MAKERERE UNIVERSITY

CURRICULUM FOR CROSS-CUTTING COURSES

1.0 Background

In the era of globalization and internationalization of universities, Makerere University has re-positioned herself as a research-led university to meet the changing needs of the times. The university has put in place supportive frameworks. These include development of supportive policies such as quality assurance policy, research and Intellectual management policies, gender policy, sexual harassment policy, and increasing the proportion of graduate students in the university among others. These are highlighted in the university strategic plan 2007-2017.

Following the Mujjaju Report (1999) requiring the PhD qualification in order to be hired as a lecturer at Makerere University, this led to a number of initiatives. Among these was the increased support by staff development to academic staff to study towards attainment of the PhD degree. Until then, academic units were offering PhD degrees by research only. With regard to value addition and intellectual discourse, PhD degree programs by research alone were considered inadequate. Subsequently, a few faculties such as Faculty of Computing and Information Technology, School of Education, and the Faculty of Economics and Management developed PhD programs by both course work and research. Feedback from the students showed that although the courses offered dealt adequately with the technical aspects in the various disciplines, there was inadequacy in terms of content in basic courses required for sharpening the students' skills in research and publication. Areas identified included Research methodology, Data analysis, Information Management, Philosophy of Method and Scholarly writing and communication. These courses would enhance the knowledge and skills of doctoral students particularly to conduct quality research.

Realising the need by PhD students to be grounded in the above areas identified, the School of Graduate Studies with support from development partners (namely Sida/SAREC of Sweden, the Carnegie Corporation of New York, Norad of Norway) and in collaboration with some units of the university, a number of courses were developed and offered as cross-cutting courses to PhD students that has attracting over 400 participants (Table 1).

Table 1 Cross-cutting courses offered to PhD Students showing number of participants per year (2000-2007)

Course	Collaborating Institution	Dates	No. of participants
Philosophy of Method	Linckoping University, Norway	August/Sept 2001 Sept-2002 Aug/Sept 2003	20 28 14
Advanced Gender Research Methods	Goetenberg University, Germany	July 2003 June 2005	22 17
Quantitative & Qualitative Research Methodology	Lund University, Sweden	Nov/Dec 2001 Nov/Dec 2002 Nov/Dec 2004 Nov/Dec 2006	30 24 25 26
Statistics and Computer Applications in Research	Makerere University	May 2002 May 2004 July 2007 July 2008	20 20 10 10
Genes and Genomes		Conducted 5 times	100
Clinical Epidemiology		To start in Phase III	
Information Competence & Management		2006 2007 2008	12 32 36
		Total	**436**

Course	2010		2011		2012		2013		S/Total		**Total**
	F	M	F	M	F	M	F	M	F	M	
Philosophy of methods	8	12	13	17	17	25	16	31	54	85	**139**
Adv. Gender Research	10	14	17	13	9	10	7	10	43	47	**90**
Statistical Computer applications	5	5	4	6	7	8	5	10	21	29	**50**
Genes and genomes				14	6				6	14	**20**
Supervision	11	23	8	16	8	10	12	16	39	65	**104**
Research Management	-	-	-	-	15	14	12	14	27	28	**55**
Scholarly writing & comm skills	-	-	-	-	13	12	16	10	29	22	51
Information competence & mgt	19	25	11	21	3	9	12	13	45	68	113
Research Methodology	15	11	-	-	12	17	16	14	43	42	85
Grand TT											707

Quality in content and delivery was attained by identifying staff from mainly within the university having competences and expertise in these courses, who were then asked to participate in the development of the course content as well as course delivery. Since inception, there has been a lot of interest by the PhD students indicated by the number of applicants whenever any these courses is advertised. There has been satisfaction from the participants with respect to both content and delivery of these courses, and this is evident from the feedback/evaluation of the various courses by the participants. In the process, students have indicated the need to have these courses taken for credit, especially PhD students on joint degree programs or registered in other universities collaborating with Makerere.

Makerere university has entered into collaborative agreements with a number of universities both in the south and the north, including offering joint PhD degrees pioneered by the Karolinska Institutet, Sweden that has already graduated four PhD students under this arrangement. This means that courses can be taken for credit and transferred to either of the collaborating institutions. On the part of Makerere University, this calls for a curriculum defining and detailing such courses.

1.1 Process leading to development of the curriculum for cross-cutting courses

Since 2001, a number of cross-cutting courses have been offered consistently, such as Research Methodology, Statistics and Computer Applications in Research, Genes and Genomes, Information Competence & Management. Given the need by the students and other stakeholders that these courses be taken for credit, the School of Graduate spearheaded the development of a comprehensive curriculum for the cross-cutting courses. A sub-committee was set up by the Sida/SAREC Steering Committee to develop the curriculum for cross-cutting courses with the School of Graduate Studies as the Secretariat.

