

MASTER OF EDUCATION IN EDUCATIONAL TECHNOLOGY

1.0 INTRODUCTION

There has been a rising demand for postgraduate studies in Educational Technology. It is therefore, important to meet this demand for teachers with advanced knowledge in Education by providing relevant programmes. The programme is also designed for persons who want to undertake or upgrade their teacher education and training.

2.0 PROGRAMME OBJECTIVES

The objectives of the programme are as follows;

- a) To prepare persons who can effectively teach in various educational institutions.
- b) To prepare education professionals to undertake leadership positions in the field of education.

3.0 ADMISSION REQUIREMENTS

- 3.1 The common regulations for Masters Degree of Jaramogi Oginga Odinga University of Science and Technology shall apply.
- 3.2 To be eligible for admission into any of the M.Ed. programmes, a candidate must be a holder of any one of the following qualifications:
 - a) At least lower Second class honours B.Ed. degree from Jaramogi Oginga Odinga University of Science and Technology or any other recognized institution of Higher learning.
 - b) Bachelor of Arts (BA) or Bachelor of Science (BSc) degree with Postgraduate Diploma in Education (PGDE) from At least lower Second class honours B.Ed. degree from Jaramogi Oginga Odinga University of Science and Technology or any other recognized institution of higher learning.
 - c) Such other academic and professional qualification equivalent to Nos. (i) and (ii) above and approved by the Department, the Faculty and Senate.
 - d) Teaching experience in an educational institution will be an added advantage.

4.0 CREDIT TRANSFER

A candidate may be exempted from some course units and credit(s) transferred from institutions recognized by the Senate, subject to the following conditions:

- a) Must have passed in similar course units at Master's level. Request for exemption should be made in writing to the Director, Board of Postgraduate Studies through the Dean of the respective School and must be accompanied by officially endorsed supporting documents.
- b) Candidates may be allowed to transfer up to one third (1/3) of the total number of course units.
- c) Application for transfer will be processed only after payment of the prescribed fees.

5.0 COURSE STRUCTURE AND DURATION

- a) The Masters' course shall normally take two years covering 4 semesters offered by unit method.
- b) Courses shall be offered in units. A course unit is defined as that part of a semester subject described by coherent syllabus and taught normally over a period of a semester. It is designated as a total of 42 hours of study in a semester. For this purpose, one 1-hour lecture is equivalent 2-hours tutorial or 3-hours practical or any combination as may be approved by the Board of the School.
- c) Part-time students shall be allowed to take not less than 50% of the courses prescribed for the year.
- d) All course units will be taught for a total of 42 contact hours, including examinations except project work which will take 480 hours of practical work and project writing.

6.0 BASIC REQUIREMENTS

All core courses are compulsory; however, students can take additional electives courses up to a maximum of the six units.

7.0 EXAMINATIONS REGULATIONS

University College Examinations rules and regulation shall apply.

8.0 COURSE DISTRIBUTION

FIRST YEAR – FIRST SEMESTER

Course Code	Course Title	Units
ECTC 801:	Research Methods in Education	(42hrs)
ECTC 802:	Curriculum Theory and Design	(42hrs)
ECT 803:	Instructional Theory and Design	(42hrs)
ECT 804:	Computer Application in Research	(42hrs)

Any two Elective courses from the list below

ELECTIVES

Course Code	Course Title	Credit hours
ECT 817:	Design of Multi Media Materials	
ECT 818:	Technology Policy and Cost Factor	
ECT 819:	Management of Multi Media Resource Centres	

(Electives)

FIRST YEAR, SECOND SEMESTER

Course Code	Course Title	Credit hours
ECT 820:	Evolution of Educational Technology	
ECT 821:	Technology and Subject Teaching	
ECT 822:	Technology in Special Education	
ECT 823:	theoretical Basis of Learning with Technology	
ECT 899:	Research Proposal	
Any one Elective		

ELECTIVES

Course Code	Course Title	Credit hours
ECT 824:	Educational Technology Practical	
ECT 825:	Open, Distance and E-Learning	
ECT 826:	Educational Technology and Motivation of Learners	

SECOND YEAR

FIRST SEMESTER

ECT 899:	Research (Data Collection & Analysis)
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SECOND YEAR

SECOND SEMESTER

ECT 899:	Research (Thesis Writing & Presentation)
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9.0 COURSE DESCRIPTION

ECTC 801: Research Methods in Education

Meaning of research in education conceptualization qualitative and quantitative research in education investigation issues in education research needs in the schools curriculum and

instructional setting identify research problems and construction hypothesis literature review and source of literature, population and sampling developing a research proposal techniques and tools of data collection in education ethical consideration organization and analysis of research data. Use of descriptive and inferential statistics in data analysis interpretation of results and writing of research report.

