious values to the promotion of peace and justice in the society.	Analyze and propose solutions to the current problems faced by the Rwandan family.	Value the importance of marriage and family in the promotion of peace and values in the society

35. SOCIAL STUDIES [SSE OPTION YEAR 1]

TOPIC AREAS	SUBTOPIC AREAS	COMPETENCES
The concept of social studies	.....	To explain the components of social studies and evaluate its importance.
Geography	Physical geography	To explain the formation of major relief regions of Rwanda and evaluate their effects on human activities.
		To compare major types of rocks in Rwanda and evaluate their importance.
		To compare major types of soil in Rwanda and assess their importance
		To analyze the climate of Rwanda and its impact on human activities
		To explain the importance of vegetation in Rwanda and evaluate conservation measures.
		To describe the drainage system of Rwanda and explain its relationship with the human activities
	Human and economic geography	To examine demographic problems in Rwanda and suggest their solutions
		To evaluate the impact of the rural and urban settlements on the sustainable development in Rwanda.

		To investigate the impact of various agricultural activities on the sustainable development in Rwanda.
		To investigate the impact of forestry on the sustainable development in Rwanda.
		To analyze the impact of fishing on the sustainable development of Rwanda.
		To investigate the impact of mining on sustainable development in Rwanda.
		To investigate the impact of power and energy production on the sustainable development in Rwanda.
		To explain the impact of industrialization on the sustainable development in Rwanda.
		To investigate the impact of transport, communication and trade on the sustainable development of Rwanda.
		To investigate the impact of environment conservation and tourism on the sustainable development of Rwanda.
History	History of Rwanda	To analyze the history of pre-colonial Rwanda

		<p>To assess the performance of the German and Belgian rule, the 1959 crisis and the process of the independence in Rwanda.</p> <p>Examine the achievements and failures of the 1st and the 2nd Republics in Rwanda</p> <p>Assess the causes, course and consequences of Liberation war of 1990-1994 in Rwanda.</p> <p>Differentiate between Genocide and other mass crimes</p> <p>Describe the causes and the course of Genocide against the Tutsi(Planning, execution and stopping of Genocide)</p> <p>Examine the consequences of the Genocide against the Tutsi and how society has been re-built.</p>
<p>GENERAL INTRODUCTION TO ECONOMICS.</p>	<p>BASIC ECONOMIC CONCEPTS AND PRINCIPLES.</p>	<p>To use the basic concepts of economics appropriately and appreciate the role of economics in society.</p> <p>To describe the nature and scope of economics as applied in various domains.</p> <p>To demonstrate a good understanding of the fundamental economic principles and their applicability to daily life.</p>

		To describe economic phenomenon using mathematical tools.
MICROECONOMICS	PRICE THEORY	To analyse the factors that determine prices in the market.
		To analyse the determinants and value of demand in allocating resources in the market.
		To analyse the determinants for supply in the market. To determine equilibrium position in the market.
		To interpret the variations in percentages of quantity demanded and supplied due to changes in their determinants. To analyze the role of price mechanism in allocation of resources.
	PRODUCTION THEORY.	To assess the role of the factors of production in the economy.
		To assess the impact of location and localization of firms in an area. To describe and illustrate production function of a firm. To describe production costs and revenues of the firm in the short run and long run

36. SOCIAL STUDIES [ECLPE]

TOPIC AREA	SUBTOPIC AREA	COMPETENCIES		
		Year 1	Year 2	Year 3
The concept of social studies	-----	- Explain the overview and the relationship between the components of social studies	-----	-----
Geography	Physical geography	- Distinguish the components of the universe and the Solar system. - Explain the earth movements and their effects.	-----	-----
		- Analyze the formation of major relief regions of Rwanda and their effects on human activities	Describe the Internal processes responsible for the evolution of different relief landforms and associated features.	

TOPIC AREA	SUBTOPIC AREA	COMPETENCIES		
		Year 1	Year 2	Year 3
			Describe the external processes responsible for the evolution of different relief landforms and associated features.	-----
		- Compare different types of rocks in Rwanda and their importance.	- Explain the mode of formation of rocks and their importance with special focus on the economic aspect.	----- ---
		- Compare different types of soils of Rwanda and assess their importance.	- Explain the factors for soil formation, the causes and effects of soil erosion, and soil conservation measures.	-----

TOPIC AREA	SUBTOPIC AREA	COMPETENCIES		
		Year 1	Year 2	Year 3
		<ul style="list-style-type: none"> - Analyze the climate of Rwanda and the impact of climate change on human activities. 	<ul style="list-style-type: none"> - Appreciate the importance of the atmosphere, weather, and the impact of climate on the environment and human activities in the world. 	-----
		<ul style="list-style-type: none"> - Appreciate the importance of different vegetation types and their conservation in Rwanda. 	<ul style="list-style-type: none"> - Appreciate the distribution of different vegetation types in the world 	-----
		<ul style="list-style-type: none"> - Analyze the drainage system of Rwanda and its relationships with human activities. 	-----	-----
	Human and Economic geography	<ul style="list-style-type: none"> - Discuss peculiar demographic problems in Rwanda and their solutions 	<ul style="list-style-type: none"> - Discuss peculiar demographic problems in China and their solutions 	----- -----

