

**Faculty of Arts & Culture
Eastern University, Sri Lanka**

Master of Education (MEd)

Detail Syllabus

First Semester

MED 1011 Philosophical Foundations of Education - 03 Credits

Objectives

1. To expose the students to different modes of philosophical enquiry as a basis of all educational endeavors.
2. To enable the students to understand the significance of the ultimate human concerns and the contribution of philosophy in the regard.
3. To develop an understanding among students about the contributions of Eastern and western philosophies.
4. To expose the students to different modes of philosophical enquiry as a basis of all educational endeavors.

Expected Learning outcome

1. To enable the student to understand and define the concept of education.
2. To understand and define the concept of education.
3. To enable them to analyses the philosophical bases of education.
4. To enable them to understand human values and morals.
5. To enable them to examine the forces and process of socialization
6. To enable them to develop in them the ability to apply the concepts and principles of educational sociology to teaching and learning process.
7. To enable them to promote national integration among different social group.
8. To understand the professional culture of teachers.

1.0. Philosophy and Educational Philosophy

1.1. Definition and Scope

- 1.2. Aims and Objective of Education Unit
 - 1.3. Relevance to Education in respect of Teachers, Principles,
Curriculum developer, Planners
- 2.0. Social foundations of Education Unit
- 2.1. Educational Sociology
 - 2.2. Definition and Scope
 - 2.3. Theories and its relevance to Education
 - 2.4. Sociological factors
 - 2.5. Socialization process and its impact on Education
- 3.0. Concept of Teaching and Pedagogical approaches
- 3.1. Conceptual framework of teaching with special reference to
Traditional Educators

Plato, Rousseau, Socrates, Froebel, Aristotle, Karl Marx
Comenius, Swami Vipulananthar, Sri Arumuganavalar
Mahathma Gandhi, John Dewey, Bertrand Russell,
Paulo Ferie, Michel Facoult
 - 3.2. Different approaches to teaching.

Psychological

Philosophical

Sociological and Research.
 - 3.3. Communication skill in teaching
 - Listening
 - Explaining
 - Defining
 - Questioning
 - Probing

- Responding
- Feedback
- Reinforcement

4.0 Qualitative changes in Education

- 4.1. School culture
- 4.2. Professional Development of teachers
- 4.3. Teacher personality and qualities of good teachers
- 4.4. Value Education
- 4.5. Scientific outlook

5.0. Curriculum Studies

- 5.1. Need and definition
- 5.2. Aims and Objective
- 5.3. Different curriculum
- 5.4. Types of curriculum

6.0. Sociology of Education

- 6.1. Definition and Scope.
- 6.2. Sociological factors.
- 6.3. Theories and relevance to education.
- 6.4. Process of Socialization and its impact.

Reading List:

1. Foundation of Education , S.P.Chaube & A.Chaube, Vikas Publishing house Pvt,Ltd., New Delhi 1973
2. The World crisis in Education, Coombs, Philip, H. The view from the Eighties, Oxford University Press, UK-1985
3. Human Development Report, Oxford University Press, UN Plaza, NY – 2000
4. Education for work, Corson, David (ed) Multilingual Matters Ltd, Cleve don England, - 1991

5. Investing in the Future, Hallak, Jacques Setting Educational Priorities in the Development Work, UNESCO, Paris 1990.

MED 1012 Psychological Foundation of Education – 03 credits

Objectives

1. To provide students a theoretical background of educational psychology and its important concepts.
2. To help them understand the application of theories of educational psychology in educational practice.
3. To enable them to understand the nature of growth and development, learning, motivation, and its various educational implications.
4. To help them to understand the nature of individual difference, children with special needs and group dynamics in the classroom and to deal effectively, with teaching and day to day school work
5. To enable them to gain knowledge of the personality development in the assessment of children and to know the contemporary development in educational psychology.

Expected Learning outcome

1. To enable the students to develop and to know the ways of understanding the philosophical life.
2. To develop skills pertaining to philosophical analysis.
3. To understand the importance psychology in human development.
4. To enable the students to understand human values and morals.
5. To identify the individual needs of the children and help them to develop their total personality.
6. To enable them to gain knowledge of the personality development in the assessment of children and to know the contemporary developments in educational psychology.