ECTC 802: Curriculum Theory and Design

Curriculum as a discipline and as a programme of instruction: emerging concepts of curriculum development interdisciplinary approach to curriculum development; historical foundations, sociological foundations, psychological foundations, philosophical foundations implications of these disciplines to curriculum theory and practice; developing theories, concept and models for understanding the meaning and process of curriculum development focus of works on selected curriculum scholars such as Ralph Tyler, Hilda Taba, Jerome Bruner, John Dewey, Ivan Illich and Paul Freire; recent approach to curriculum development concept of curriculum design, models of curriculum designs; problem of scope, sequence, integration, balance, continuity and relevance in designing curriculum.

ECT 803: Instructional Theory and Design

Concept of instructional theory and design; issues and existing research in the use and development of methods and media instructions; instructional design process; factors to consider in designing instructional environment; resource-based learning; effect of media in teaching and learning.

ECT 804: Computer Application in Research

Practical experience in use of computer in analyzing and interpreting data; basic principles in computer operations; basic word processing; operation of statistical packages to compute descriptive statistics; mean median mode quartile and percentile range standard deviation; computer and inferential statistics; correlation and regression coefficient, t-statistics- F ratio in ANOVA, chi-square; drawings and interpreting simple graphical plots.

ECT 817: Design of Multi-media Materials

Focuses on the design and production of multimedia materials for education; using resources available locally audio technology, video technology, visual media and print media, issues and existing research on learning from educational technology (multi media resources)

ECT 818: Technology Policy and Cost Factor

Meaning of educational technology policy; policy statements; written and unwritten technology policy; formulation of technology policy, comparative analysis of technology policies from developed and developing countries; policy guidelines on the use of it or ICT; curriculum and technology policy ;implementation of computer policy; government policy e.g. white paper; financial policy on ICT; government policy domain.

ECT 819: Management of multimedia Resource Centres

The philosophical and historical dimensions of multi-media resource centres: multi-media resource center definitions, the concept of resource –based learning; Multi-media resources research; organization of multi-media resource centers; managing multi-media resource centers; planning, allocation and distribution of resources; physical resources, buildings and equipment, human resources, staff development and training; strategies for maximizing resources, coordination of resources input and use and misuse of resources.

ECT 820: Evolution of educational technology

Definition of educational technology; technology in education, technology of education, characteristics of educational technology; history of communication technology. Tracing the development of the dominant modes of transmitting knowledge from oral to written print media, visual media, to the electronic media; effects of mass media in education at all levels of education; factors affecting use of technology in education; policy and future use of technology in education in developing countries, costs and benefits of technology in developing countries; educational technology in mass instruction; individualized instruction and group teaching.

ECT 821: Technology and Subject Teaching

Concept and function of information technology in instruction; computer development and relevance to teaching and learning; curriculum integration of information technology; computer

integrated education; computer managed instruction; computer assisted instruction; factors affecting computer use in schools ;current trends in computer use in educational settings; basic skills in computer use; word processing, data bases, spread sheet, educational uses of the internet and power point; benefits and limitations of computer applications in instruction; cost and benefits; policy and practice in developing countries.

ECT 822: Technology in Special Education

Focuses on technology designed especially to help those with disabilities –assistive or adaptive devices for the physically impaired; overcoming sensory impairments with technology; developing the individualized education programmes; approaches to selecting devices and applications of technology ;benefits and limitations of technology in special needs education; using visual, audio and audio –visual aids in special needs education.

ECT 823: Theoretical Basis of Learning with Technology

Focuses on the role of computers in behaviorist and constructivist learning; constructivist approaches to teaching; definition and characteristics of cooperative learning with technology; integrated learning systems; computer assisted learning; reasons for learning with technology; merits and limitations of technology in teaching and learning.

ECT 824: Educational Technology Practical

Concept and purpose of electronic media in instruction, practical skills in photography, basic video production techniques, planning, editing, audiovisual production of slide tape program, text and print including desktop publishing, graphics design, computer software design, transparencies and audio production techniques; radio programmes production and use of cassette tape recordings; production of visual materials.

ECT 825: Open, Distance and Electronic Learning

Concept, philosophy and purpose of open, distance and Electronic learning, web-based, virtual classrooms, e-learning; principles of e-learning and teaching and learning; teaching online and factors to consider when planning online teaching and learning; factors affecting introduction and use of e-learning in schools, government policy on open, distance and e-learning,

management and cost of open, distance e-learning. Future of e-learning, future of e-learning, management and cost of open, distance and e-learning. Benefits and shortcomings of e-learning; future of e-learning.

ECT 826: Educational Technology and Motivation of Learners

Introduction to educational technology; philosophical dimensions of educational technology: the role of technology in support of content standards, learning educational teaching, and learning with technology in schools; Teacher training in educational technology; educational technology research, the selection, operation and select, operation and use of media computing, Internet and learning communication; the implementation of educational technology in the classroom; managing educational technology in formats.

ECT 899: Research

The student, under the guidance of supervisors will select a research topic, develop research proposal, collect data, write a thesis, defend and present it.