TOPIC AREA	SUBTOPIC AREA	COMPETENCIES		
		Year 1	Year 2	Year 3
		<ul style="list-style-type: none"> - Assess the impact of rural and urban settlements on sustainable development of Rwanda. - Analyze the impact of Various socio-economic activities on sustainable development of Rwanda (Agriculture, Mining, Power and Energy, Industrialization, Tourism. 	-----	-----
History	History of Rwanda	<ul style="list-style-type: none"> - Analyze the political, social and economic organization of pre-colonial Rwanda. - Evaluate the performance of the German and Belgian rules in Rwanda 	<ul style="list-style-type: none"> - Examine the achievements and failures of the 1st and the 2nd Republics in Rwanda - Assess the causes and consequences of Liberation war of 1990-1994 in Rwanda. 	-----

TOPIC AREA	SUBTOPIC AREA	COMPETENCIES		
		Year 1	Year 2	Year 3
		<ul style="list-style-type: none"> - Assess the 1959 crisis in Rwanda - Evaluate the process of independence in Rwanda 	<ul style="list-style-type: none"> - Analyze forms of genocide denial and genocide ideology in Rwanda and abroad 	-----
			<ul style="list-style-type: none"> - Analyze the achievements and challenges of the Rwandan Governments in post genocide period (transition period and 3rd Republic) - Suggest ways of preventing genocide from happening again in Rwanda and elsewhere 	-----

TOPIC AREA	SUBTOPIC AREA	COMPETENCIES		
		Year 1	Year 2	Year 3
	Citizenship	-----	<ul style="list-style-type: none"> - Examine the achievements and failures of the 1st and the 2nd Republics in Rwanda. 	
		-----	<ul style="list-style-type: none"> - Assess the causes and consequences of Liberation war of 1990-1994 in Rwanda. 	
		-----	<ul style="list-style-type: none"> - Analyze the achievements and challenges of the Rwandan Governments in post-genocide period (transition period and 3rd Republic) 	
		-----	<ul style="list-style-type: none"> - Analyze forms of genocide denial and genocide ideology in Rwanda and abroad 	

TOPIC AREA	SUBTOPIC AREA	COMPETENCIES		
		Year 1	Year 2	Year 3
		-----	- Suggest ways of preventing genocide from happening again in Rwanda and elsewhere	
		-----	- Suggest ways of preventing Human Rights violations (Forced labour for Children) - Analyze the national duties and responsibilities (Itorero, imihigo, Umuganda, community policing)	-----
		-----	- Explore ways of preventing conflicts and violence at national and international level	-----

TOPIC AREA	SUBTOPIC AREA	COMPETENCIES		
		Year 1	Year 2	Year 3
		-----	<ul style="list-style-type: none"> - Explore different major measures of home grown solution to solve conflicts (Abunzi, Gacaca) - Identify the lessons that can be learnt from failed self – reliance policies of African leaders Explain how justice has been delayed and denied in Rwandan society. - Critique how home-grown solutions contribute to self-reliance (Girinka, Ubudehe, Kuremera, Umuganda, Agaciro, Imihigo, Itorero community policing. 	-----

TOPIC AREA	SUBTOPIC AREA	COMPETENCIES		
		Year 1	Year 2	Year 3
		-----	- Analyze different types of leadership management in Rwandan context (Imihigo, umushyikirano). - Compare forms of democracy and justice in Rwanda and the neighboring countries	-----
		-----	- Survey the factors of national cohesion: <ul style="list-style-type: none"> o Culture o History o Economic and human activities 	-----

TOPIC AREA	SUBTOPIC AREA	COMPETENCIES		
		Year 1	Year 2	Year 3
	History of Africa	-----	<ul style="list-style-type: none"> - Analyze Islamic political movements in Africa (Jihads movements) - Discuss the role of agents of colonial conquest (Christian missionaries, chartered companies and explorers). - Describe European domination, exploitation in Africa and its consequences in the 19th Century. - Analyze impact of colonial rule on political, economic and social on African societies. 	-----

TOPIC AREA	SUBTOPIC AREA	COMPETENCIES		
		Year 1	Year 2	Year 3
		-----	- Analyze causes of African nationalism, the means used to regain independence in Africa and its impact on African societies	-----
	History of Europe and the rest of the World	-----	-----	- Analyze the contribution of main civilizations of the World to the development of society. - Analyze the background and influence of middle and Modern Times on the world community.

TOPIC AREA	SUBTOPIC AREA	COMPETENCIES		
		Year 1	Year 2	Year 3
		-----	-----	<ul style="list-style-type: none"> - Assess the contributions of the Great Revolutions of 18th to 19th Centuries towards the transformation of Societies. - Analyze the political, economic and social changes in the World between the two World Wars

37. SOCIAL STUDIES FOR (LE & SME)

TOPIC AREAS	SUBTOPIC AREAS	COMPETENCES		
		Y1	Y2	Y3
The concept of social studies	-----	<ul style="list-style-type: none"> - Explain the overview and the relationship between the components of social studies 	-----	-----
HISTORY	History of Rwanda	<ul style="list-style-type: none"> - Analyze the political, social and economic organization of pre-colonial Rwanda. 	<ul style="list-style-type: none"> - Evaluate the performance of the German and Belgian rules in Rwanda - Assess the 1959 crisis in Rwanda Evaluate the process of independence in Rwanda. 	<ul style="list-style-type: none"> - Examine the achievements and failures of the 1st and the 2nd Republics in Rwanda - Assess the causes and consequences of Liberation war of 1990-1994 in Rwanda - Analyze forms of genocide denial and genocide ideology in Rwanda and abroad

TOPIC AREAS	SUBTOPIC AREAS	COMPETENCES		
		Y1	Y2	Y3
	Conflict transformation	<ul style="list-style-type: none"> - Explore ways of preventing conflicts and violence at national and international level 	-----	-----
		Explore different major measures of home grown solution to solve conflicts (Abunzi, Gacaca)	-----	-----
		<ul style="list-style-type: none"> - Analyze the national duties and responsibilities (Itorero, imihigo, Umuganda, community policing) 	-----	-----
		<ul style="list-style-type: none"> - Compare forms of democracy and justice in Rwanda and the neighboring countries 	-----	-----

TOPIC AREAS	SUBTOPIC AREAS	COMPETENCES		
		Y1	Y2	Y3
CITIZENSHIP	Dignity and self-reliance	-----	-----	- Identify the lessons that can be learnt from failed self-reliance policies of African Leaders Explain how justice has been delayed and denied in Rwandan society. - Critique how home-grown solutions contribute to self-reliance (Girinka, Ubudehe, Kuremera, Umuganda, Agaciro, Imihigo, Itorerocommunity policing).