1.0. Psychology and Educational Psychology

1.1. Definition and Scope

1.2. Methods of Psychological Studies

- 1.3. Relevance to Education
 - designing curriculum
 - Choice of learning material
 - Planning and executing various methods of instruction in the Class room
- 1.4 Neo-Marxian thoughts on Educational Psychology.
- 2.0. The Child
 - 2.1. Significance of Childhood
 - 2.2. Cognitive development
 - 2.3. Harts of development
 - 2.4. Psychosocial development
- 3.0. The adolescent
 - 3.1. Psycho-social development
 - 3.2. Cognitive development
 - 3.3. Hazards of development
- 4.0. Advances in child and adolescent psychology
 - 4.1. Advances in child psychology
 - 4.2. Advances in adolescent psychology
- 5.0. Language and Thought
 - 5.1. Language and Thought
 - 5.2. Concept formation
- 6.0. Mediating process in Cognitive Behavior.
 - 6.1 Perception
 - 6.2. Memory and recall strategies and study skills

7.0. Learning

- 7.1. Behavioral learning/ S.R. Theories and their application
- 7.2. Cognitive learning/ field theories
- 7.3. Traditional theories of learning
- 7.4. Field- Cognition theories- Kurt, Lewin, E.C.Tolman, Gestalists
- 7.5. Piaget, Bruner, Gagne
- 7.6. Information processing- the concept and the application
- 7.7 Social Learning

Reading list:

1. Psychology- An Introduction 1
Psychology- An Introduction 11, K.Sivanandamoorthy – 1985
2. Kalviyum Ulaviyalum 1.11, S.Muthulingam – 1989
3. Advanced Psychology, Christian Brain – 1978
4. Experimental Psychology,, M.R.D. Amato – 1979
5. Advanced Educational Psychology,, S.S.Chauhan – 1989
6. Child Psychology a Contemporary view point, E.Mavis Hetherington, and Rees D.Parke – 1988

MED 1013 – Education Planning and Management - 03 Credits

Objectives

1. To enable the students to acquire necessary knowledge and expertise of the principles and procedures of educational planning and development.
2. To development an understanding and appreciation of the role of different agencies of educational planning.
3. To enable them to understand contemporary developments in educational management and planning.

Expected Learning outcome

1. To understanding what is the educational planning.
2. To enable the students to understand basic concepts of educational planning, management and development.
3. To knowing the stages of planning
4. To understanding the objectives of educational planning
5. To understanding regional disparities in education
6. To gaining skills in project planning.

1.0. Concept and theories of Education Planning and Management.

- 1.1. Basic Concept
- 1.2. Development of theories of planning and organization
- 1.3. Educational Management and school Leadership
- 1.4. Management of social sector organization

2.0. Practices of planning and management of Education Institution

- 2.1. Planning of Education Institution
- 2.2. Inspection and Supervision of Education Institution
- 2.3. Statutory responsibility of Education Institution
- 2.4. Institutional plans, program and projects.

3.0. Management of Educational changes and reforms

- 3.1. Basic concepts of changes
- 3.2. Managerial aspects of Educational changes
- 3.3. Managerial and administrative aspects of educational changes

4.0. Educational Planning

- 4.1. Basic concepts of changes
- 4.2. Provincial, district, a zonal level planning and management
- 4.3. School level planning

- 4.4. School as an organization
- 5.0. Time management for Educational organization
 - 5.1. Basic concept and Time management
 - 5.2. Time management for Educational organization
 - 5.3. Time management for leaders of Education
 - 5.4. Management of Time table
 - 5.5. Promotion of curricular and curricular activities
- 6.0. Human Resource Development for Educational Management
 - 6.1. Basic theories of Manpower and HRD
 - 6.2. HRD for Educational Institution
 - 6.3. Staff Development of Education Institution
 - 6.4. Recent development in HRD relevant to education
- 7.0. Management of Resources
 - 7.1. Principles of resource Management
 - 7.2. Types of resource Management
 - 7.3. Development and Maintenance.

Reading list:

1. Educational planning theory and New development. S.Santhirasegaram, and M.Sinnathamby – 1985.
2. Development and planning of Modern Education J.C.Aggarwal, Vikas publishing house PVT Limited – 1989.
3. Curriculum planning, Kenneth T.Henson – 1986
4. Bush, T and West – Burnham (Eds) 1994 the Principle of Educational, Development, Harlow, Longman.
- 5.