A number of meetings of the committee were held and various stakeholders in the academic units were consulted while developing the structure and content of the cross-cutting courses. The committee was aware that some units run some of the courses identified here as cross-cutting and needed views and input by such units particularly on the content of the proposed cross-cutting course.

1.2 Proposed implementation strategy

The cross-cutting courses are already running since 2001 and have been coordinated by the School of Graduate Studies. They are timetabled to run each year. PhD students are required to have taken all the core courses and any electives in consultation with the supervisor(s) for successful completion of the program.

Each of the cross cutting courses will be hosted by an academic unit for coordination purposes (Table 3). However, lecturers to teach on each course will be identified and agreed upon by the host units in consultation with the DRGT.

Table 2 Cross-cutting courses showing the host unit

Course	Host unit
Advanced Research Methods	Directorate of Research & Graduate Training*
Advanced Quantitative Data Analysis	College of Management and Business Studies, School of Statistics and Planning
Advanced Qualitative Research Methodology & Data Analysis	College of Humanities and Social Sciences School of Social Sciences
Scholarly writing & Communication Skills	College of Humanities and Social Sciences Department of Languages
Philosophy of Method	College of Humanities and Social Sciences, Department of Philosophy
Information Competence & Management	University Library
Advanced Gender Research Methodology	College of Humanities and Social Sciences, School of Women and Gender
Genes & Genomes	College of Health Sciences
Clinical Epidemiology	College of Health Sciences, School of Public Health

*DRGT initially to coordinate the course and later hand it over to an agreed academic unit to host

2.0 Title of the Program

Cross-cutting Course Curriculum for Doctoral Students

3.0 Justification

Makerere University had been offering PhD by research only up until 2003 when some academic units developed PhD by course work and research. The major reason was lack of capacity by many units to offer a taught PhD degree program. With the coming of the reforms of the late 1990's including the requirement for staff to have a PhD to be appointed lecturers at the University, many academic staff from the units registered for PhD degree programs. To add value, there was need for development of taught PhD programs.

3.2 Niche and value addition

The number of doctoral students at Makerere University is on the increase. With the introduction of cross-cutting courses for PhD students, the number of applicants for any of these courses has been on the rise each time the courses are advertised. This has shown the need, value and popularity of these courses among the students. The value of a number of these courses is manifested in having students from both the humanities and natural sciences attending the same course leading to useful cross-fertilisation and learning from each other.

Although a good number of the PhD students come from academia, they still require value addition inform of gaining knowledge through a taught PhD program. However, competencies are lacking in some units to impart knowledge and needed skills to the student to enable them formulate a research problem, write a proposal, implement it and later on publish. Therefore, identification and utilizing existing highly skilled staff form across the university including visiting professors from collaborating universities to teach the cross-cutting courses will be quite valuable to the PhD students in their research process. Undoubtedly, Makerere is the first university in the region to develop a curriculum for the Cross-cutting courses for PhD students. This curriculum is likely to attract PhD students from around the region.

4.0 Aims and Objectives

4.1 Mission of the Cross-cutting course Curriculum

The mission of the Cross-cutting course program is to produce quality doctoral graduates with the necessary research investigative skills to lead research development agendas. This mission will be achieved through graduate research and training that links advances in basic and applied humanistic and biological sciences.

4.2 The Goal of the Cross-cutting Course Curriculum

The goal of this curriculum is to create excellence in PhD training and research internationally.

5.0 Management and Capacity

The School of Graduate Studies shall play an oversight role in the coordination of the implementation of the cross-cutting courses at Makerere University. The host units, however, will be responsible for ensuring that the courses are implemented as required. This includes ensuring that the course is delivered on time, development of a teaching timetable, collating marks and forwarding to the DRGT for presentation to the Board of Graduate Studies and Senate.

Makerere University boasts a high concentration of highly qualified and skilled academic human resource in the country and the region. There is, therefore, tremendous expertise available locally in all the areas addressed by the cross-cutting courses. This expertise has been and continues to be identified and utilized in developing the content including delivery of these courses. Periodically, the identification of lecturers to teach on the course will be made in consultation with other units and the DRGT.