TOPIC AREAS	SUBTOPIC AREAS	COMPETENCES		
		Y1	Y2	Y3
	Democracy and justice	-----	-----	- Analyze different types of leadership management in Rwandan context (Imihigo, umushyikirano).
Geography	Physical geography	-----	- Distinguish the components of the universe and the Solar system. - Explain the earth movements and their effects.	-----
		-----	- Analyze the formation of major relief regions of Rwanda and their effects on human activities	-----
		-----	- Compare different types of rocks in Rwanda and their importance.	-----

TOPIC AREAS	SUBTOPIC AREAS	COMPETENCES		
		Y1	Y2	Y3
		-----	- Compare different types of soils of Rwanda and assess their importance.	-----
		-----	- Analyze the climate of Rwanda and the impact of climate change on human activities.	-----
		-----	- Appreciate the importance of different vegetation types and their conservation in Rwanda.	-----
		-----	- Analyze the drainage system of Rwanda and its relationships with human activities.	-----

TOPIC AREAS	SUBTOPIC AREAS	COMPETENCES		
		Y1	Y2	Y3
	Human and Economic geography	-----	-----	<ul style="list-style-type: none"> - Discuss peculiar demographic problems in Rwanda and their solutions
		-----	-----	<ul style="list-style-type: none"> - Assess the impact of rural and urban settlements on sustainable development of Rwanda.
		-----	-----	<ul style="list-style-type: none"> - Analyze the impact of Various socio-economic activities on sustainable development of Rwanda (Agriculture, Mining, Power and Energy, Industrialization, trade and Tourism.

21.

38. SPECIAL NEEDS AND INCLUSIVE EDUCATION (ALL OPTIONS)

TTC topic areas in SN&IE	Sub topic area	Competences		
		Year 1	Year 2	Year 3
Basics of Special Needs and Inclusive Education	1. Concepts and terms in Special Needs and Inclusive Education	Appropriately apply the various concepts and terms used in Special Needs and Inclusive Education in their practice	-----	-----
	2. Background history of Special Needs and Inclusive Education	Describe the roots and development in Special Needs and Inclusive Education and use that knowledge to participate and contextualize the education of learners with disabilities and other SEN in practice	-----	-----
	3. International, regional and national legal frameworks	Link the legal frameworks with the inclusive educational practice to advocate and sensitize the school and neighborhood communities on inclusion of learners with disabilities & SEN	-----	-----

TTC topic areas in SN&IE	Sub topic area	Competences		
		Year 1	Year 2	Year 3
	4. Principles of inclusive education	Promote principles of Inclusive Education in schools	-----	-----
	5. Models for Inclusion of learners with disabilities and other SEN	Contribute towards the school transformations towards appropriate inclusive education models	-----	-----
	6. Introduction to Braille and tactile transcriptions	Use Braille and tactile transcriptions as alternative communication for learners with visual difficulties	-----	-----
	7. Introduction to Rwandan Sign Language and introduction to Deaf education	Use Rwandan Sign Language as alternative communication used by learners with hearing difficulties	-----	-----

TTC topic areas in SN&IE	Sub topic area	Competences		
		Year 1	Year 2	Year 3
Raising community awareness on special needs and inclusive education	8. Parental involvement	Advocate and sensitize parents on inclusion of learners with disabilities & other SEN.	-----	-----
	9. Community involvement	Advocate and sensitize community on inclusion of learners with disabilities & other SEN.	-----	-----
	10. School community involvement	Advocate for inclusion of learners with disabilities and other SEN through Umuganda, school clubs, etc,	-----	-----
	11. Media	Advocate and sensitize for the education of learners with SEN and disabilities using media.	-----	-----

TTC topic areas in SN&IE	Sub topic area	Competences		
		Year 1	Year 2	Year 3
Categories of learners with Special educational needs and teaching/learning approaches	12. Learners with sensory (visual, hearing & Deaf Blindness) difficulties and teaching/learning approaches	-----	Design and use appropriate approaches for inclusion of learners with sensory difficulties	-----
	13. Learners with Physical challenges and teaching/learning approaches.	-----	Design and use appropriate approaches for inclusion of learners with physical challenges	-----

TTC topic areas in SN&IE	Sub topic area	Competences		
		Year 1	Year 2	Year 3
	14. Learners with specific learning difficulties (Dyslexia, Dyscalculia, aphasia, Dyspraxia, Dysgraphia, etc.) and teaching/ learning approaches.	-----	Design and use appropriate approaches for inclusion of learners with specific learning difficulties.	-----
	15. Learners with developmental and cognitive disorders: Down's syndrome, speech and language difficulties, Autism, ADHD,	-----	Design and use appropriate approaches for inclusion of learners with developmental and cognitive disorders	-----