MCC 102 Research Methods in Education - 04 Credits

Objectives

1. To enable students to understand the foundations of educational research.

2. To enable students to identify research problems, and variables.
3. To enable students to formulate hypothesis, design educational research and to make the understand different techniques of data collection.
4. To enable students to familiarize with different methods and approaches of educational research

Expected Learning outcome

1. To enable the student to understand the need for research in education to find answers to unsolved problems.
2. To expose the student to different kinds of research approaches undertaken by educational researchers.
3. To enable students to formulate hypothesis, design educational research and to make the understand different techniques of data collection.
4. To enable the student to identify educational situation which need investigation.
5. To enable the student to gain competence in the use of different techniques of data collection.
6. To enable the students to develop skills necessary to analyze and interpret relevant data.
7. To enable them to develop knowledge, skills and competencies in engaging in an educational research and to formulate a research report.
8. To enable them to gain competency to evaluate research reports.

1.0. Nature of Research

- 1.1. Research in General
- 1.2. Research Perspectives

2.0. Nature of Social Science Research

- 2.1. Social Science Research
- 2.2. Educational Research
- 2.3. Scope and purpose of research
- 2.4. Scope and purpose of Educational research with particular
Referenceto Sri Lanka

3.0. Stages of Research

3.1. Identification and statement of problems

- Review of Literature
- Research Question

3.2. Formulation of Hypothesis

3.3. Formulation and Design

3.4. Gathering Data

3.5. Coding and Analyzing Data

3.6. Interpreting results to answer research questions (Hypothesis)

4.0. Research Designs

4.1. Experimental research 1

Experimental research 2

4.2. Descriptive Research

- Case studies
- Development studies
 - a. Longitudinal studies
 - b. Cross-sectional studies
- Surveys
 - a. Longitudinal studies
 - b. Cross-sectional studies
- Co-relation studies

4.3. Historical research

4.4. Ethnographical and qualitative research

4.5. Action research

4.6. Policy research

4.7. Evaluation research

5.0. Data Collection

5.1. Concept of measurement and types of data

- Ordinal
- Nominal
- Interval
- Ratio

1.2.Methods of Data Collection

- Questionnaire
- Interview
- Observation
- Tests
- Document Analysis
- Rating Scales

1.3.Qualities of Measuring, instruments

- Reliability
- Validity
- Practicability

1.4.Triangulation

6.0. Sampling

6.1. Sampling concepts and Terminology

- Sample
- Population
- Sampling frame
- Sampling size
- Sampling fraction
- Sampling error
- Sampling elements

6.2. Sampling Designs

- Probability sampling design
- Non probability sampling design

7.0. Data analysis and interpretation

- 7.1. Quantifying data
- 7.2. Types of quantitative analysis
 - a. Univariate analysis
 - b. Bivariate analysis
 - c. Multivariate analysis
- 7.3. Qualitative analysis – 1
Qualitative analysis – 2
- 7.4. Computer application research
- 7.5. Interpretation

8.0. Writing of Research report

- 8.1. Contents of a research report
- 8.2. Mechanics of reporting

9.0 Educational research in Sri Lanka

- 9.1. Status of Educational Research
- 9.2. Research climate
 - Researches
 - Facilities for Dissemination
 - Methods for Implementing research finding
 - Role of the teacher in Educational research
 - a. As a research
 - b. As a consumer
 - c. As a facilitator
 - d. As a Disseminator
- 9.3. Preparation of a research proposal

- 9.3.1. Background of the study
- 9.2.2. Problems statement and research question
- 9.2.3. Definition of important terms
- 9.2.4. Determination and limitation
- 9.2.5. Assumption
- 9.2.6. Conceptual frame work
- 9.2.7. Methodology
- 9.2.8. Concern of trustworthiness reliability and validity
Concerns
- 9.2.9. Ethical consideration
- 9.2.10. Significance of the study
- 9.2.11. Time frame
- 9.2.12. Bibliography

Reading list

1. Methodology of Education research, Dr.R.N.Sharma, Surjeet Publication, Oct – 1992
2. Research in Education, John.W.Best and James V.Kahn, New Delhi – 1996
3. Educational Research, Gay, L.R.Ohio Mevrie publishing – 1987
4. How to Design and Evaluate Research in Education, Fraenkel, Joek.R. New Delhi, Megnaw Hill – 1993
5. Best John W and Kahn James V, Research in Education, Prentice hall India Pvt. Ltd., New Delhi. (1992)
6. Truckman Bruce W, Conducting Educational Research, New York: Harcourt Brace Jovanovich, Inc. (1972)
7. Travers Robert MW, An Introduction to Educational Research, New York: MacMillan Publishing Co., Inc., (1978)

MED 1014 English Language Skill – 3 credits

Objectives

1. To develop the student's language and communicational skill.
2. To develop inter-personal relationship among their coordination.
3. To motivate the reading and prepare for their reports.