TTC topic areas in SN&IE	Sub topic area	Competences		
		Year 1	Year 2	Year 3
	16. Gifted and talented Learners and teaching/learning approaches	-----	Design and use appropriate approaches for inclusion of gifted and talented learners	-----
	17. Emotional and behavioral disorders (EBD) and teaching/learning approaches.	-----	Design and use appropriate approaches for inclusion of learners with emotional and behavioral disorders	-----
	18. Other categories that may lead to educational vulnerability (learners with health problems, street children, refugees, orphans)	-----	Design and use appropriate approaches for inclusion of learners with health and social problems (street children,refugees and orphans)	-----

TTC topic areas in SN&IE	Sub topic area	Competences		
		Year 1	Year 2	Year 3
General strategies for inclusive teaching and learning	19. Lesson planning for learners in an Inclusive class	-----	Apply an inclusive lesson plan in school practice	-----
	20. Lesson delivery, monitoring and assessment in an inclusive class	-----	-----	Competently apply various strategies of teaching, management and assessment in an inclusive class
	21. Guidance and counseling for learners with SEN	-----	-----	Competently offer career guidance and counseling services to learners with SEN.

TTC topic areas in SN&IE	Sub topic area	Competences		
		Year 1	Year 2	Year 3
Identification, assessment and placement of learners with SEN	22. Identification, referral & assessment of learners with SEN	-----	-----	Identify, assess and use assessment tools for learners' placement or referral.
	23. IEP & placement of learners with SEN	-----	-----	Prepare and apply IEP in a planned lesson
	24. Educational provisions and resources for different categories of learners with SEN	-----	-----	Design, adapt, and/or produce appropriate teaching and learning resources for different categories of learners with SEN

TTC topic areas in SN&IE	Sub topic area	Competences		
		Year 1	Year 2	Year 3
	25. Resource room use and practices	-----	-----	Use the school resource room to address the different educational needs of learners with SEN.
Alternative communication	26. Braille	Read and write grade one Braille and tactile transcriptions.	Read and write intermediate Braille grade one.	Read and write advanced Braille grade 1 and introduction to grade 2.
	27. Rwandan Sign Language	Use basic Rwandan Sign Language	Use intermediate Rwandan Sign Language	Use advanced Rwandan Sign Language

Annex 4: Overview of Teaching Methods and Practice

1. INKUBIRAHAMWE Y'IYIGAYIGISHA RY'IKINYARWANDA "ISHAMI RY'INDIMI N'UBUREZI"

IMBUMBANYIGISHO	INYIGISHO	UBUSHOBOZI BUGAMIJWE		
		UMWAKA WA 1	UMWAKA WA 2	UMWAKA WA 3
1. Gusobanukirwa n'integanyanyigisho y'ikinyarwanda mu mashuri abanza n'ibikenewe mu kwigisha.	Imiterere y'integanyanyigisho y'ikinyarwanda yo mu mashuri abanza n'uko yifashishwa.	Gutahura ibigize integanyanyigisho y'ikinyarwanda n'uko bikurikirana. Kugaragaza akamaro ko kwiga ururimi rw'ikinyarwanda nk'umwenerurimi	-----	-----
	Ibitabo n'izindi mfashanyigisho zifashishwa mu kwigisha ikinyarwanda.	Gutahuraimiterere y'ibitabo n'izindi mfashanyigisho byifashishwa mu kwigisha ikinyarwanda mu mashuri abanza.	-----	-----

IMBUMBANYIGISHO	INYIGISHO	UBUSHOBOZI BUGAMIJWE		
		UMWAKA WA 1	UMWAKA WA 2	UMWAKA WA 3
2. Imyigire n'imyigishirize y'lkinyarwanda mu mashuri abanza.	Iby'ibanze mu kwigisha ururimi kavukire.	Gusobanura amahame n'amahange yo kwigisha ururimi kavukire n'imbogamizi zishobora kuboneka mu myigire yarwo.	-----	-----
	Imyigishirize y'inyajwi.	Gutegura amasomo yo kwigisha gusoma no kwandika inyajwi.	-----	-----
	Imyigishirize y'ingombajwi n'ibihekane.	Gutegura amasomo yo kwigisha gusoma no kwandika ingombajwi n'ibihekane.	-----	-----
	Imyigishirize y'imyandiko	Gutegura amasomo yo kwigisha umwandiko.	-----	-----
	Imyigishirize y'icyandikwa	Gutegura amasomo yo kwigisha icyandikwa	-----	-----

IMBUMBANYIGISHO	INYIGISHO	UBUSHOBOZI BUGAMIJWE		
		UMWAKA WA 1	UMWAKA WA 2	UMWAKA WA 3
	Imyigishirize y'ikibonezamvugo	Gutegura amasomo yo kwigisha ikibonezamvugo.	-----	-----
	Imyigishirize y'imyandiko yo gufata mu mutwe no gutondagurwa.	Gutegura amasomo yo kwigisha uturingushyo n'imivugo n'amagorane .	-----	-----
	Imyigishirize y'innyandiko zitandukanye.	Gutegura amasomo yo kwigisha, gufatisha mutwe no kuriramba indirimbo.	-----	-----
		Gutegura amasomo yo kwigisha ikiganiro mpaka.	-----	-----
		Gutegura amasomo yo kwigisha guhanga umwandiko	-----	-----
			-----	-----

IMBUMBANYIGISHO	INYIGISHO	UBUSHOBOZI BUGAMIJWE		
		UMWAKA WA 1	UMWAKA WA 2	UMWAKA WA 3
3. Iyimenyerezamwuga	<p>Kwitegereza isomo ntangarugero no kwigana uburyo bwo kwigisha.</p> <p>Imyigishirize y'amasomo anyuranye y'lkinyarwanda ku ishuri no hafi y'ishuri.</p> <p>Imyigishirize y'amasomo anyuranye y'lkinyarwanda ku mashuri ya hafi y'aho aturuka.</p>	<p>Gutegura no kwigisha isomo nyiganasomo ry'lkinyarwanda, gutanga no kwakira ubujyanama ngarukirane</p> <p>.....</p>	<p>Gutegura no kwigisha amasomo menyerezamwuga ku mashuri abanza</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>- Gutegura ibidanago by'isomo ry'lkinyarwanda. - Gutegura no kwigisha amasomo menyerezamwuga ku mashuri abanza y'aho baturuka n'isomo risoza.</p>

2. DESCRIPTEURS DES COMPÉTENCES EN METHODOLOGIE D'ENSEIGNEMENT/APPRENTISSAGE DU FRANÇAIS LANGUE ETRANGERE PAR NIVEAU AU TTC: LANGUAGE EDUCATION OPTION

Domaine de communication	Sous domaine	COMPÉTENCES		
		Première année	Deuxième année	Troisième année
Comprendre le programme du primaire	- Contexte et justification de l'enseignement de français au second cycle du primaire		<ul style="list-style-type: none"> - Justifier l'importance de l'enseignement du français à l'école primaire. - Montrer l'utilité des compétences acquises dans la vie de tous les jours 	
	- Composantes du programme de français au primaire		<ul style="list-style-type: none"> - Décrire la structure et la fonction de chaque composante du programme de français. - Identifier les séquences et la progression de l'acquisition des compétences à travers le programme de chaque niveau. 	

Domaine de communication	Sous domaine	COMPETENCES		
		Première année	Deuxième année	Troisième année
Démarche méthodologique: Compréhension orale et écrite	- Ecouter et comprendre		- Préparer des activités susceptibles de développer les compétences génériques et les compétences communicatives.	- Préparer des activités susceptibles de développer les compétences génériques et les compétences communicatives
	- Lire et comprendre			
Démarche méthodologique : expression orale et écrites	- S'exprimer oralement en utilisant le vocabulaire, la grammaire, l'orthographe et la phonétique consignés dans le programme.			

Domaine de communication	Sous domaine	COMPETENCES			
		Première année	Deuxième année	Troisième année	
		- S'exprimer par écrit en utilisant le vocabulaire, la grammaire, l'orthographe et la phonétique consignés dans le programme.	- Guider l'apprenant / enseignant dans la préparation d'une fiche	- Guider l'apprenant / enseignant dans la préparation d'une fiche	- Guider l'apprenant / enseignant dans la préparation d'une fiche -leçon suivant les principes d'enseignement/ apprentissage du Français Langue Etrangère (FLE) contenant les thèmes transversaux.
			- leçon suivant les principes d'enseignement/ apprentissage du Français Langue Etrangère (FLE) contenant les thèmes transversaux.	- Utiliser les manuels scolaires et autre matériel didactique disponibles et guider l'apprenant / enseignant à faire de même.	- Utiliser les manuels scolaires et autre matériel didactique disponibles et guider l'apprenant / enseignant à faire de même.

Domaine de communication	Sous domaine	COMPETENCES		
		Première année	Deuxième année	Troisième année
			- Fabriquer le matériel didactique avec des objets disponibles et accessibles dans l'environnement local et guider l'apprenant / enseignant à faire de même.	-Fabriquer le matériel didactique avec des objets disponibles et accessibles dans l'environnement local et guider l'apprenant / enseignant à faire de même.
Evaluation basée sur les compétences	Techniques d'évaluation de l'enseignement/ apprentissage du français.	.....	- Préparer des activités susceptibles de mesurer les compétences génériques et les compétences et guider l'apprenant /enseignant à faire de même.	-Préparer des activités susceptibles de mesurer les compétences génériques et les compétences et guider l'apprenant / enseignant à faire de même.

		COMPETENCES		
		Première année	Deuxième année	Troisième année
Domaine de communication	Sous domaine			
	<ul style="list-style-type: none"> - Enregistrer et analyser les résultats de l'évaluation. - Corriger et combler d'éventuelles lacunes.	.....	-----	<ul style="list-style-type: none"> - Se baser sur les résultats de l'évaluation en vue d'améliorer les méthodes et procédés d'enseignement/ apprentissage du FLE.
Pratique	Observer l'environnement de l'école primaire et les leçons modèles.	.....	<ul style="list-style-type: none"> - Identifier les composantes et les qualités de l'environnement favorable à l'enseignement/ apprentissage du FLE et guider l'apprenant / enseignant à faire de même. - Faire respecter les différentes étapes d'une leçon de FLE. 	<ul style="list-style-type: none"> - Identifier les composantes et les qualités de l'environnement favorable à l'enseignement/ apprentissage du FLE et guider l'apprenant / enseignant à faire de même.

Domaine de communication	Sous domaine	COMPETENCES			
		Première année	Deuxième année	Troisième année	
					- Faire respecter les différentes étapes d'une bonne leçon de FLE.
		Micro-enseignement	- Guider une leçon donnée dans un cadre de simulation.
	Pratique et critique	.....		- Guider une leçon donnée dans une classe de l'école primaire en respectant les méthodes participatives centrées sur l'apprenant dans le cadre du CBC.