Expected Learning outcome

1. To increase the English language proficiency.
2. To accelerate the reading and comprehensive capacity of the candidate for them to help for the future activities such as thesis writing.
3. To increase the communication skill knowledge through English language.
4. To increase the inter-relationship working capacity among the members of the institution.

1.0 Advanced Grammar

- Sentence Structure
- Phrase and Clause
- Word class
- Prepositions
- Sentence Analysis

2.0 Translation skill

- Introduction
- Translation Techniques
- Problems in Translation
- Translation Tasks
- Selected Texts Translations

3.0 Speaking Skill

- Presentation Skills
- Interview Skills

4.0 Writing skills

- Preparing Skills Portfolio
- Preparing a Curriculum Vitae
- Essay Writing
- Proposal Writing
- Report Writing

Second Semester

MED 1021 Comparative and Historical Study of Education – 03credits

Objectives

1. To compare the all education system and its history in the world.
2. To understand the development of educational system in each country.
3. To understand the differences between the educational system among the selected country.

Expected Learning outcome

1. To understand need for comparative education
2. To understand the methods of comparative study
3. To identify the benefits of comparative study
4. To gain knowledge about the problems of comparative education in related countries.
5. To get skills in comparing the system of the countries

- 1.0 Development of School system
- 2.0 Education Development in Sri Lanka - Ancient period
- 3.0 Education Development in Sri Lanka - Colonial period
- 4.0 Education Development in Sri Lanka - After independence
- 5.0 Problems in education in Sri Lanka educational system.
- 6.0 Recent reforms in education and its implementation.
- 7.0 Educational problems in developing countries.
- 8.0 Educational problems in multicultural societies.

Reading list

1. Comparative Education., S.P.Chaube and A.Chaube, Vikas Publication house PVT Ltd, New Delhi – 1993.
2. Text Book of comparative Education., T.S.Sodh, Vikas Publication house PVT Ltd, New Delhi – 1998

MED 1022 Pre School and Primary School Education – 03 Credits

Objectives

1. To enable students to develop interest to engage in activities related to helping pre and primary school children.
2. To enable them to comprehend the factors related to adjustment problems of pre and primary school children
3. To enable them to acquire relevant knowledge and skills of identifying pre and primary students problem.

Expected Learning outcome

1. To recognize the nature and scope of primary and preschool education in Sri Lanka.
 2. To understand the importance preschool and primary education.
 3. To develop skills employing appropriate teaching techniques and methods.
 4. To develop the knowledge of educational policies and practices in contemporary world.
 5. To understand the educational development in a few countries and their influence in Sri Lanka educational policies and practice an preschool and primary education.
-
- 1.0. Aims and objectives of pre and primary school.
 - 1.1. Concepts of pre and primary education.
 - 1.2. Aims and objectives of pre, and primary school education
 - 1.3. Ages and stages of pre, primary education.
 - 1.4. Polices and planning in pre, primary education.
 - 1.5. New trends in pre, primary education.
 - 2.0. Pre and primary child
 - 2.1. Growth and development
 - Physical/ psycho-motor
 - Cognitive
 - Social, moral, emotional

- 2.2. Individual differences
- 2.3. Entre behavior at prep school and primary level.
- 3.0. Child in Pre School and primary school
 - Learning in primary years, initiations, observation, questioning, conditioning, play, discovery, peer, learning etc.
- 4.0. School Curriculum
 - 4.1. Importance of integrated curriculum
 - 4.2. Skill training in preschool and primary education.
 - 4.3. Evaluation of present primary curriculum implication.
 - 4.4. Preparation of curriculum material supplementary materials, student
 - Text books, teachers' hand books, Audio- Visual aids.
- 5.0. Physical and social environment of pre and primary school.
 - 5.1. Physical environment/ Social environment (classroom, playground, library)
 - 5.2. Child in the school community
 - 5.3. Facilities and resources required
- 6.0. Methods of teaching
 - 6.1. Child centre Education
 - (Acting method, play, field trips, simulation, observation, problems solving integrated approach)
 - 6.2. Skill development (learning habits)
 - 6.3. Remedial teaching
 - 6.4. Teaching the children of schools, multigrade teaching etc.
- 7.0. Evaluation
 - 7.1. Evaluation of student`s progress
 - 7.2. Evaluation of self-improvement Diagnosis remedial measures
 - 7.3. Follow up activities
- 8.0. Supervision and Management