3. TEACHING METHODS AND PRACTICE FOR PRIMARY-ENGLISH: LE and ECLPE

Topic areas	General competences		
	Year one	Year two	Year three
1. Understanding English language syllabus for primary.	<p>Explain the essence of teaching English in primary and how the skills are used in everyday life.</p> <p>Identify the components of English syllabus for primary schools</p> <p>Identify possible teaching/ learning resources required for teaching and learning English in primary.</p>	<p>.....</p>	<p>.....</p>
2. Teaching and learning methods and strategies for English in primary.	<p>Differentiate methods and strategies used to teach languages as mother tongue to methods and strategies used to teach languages as second language.</p> <p>Explain the rationale to use five components of teaching reading in every languages in a way that makes successful one's teaching language.</p> <p>Prepare a lesson related to teaching listening and speaking.</p>	<p>.....</p>	<p>.....</p>

Topic areas	General competences		
	Year one	Year two	Year three
3. Teaching practice	Prepare an active lesson related to reading and writing.	.....	.....
	Prepare an active lessons related to grammar.	.....	.....
	Evaluate adequacy of teaching and learning strategies used during model lessons as student getfamiliar with teaching and learning environment.		.....
	Facilitate different types English lessons in a simulated context(micro-teaching) in Teacher Training College.	.....	.....
		Facilitate various English lessons in a demonstration schools.	Facilitate various English lessons at primary level at demonstration school and during school attachment.

4. TEACHING METHODS AND PRACTICE FOR PRIMARY - FINE ART AND CRAFTS: LE, SSE & ECLPE

TOPIC AREA	COMPETENCES		
	YEAR 1	YEAR 2	YEAR 3
1. Understanding the Fine Art and Craft syllabus for Primary school.	-----	- Identify components and structure of Fine Art and Crafts syllabus in primary.	-----
	-----	Explain why it is essential to teach Fine Art and Crafts in primary and how the skills are used in everyday life.	-----
	-----	- Identify possible learning and teaching resources required for the learning Fine Art and Crafts in primary	-----
2. Teaching and learning methods and strategies for Fine Art and Craft in primary.	-----	- Explain methods and strategies in a way that makes successful one's teaching Fine Art and Crafts	-----
	-----	- Prepare an active lesson related to drawing still life and nature, using available resources.	-----
	-----	- Prepare an active lesson of letter styles, illustrations and colour	-----

TOPIC AREA	COMPETENCES		
	YEAR 1	YEAR 2	YEAR 3
	-----	- Prepare an active lesson of Clay and methods of building clay figures using available sources	-----
	-----	- Prepare an active lesson of fabrics, motifs and pattern in embroidery.	-----
1. Teaching practice	-----	- Evaluate adequacy of strategies used in teaching and learning different types of lesson during model lessons	-----
	-----	- Facilitate different types of Fine Art and Crafts lessons in a simulated context in TTC	-----
	-----	- Facilitate Various types of Fine Art and Crafts lessons in a demonstration schools	Facilitate various types of Fine Art and Crafts lessons in a demonstration schools and during the school attachment period

Note: The TMP of Fine Arts and Crafts will be taught in year one for SSE option and in year 2 for ECLPE and LE options

5. TEACHING METHODS AND PRACTICE OF PRIMARY-MUSIC: LE, SSE & ECLPE

TOPIC AREA	COMPETENCES		
	YEAR 1	YEAR 2	YEAR 3
1. Understanding the Music syllabus for primary	-----	Explain the components a primary music syllabus and the importance of teaching music in daily life.	-----
	-----	Identify possible learning and teaching resources required for the learning Music in primary	-----
2. Teaching and learning methods and strategies for Music in primary	-----	Explain methods and strategies to be use in a way that makes successful one's teaching music	-----
	-----	Prepare an active lesson related to performing music	-----
	-----	Prepare an active lesson of composing songs and poems	-----
	-----	Prepare an active lesson of appraising	-----

2. Teaching practice	-----	Evaluate adequacy of strategies used in teaching and learning different types of lesson during model lessons	Facilitate various types of Music lessons in a demonstration schools and during the school attachment period
	-----	Facilitate different types of Music lessons in a simulated context in TTC	
	-----	Facilitate various types of Music lessons in a demonstration schools	

Note: The TMP of Music will be taught in year 2 for the three options: LE, SSE and ECLPE

6. TEACHING METHODS AND PRACTICE OF PRIMARY- PHYSICAL EDUCATION AND SPORTS (SSE & SME Options)

TOPIC AREA	COMPETENCES		
	YEAR 1	YEAR 2	YEAR 3
1. Understanding the Physical Education and Sports syllabus for primary	-----	Identify the components of Physical Education and Sports syllabus for primary schools	-----
	-----	Explain the essence of teaching Physical Education and Sports and how the skills are used in everyday life.	-----
	-----	Identify possible learning and teaching resources required for the learning of Physical Education and Sports in primary	-----
2. Teaching and learning methods and strategies for Physical Education and Sports in primary	-----	Explain methods and strategies to be used in a way that makes successful one's teaching Physical Education and Sports	-----
	-----	Prepare an active lesson related to performing Physical Education and Sports exercise	-----

	-----	Prepare a lesson related to performance of Physical Education and games related to sports.	-----
	-----	Prepare an active lesson of games	-----
	-----	Prepare an active lesson of specific sports: Gymnastics, athletics, football, volleyball, basketball and handball	-----
3. Teaching practice	-----	Evaluate adequacy of strategies used in teaching and learning different types of lesson during model lessons	-----
	-----	Facilitate different types of Physical Education and Sports lessons in a simulated context in TTC	-----
	-----	Facilitate various Physical Education and Sports lessons in a demonstration schools	Facilitate various types of Musiclessons in a demonstration schools and during the school attachment period

Note: TMP for PES will be taught in year one for SSE option and in year 2 for ECLPE and SME options.