- 8.1. Supervision at different levels
- 8.2. Role of school principals
- 8.3. Financial Management/ Resource Management
- 9.0. School and the Community relationship in Pre School and primary Education
 - 9.1. Role of the school
 - 9.2. Role of the parent
 - 9.3. Role of the Community
- 10.0. Teacher
 - 10.1. Role, status, teacher personality
 - 10.2. Professionalism
 - 10.3. Problem issue
 - 10.4. Research in school.

Reading list:

1. Denis Hayes.R., A StudentTeacher’s guide to Primary School Placement, Routedge Flamer, taylor and Francis Group, London and New York. 2003.
2. Rao, V.K. and Redy, R.S. Pre School and Primary Education, Commonwealth Publishers, 4378/4B Ansari Road, darya Ganji, New Delhi – 110002.
3. Darla Ferris Miller, Positive Child Guidance(4th Edition), Thomson Delmar Learning Inc, Clifton Park, NY 12065-2919
4. Stephanie, Doris Christensen and Eva Moravcik, Who Am I in the Lives of Children? Merrill, An Imprint of Prentice Hall, Englewood Cliffs, New Jersey, Columbus, Ohio.
5. Vijaya Kumari Kaushik and Sharma, S.R. Child Psychology Growth and Development, Anmol Publication Pvt Ltd, New Delhi – 110002.

MED 1023 Evaluation of Educational Dimensions – 03 credits

Objectives

1. To enable the students to understand the basic concepts of measurement, assessment and evaluation.

2. To enable the students to understand the role of assessment in the teaching-learning process.
3. To develop understanding about the fundamentals of sampling theory.
4. To impart knowledge about various measurement and scaling techniques.
5. To understand the application aspects of descriptive and inferential statistics.

Expected Learning outcome

1. To enable them know the importance of specifying objective in teaching assessment of learning outcomes and to apply such activities to actual situations.
2. To enable them to understand and apply different types of assessment in classroom situations.
3. To enable them to cognize the characteristics of assessment tools and to construct appropriate assessment tools.
4. To enable them to gain proficiency in the knowledge and use of basis statistical procedures and techniques to interpret educational data.

1.0. Nature of Educational Measurement and Evaluation.

1.1. Meaning of measurement and evaluation

1.2. Relevance to Educational practices

1.3. The needs for measurement and Evaluation

1.4. Objectives –cognitive, affective and psycho-motor domains, taxonomies of objective

2.0. The role of Educational Measurement and evaluation

2.1. Selection of students

2.2. Placement of students

2.3. Diagnosis and remedies

2.4. Criterion for accountability of teachers

2.5. Feedback for learning and teaching

2.6. Motivation and guidance for learning

2.7. Program and curriculum improvement

- 2.8. Theory development
- 2.9. Indicator of the relationship between school and the community

- 3.0. Domains and Taxonomies of Educational objectives
 - 3.1. B.S.Bloom's taxonomy of objectives in the cognitive Domain- application
 - 3.2. D.R.Krathwohl's taxonomy of objectives in the affective Domain- application
 - 3.3. E.J.Sympson's taxonomy of objectives in the psycho-motor Domain- application

- 4.0. Characteristics of tools for educational measurement.
 - 4.1. Validity
 - 4.2. Reliability
 - 4.3. Practicality

- 5.0. Measurement of Achievement in the cognitive Domain
 - 5.1. Essay type test
 - 5.2. Objective type test
 - 5.3. Performance type test

- 6.0. Standardization of Achievement test
 - 6.1. Construction of test
 - 6.2. Preparation of norms

- 7.0. Measurement of Aptitudes
 - 7.1. Basic concepts related to aptitude and its measurement
 - 7.2. Measurement of General Aptitude
 - 7.3. Measurement of special aptitude
 - 7.4. Uses of aptitude test

- 8.0. Measurement of Personality
 - 8.1. Social and Ethical implications of personality testing
 - 8.2. Measurement of interest and aptitudes.
 - 8.3. Self- report inventories.

8.4. Projective techniques.

9.0. Statistical concept and methods used for educational purpose

9.1. Descriptive statistics

- Graphical representation of test scores
- Measures of central tendency and that of variability of a set of scores, derived scores, correlation between two sets of scores

9.2. Basic inferential statistics

- Normal probability distribution and 't' distribution
- Sampling distribution and standard error
- Analysis of variance
- Testing hypothesis about population values
- Simple non- parametric tests of significance

10.0. Recent trends in Evaluation Techniques

10.1. In course assessment

10.2. Continuous assessment

10.3. Case study approach

Reading list:

1. Measurement and Evaluation in teaching, Grounlund, N.E. New York : Macmillan – 1997
2. How to make achievement tests and assessment, Grounlund, N.E(5th edition) Boston: Ally & Bacon.
3. Classroom assessment, Ariasina, P.W. (2nd edition) New York, McGraw-Hill, Inc. – 1994
4. Taxonomy of Educational objectives., Boom, B.S. the classification of Educational Goal, Hand book 1 – 1956.

MED 1024 Contemporary Issues in Education – 03 credits

Objectives

1. To enable the student to gain knowledge of educational policies and practices in contemporary world
2. To enable the student to evaluate the impact of decentralization and devolution on education
3. To enable the student to gain knowledge on the education system that existed in Sri Lanka prior to recent reforms.

Expected Learning outcome.

1. To enable the student to examine the relationship between education and development
2. To enable the student to gain knowledge of educational policies and practices in contemporary world
3. To enable them to assess the impact of successive educational policies and reforms, with particular reference to the present situation
4. To enable the student gain competency to examine contemporary social problems in Sri Lanka in relation to education
5. To enable the student to comprehend new trends in education in developing and developed countries.

1.0. Educational and Development

- 1.1. Concept of Development and Education
- 1.2. Interaction between education and economics
- 1.3. Interaction among educator, politics and social structure
- 1.4. Education as a human development
- 1.5. Educational planning for development

2.0. Problems in Education

- 2.1. Problems related to Race, Religion and language
- 2.2. Women Education
- 2.3. Adult Education

- 3.0. Decentralization and Devolution in Education
 - 3.1. Concepts of centralization
 - 3.2. Decentralization and devolution
 - 3.3. Problems and issues in decentralization and development
- 4.0. Education Policies and reform in Sri Lanka
 - 4.1. Historical perspective:
 - Educational development up to end of Dutch period
 - 4.2. Educational development under the British rule
 - 4.3. Forces of changes in education during the pre-independence era.
 - 4.4. Major educational policies and reforms after independence.
- 5.0. Contemporary social problems in Sri Lanka in relation to education
 - 5.1. Youth unrest (strategies to resolve youth unrest through education)
 - 5.2. Gender issue (towards gender equity in education)
- 6.0. Comparative outlook on educational problems – case studies
 - Education system in a few selected countries
- 7.0. Emerging issues in education in Comparative perspectives
 - 7.1. Internationalization of Education
 - 7.2. Feature of education in developing countries
 - 7.3. Media in education

Reading list:

1. Educational Issues in India , S.P.Chaube & A.Chaube, Vikas Publishing house Pvt,Ltd., New Delhi 1973.
2. Current Problems in Educational System, Hallak, Jacques Setting Educational Priorities in the Development Work, UNESCO, Paris 1990.

3. Current Educational Problems in Indian Educational System, Fraenkel, Joek.R. New Delhi, Megnaw Hill – 1993

MED 1030Dissertation - 06Credits

Students will be required to carry out this assignment on an approved topic pertaining to education in consultation with their respective supervisors.

The dissertation is expected to be research oriented and should be in typed and bound form, like any other dissertation. The last day for submission of the dissertation will be the last day of the final examination.

MCC 201 Introductions to Information and Communication Technology I & II– 02 Credits.

Objectives.

1. Develop a fundamental knowledge in ICT
2. Provide students with ICT knowledge that can be applied in other fields
3. Improve the skills required for the development of ICT based solutions for real world problems
4. Provide awareness of the computer architecture, the evolution of computers, major components of computer and computer networking for communication.
5. Identify day-to-day computer applications.
6. Provide the uses for day-to-day activities in ICT
7. Demonstrate an awareness of social, ethical and safety issues related to ICT

Expected Learning Outcomes.