7. TEACHING METHODS AND PRACTICE OF PRIMARY-SOCIAL STUDIES(SSE & ECLPE)

Topic areas	General competences		
	Year one	Year two	Year three
1. Understanding the social studies syllabus for primary	Explain the essence of teaching social studies in primary and how social studies are applied in everyday life.	.....	.....
	Identify the components of social studies syllabus for primary schools	-----	-----
	Identify possible learning and teaching resources required for the learning social studies in primary	.....	.....
2. Teaching and learning methods and strategies for social studies in primary	Explain general methods and strategies of teaching social studies in successful ways	.....	.....
	Prepare an active lesson related to observable lesson	.....	.....
	Prepare an active lesson related non observable lesson	.....	.....
	Prepare an active lessons related to Genocide studies	.....	.....

3. Teaching practice	Evaluate adequacy of strategies used in teaching and learning different types of lesson during model lessons	.....	.....
	Facilitate different types of social studies lessons in a simulated context in Teacher Training College.	.....	.....
	-----	Facilitate various social studies lessons in a demonstration schools	Facilitate various types of social studies lessons in a demonstration schools and during the school attachment period

Note: The TMP of social studies will be taught in year one for SSE option and in year 2 for ECLPE

8. TEACHING METHODS AND PRACTICE OF PRIMARY SCIENCE AND ELEMENTARY TECHNOLOGY (SME & ECLPE OPTION)

PART I: SET-SCIENCE COMPONENT

TOPIC AREA	COMPETENCES		
	YEAR 1	YEAR 2	YEAR 3
1. Understanding the primary SET syllabus	To explain the essence of teaching SET in primary and how the skills are used in everyday life.	-----	-----
	Differentiate available/possible learning and teaching resources required for the learning SET in primary	-----	-----
2. Teaching and learning methods and strategies for SET in primary	To prepare theory based lessons by developing generic competences and integrating cross-cutting issues through learning activities.	-----	-----
	To prepare practical based lessons by developing generic competences and integrating cross-cutting issues through learning activities	-----	-----

TOPIC AREA	COMPETENCES		
	YEAR 1	YEAR 2	YEAR 3
	To prepare observation based lessons by developing generic competences and integrating cross-cutting issues through learning activities	-----	-----
	To prepare experimental based lessons by developing generic competences and integrating cross-cutting issues through learning activities	-----	-----
3. Teaching practice	To evaluate adequacy of teaching and learning strategies and active methods used during model lessons performed in a specified teaching and learning environment.	-----	-----
	To prepare and facilitate SET lessons in a simulated context in Teacher Training College.	-----	-----

TOPIC AREA	COMPETENCES		
	YEAR 1	YEAR 2	YEAR 3
	-----	To plan and facilitate various SET lessons in a demonstration schools.	-----
	-----	-----	Plan and facilitate SET lessons at primary schools during school attachment and final lessons.

Note: The SET TMP will be taught in Year one for SME option and in Year 2 for ECLPE option.

Part II: SET-ICT PART

TOPIC AREA	COMPETENCES		
	YEAR 1	YEAR 2	YEAR 3
1. Using XO laptops	Create word processing documents	-----	----- ---
	Manipulate spreadsheet documents and use formula from this program to carry out simple calculations Using XO Laptops	-----	----- ---
	Create programs for entertaining children using an XO laptop	-----	----- ---
	Use email and carry out researches in order to improve knowledge	-----	----- ---
2. Teaching and learning methods and strategies for SET (ICT part) in primary	To prepare theory based lessons pertaining to performing SET- ICT part by developing generic competences and cross-cutting issues through learning activities	-----	----- ---
	To prepare practical based lessons for SET- ICT part by developing generic competences and integrating cross-cutting issues through learning activities	-----	----- ---

Note: Topics related to planning and facilitating lessons in demonstration schools and during school attachment are the same for both the Science part and the ICT part, therefore the overview on these topics is only in the SET- Science part.

9. TEACHING METHODS AND PRACTICE OF RELIGIOUS EDUCATION (SSE & ECLPE)

TOPIC AREA	UNITS	COMPETENCES		
		YEAR 1	YEAR 2	YEAR 3
1. Understanding the Religious studies syllabus for primary school	1 Introduction to teaching Religious studies at Primary School	Explain the essence of teaching Religious studies in primary and how the skills are used in everyday life.	-----	-----
	2 Teaching and learning resources	Differentiate available/possible learning and teaching resources required for the learning Religious studies in primary	-----	-----
2. Teaching and learning methods and strategies for Religious studies in primary school	3 General principles and approaches of teaching Religious studies	Describe general principles and approaches of teaching Religious studies in primary	-----	-----

TOPIC AREA	UNITS	COMPETENCES		
		YEAR 1	YEAR 2	YEAR 3
3 Teaching and learning methods and strategies for Religious studies in primary school	4. Teaching Bible/ Scripture related lessons	Demonstrate each step in Bible related lesson with practical examples.	-----	-----
	5. Teaching a civic or moral related lesson.	Demonstrate each step in civic or moral related lesson with practical examples.	-----	-----
	6. Preparation of Religious studies lesson.	Prepare a religious studies lesson using adequate approaches and techniques of teaching	-----	-----
	7. Observation of model lesson	Evaluate adequacy of teaching and learning strategies used during model lessons as student get familiar with teaching and learning environment	-----	-----

TOPIC AREA	UNITS	COMPETENCES		
		YEAR 1	YEAR 2	YEAR 3
4. Teaching practice	8. Micro-teaching	Students will be able to efficiently conduct a lesson of religious studies.	-----	-----
	9. Teaching practice (year 2)	-----	Student-teachers will be able to facilitate Religious studies lessons in a demonstration school.	Student-teachers will be able to facilitate Religious Studies lessons in a demonstration school, during school attachment and Final lesson