1. Students able to handle the computer hardware and the applications software.
2. Students will understand the concept of ICT and its security, evolution of computers, components of computer, computer networking and their usage and the methods of handling the internet in efficient manner.
3. Students enable to manage word processing, spread sheet applications, database system and create a good presentation.

Technology I- Theory

1.0 Introduction to Computer

- Basic concepts of Information Technology (IT)
- Definitions of IT
- Concepts of ICT (Information and Communication Technology)
- Distinguish between Data and Information

2.0 Computer architecture and Organization

- Data flow between CPU, Main Memory, Input, Output Unit and Von Neumann Diagram.

3.0 The evolution of computers

- History of Computer
- Generations of Computer and Technologies
- Categories and characteristics of computer

4.0 Major Components of Computer

- Computer Hardware:
 - Definition of Hardware
 - Hardware Devices (Input, Output and Storage devices)
- System Unit: Motherboard, Central Processing Unit (CPU) (Arithmetic Logic Unit (ALU), Control Unit (CU), Registers), Bus, Expansion Slots, Ports and Connectors, Power Supply, Sound Components etc.
- Computer Software
 - Definition of computer software
 - Classification of computer software (System Software, Application Software and Firmware)

5.0 Number systems and Logic gates

Technology I – Practical

1.0 Introduction to computer system

Windows operating system, Linux operating system, Hardware/Software, Turning on your PC/Logging on, Desktop (Document/Application/ folder Icons), Taskbar, Start Button, Mouse click, Moving/copying files and folders, Creating/renaming/deleting files and folders, Parts of a window: bars/buttons/scroll bar, Resizing and moving a window, Opening and saving a document, Editing text, Drag and drop, How to use keyboard, Getting help, and Shutting down computer.

2.0 Word Processing

Getting started, tabs, viewing and hiding tool bars, task pane, views (normal, print layout, web layout), working with files, working with text, formatting text, list, columns, graphics, paragraph formatting, tables, drawing canvas, spelling and grammar, page formatting, page margin and gutters, tab setting, indentations insert symbol, special characters and equation, creating index, compiling table of contents, Mail merge and printing document and finally create a best research thesis (advance word processing).

3.0 Presentation techniques

Introduction, create a new presentation, power point screen layouts, working with slides, add contents, working with text, working with tables, adding graphics, editing graphics, graphs and charts, slide animation, creating photo album, adding action buttons, use the pen tool in a slide show, and adding multimedia content to a presentation

Technology – II- Theory

1.0 Computer Network

- Definition of computer network
- Characteristic of data communication
- Advantages and disadvantages of network
- Network Categories (LAN, MAN and WAN)
- Types of Networks (Peer-to-Peer Networks and Client/Server Networks)
- Intranets & Extranets
- Introduction to network devices
- Introduction to network media
- Network topologies

2.0 Internet and WWW and its services

3.0 Uses of ICT efficiently and effectively to be successful in life

- Explains the contribution of ICT towards national development
 - Education
 - Health
 - Agriculture

- E-Business
- E-Governance
- E-Commerce
- Evaluates ICT equipment to select those that meets user needs
 - Specifications of ICT devices
 - Evaluation criteria (Cost & Quality)
- Seeks IT career paths to suit one's life
 - Standing level of IT qualifications
 - Various designations related to the IT profession

4.0 Makes optimum use of ICT with awareness on relevant issues

- Ethical
- Social
- Security
- Health & Safety

Technology – II - Practical

1.0 Spreadsheet Application

Spreadsheet basics: screen layout, tabs, standard tool bar, task pane, modifying worksheet (adding and deleting worksheet, moving and copying cell, insert, delete and resize rows and columns, freeze panes), Formatting cells, formulas and functions, referencing, sorting and filling, Creating charts, Page properties and printing.

2.0 Uses of Database Management System (DBMS) Software to manage information

Planning and creating tables, creating and using forms, modifying tables, creating queries and producing reports.

3.0 Internet and E-mail

Introduction of internet, WWW and web browser, working with web browser, Loading and saving Webpages, Download the document from the internet, how to bookmark the Webpages, create free e-mail account, working with e-mail account, and introducing messenger.