10. TEACHING METHODOLOGY AND PRACTICE OF MATHEMATICS (SME & ECLPE OPTION)

Topic area	Units	Competences		
		YEAR 1	YEAR 2	YEAR 3
I. Understanding the Mathematics syllabus for primary	1. Rationale of teaching mathematics in primary schools	Explain the essence of teaching Mathematics in primary and how the skills are used in everyday life.	-----	-----
		Identify the components of Mathematics syllabus for primary schools	-----	-----
II. Teaching and learning methods and strategies for mathematics in primary	2. Principles of teaching mathematics	Identify possible learning and teaching resources required for the learning mathematics in primary	-----	-----
		Explain different methods and strategies that makes successful one's teaching mathematics lessons	-----	-----
		Prepare an active lesson of number and operations	-----	-----

Topic area	Units	Competences		
		YEAR 1	YEAR 2	YEAR 3
		Prepare an active lesson related to fractions, decimals and proportional reasoning	-----	-----
		Prepare an active lessons related to metric measurement	-----	-----
		Prepare an active lessons related to algebra	-----	-----
		Prepare an active lessons related to geometry	-----	-----
		Prepare an active lessons related to statistics and elementary probability	-----	-----
		Prepare an active lessons related to real life word problems	-----	-----

Topic area	Units	Competences		
		YEAR 1	YEAR 2	YEAR 3
II. Teaching practice	10 Adequacy of teaching and learning strategies used during model lessons	Evaluate adequacy of strategies used in teaching and learning different types of model lessons as student get familiar with teaching and learning environment	-----	-----
		Facilitate different types of mathematics lessons in a simulated context in Teacher Training College.	-----	-----
		-----	Facilitate various mathematics lessons in a demonstration schools	Facilitate various types of Mathematic lessons in a demonstration schools and during the school attachment period

11. TEACHING METHOD AND PRACTICE OF PRE-PRIMARY (ECLPE OPTION)

Topic area	Sub topic	Competences		
		Year one	Year two	Year three
1. Understanding the pre-primary syllabus	-----	Justify reasons why early learning experiences are critical to the future development of a child	-----	-----
		Explain components and rational of pre-primary syllabus	-----	-----
2. Teaching and learning approach in pre-primary	-----	Explain different approaches through which young children learn.	-----	-----
3. Teaching numeracy in pre-primary	-----	Prepare activities applying strategies of teaching numbers at the level of pre-primary which use locally available materials	-----	-----
		Prepare activities applying strategies of teaching measurement at the level of pre-primary which use locally available materials	-----	-----

Topic area	Sub topic	Competences		
		Year one	Year two	Year three
		Prepare activities applying strategies of teaching shapes and directions at the level of pre-primary which use locally available materials	-----	-----
		Prepare activities applying strategies of teaching patterns at the level of pre-primary which use locally available materials	-----	-----
4. Uburyo bwo gufasha abana mu iterambere ry'ururimi rw'ikinyarwanda mu mashuri y'ishuke	-----	Gukoresha imvugo inoze no gutegura ibikorwa biboneye bifasha umwana kunguka amagambo mashya no kuvuga adasobwa	-----	-----
		Gufasha umwana gutandukanya amajwi y'inyuguti n'ayimigemo	-----	-----
		Gutoza umwana kumanya uko bakoresha ibitabo byo gusoma.	-----	-----

Topic area	Sub topic	Competences		
		Year one	Year two	Year three
		Gusobanura iterambere ry'umwana mu bumenyi bwo kwandika.	-----	-----
5. Teaching English language in pre-primary schools.	-----	Utilize rich language and design language experiences for children which build their vocabulary, fluency, and comprehension skills	-----	-----
6. Teaching discovery of the world	-----	Apply strategies for teaching and learning about social studies concepts	-----	-----
		Apply strategies for teaching and learning about science concepts	-----	-----
7. Teaching physical development and health	-----	Practically explore gross and fine motor movement techniques/ activities appropriate to the level of young children	-----	-----

Topic area	Sub topic	Competences		
		Year one	Year two	Year three
		Practice Strategies for teaching and learning about health and self-care	-----	-----
8. Teaching creative art and culture	-----	Prepare activities to promote visual arts and identify when and how they can be done within the daily schedule for pre-primary	-----	-----
		Be able to explore Music, dance, and culture content in creative arts and culture syllabus	-----	-----
9. Teaching social and emotional development	-----	Prepare activities to promote social and emotional development and identify when and how they can be done within the daily schedule for pre-primary	-----	-----
10. Competence-based Assessment in pre-primary	-----	Set tasks to gauge/measure the achievement of learning objectives and competences	-----	-----

Topic area	Sub topic	Competences		
		Year one	Year two	Year three
		Use assessment information to guide teacher's decisions in the teaching and learning process	-----	-----
11. Teaching practice	-----	Facilitate an effective numeracy activities, with made or gathered materials, in a simulated classroom set up	-----	-----
		Facilitate an effective literacy lesson, with made or gathered materials, in a simulated classroom set up	-----	-----
		Facilitate an effective discovery of the world lesson, with made or gathered materials, in a simulated classroom set up	-----	-----
		Use sequential components of the daily schedule to Prepare a thematic plan (web-diagram and a weekly plan) incorporating activities for all 6 learning areas around one theme from the curriculum	-----	-----

Topic area	Sub topic	Competences		
		Year one	Year two	Year three
		-----	Facilitate pre-primary activities either in a simulated context or real classroom settings	-----
		-----	-----	Facilitate various pre-primary activities and internalize career behavioral development.