6.0 Program structure

The cross-cutting courses shall run on a modular basis with each course offered each year. Delivery of each course shall be in form of didactic lectures, with the major part

devoted to practicals/labs, tutorials and problem based seminars. The core courses are a requirement for all PhD students. The maximum semester load is 18 CU while the minimum program load is 24 CU. The program shall be run on a semester system and the structure is summarized below:

LH =Lecture hours, PH = Practical hours, T/SH = Tutorial or seminar hours
CLH =Clinical hours, CH =Contact hours, CU= Credit units

SEMESTER I – Core Courses

ITS code	Course name	LH	PH	TH	CH	CU
DRGT 9101	Advanced Research Methods	30	40	10	60	4
ART 9102	Philosophy of Method	30	-	15	45	3
ART 9105	Scholarly Writing & Communication Skills	20	20	15	45	3

ELECTIVES

ITS code	Course name	LH	PH	TH	CH	CU
LIB 9103	Information Competence & Management	20	20	15	45	3
WGS 9104	Advanced gender Research Methodology	20	20	15	35	3
ISE 9106	Advanced Quantitative Data Analysis	30	20	20	60	4
SOC 9107	Advanced Qualitative Data Analysis	30	20	20	60	4
FOM 9108	Clinical Epidemiology	20	20	15	45	3
FOM 9109	Genes and Genomes in the Tropics	25	20	10	45	3

ASSESSMENT OF COURSES

Each course unit shall be assessed on the bias of 100 total marks distributed as follows:

Written examination	40%
Continuous assessment	60%

Progressive assessment/course work shall consist of tests/assignments during the semester

GRADING OF COURSES

(a) Each course shall be graded out of a maximum of 100 marks and assigned appropriate letter grades and grade point average as follows:

Marks (%)	Letter Grade	Grade Point
80-100	A	5.0
75-79.9	B+	4.5
70-74.9	B	4.0
65-69.9	B-	3.5
60-64.9	C+	3.0
55-59.9	C	2.5
45-54.9	C-	2.0
40-44.9	D	1.5
35.39.9	D-	0.5
Below 35	E	0

(b) The course pass grade is 3.0 i.e. C+

COURSE DESCRIPTIONS

Course Name: **ADVANCED RESEARCH METHODS**

Course Code: **DRGT 9101**

Credit Units: **4**

Credit Hours: **60**

Brief Description

The advanced research methods course is a four credit unit (4CU) course aimed at equipping students with knowledge and skills of frameworks, processes and approaches for designing a qualitative and/or quantitative doctoral research study in the natural and social sciences. Although there is increased interest and use of qualitative research, the distinctive attributes of this approach from more traditional forms of research are still unclear to some. This course, therefore, offers a unique blend of qualitative and quantitative approaches in the research process. The broad objective of the course is premised on provision of sufficient information and knowledge to enable students acquire the skills to be able to formulate a relevant and acceptable doctoral research problem, make an educated choice of method(s), implement this/these method(s) and finally write a scientific report about the findings or results.

Learning Objectives

At the end of this course, the students will have been empowered to:

- be able to critically analyse a scenario and formulate relevant research problems
- be able to analyse different scenarios and frame relevant problems that can be expressed and defined in a professional way (conceptualisation and operationalisation)
- make an informed choice of methods from the relevant research paradigm/paradigms correlated to the specified research problem
- developed skills to make effective use of the library and e-resources in sourcing literature

Course Content

The course covers the following topics:

- **Formulation of Research Problem(s) and the logical framework**:
    - Underlying processes of scientific research; Role of theory in problem formulation; philosophical basis of formulation of a research problem, Generating versus verifying theories, The empirical unfolding of research problems, Research questions stemming from multi-method Research,

Mixing metaphors to generate research problems, Identifying research objectives, The logical framework approach to project planning and management, The vertical logic of a logical framework, The horizontal logic of a logical framework; The project outputs and activities, the proposal budget and budgeting.

- **Library Information search:** Use of library and e-resources in research proposal writing; citations and referencing techniques

Overall methodological approach – Quantitative approaches

- Sample size and sampling techniques - sampling simple random sampling, stratified random sampling; ratio estimators, difference estimation and regression estimator; systematic sampling; cluster sampling; multi-stage sampling; multi-phase sampling; sampling on successive occasions, errors in survey
- Research design (experimental, quasi-experimental and observational study designs – Case control, Cohort and Cross-sectional)); data analysis. Major theoretical and philosophical underpinnings of research including: the idea of validity in research; reliability of measures;

Qualitative approaches - Qualitative research methods and research instruments; blending quantitative and qualitative research designs

Ethical considerations and research

Suitable data collection and analysis techniques; Interpretation and conclusion of the research; Writing an effective research proposal;; Selection of software implementation methods;

Course Delivery

- Didactic lectures to stimulate discussion
- Group work
- Practical demonstration and hands on sessions
- Assignments

Reading List

Research Methods by Kleinbaum, Kupper and Morgernstein

Patton, Michael Quinn; Qualitative Evaluation and Research Methods, Beverly Hills, Sage, 2nd Edition,1990

Sieber, J.E. (1993) Planning Ethically Responsible Research. Sage Publishers

Course Name: **PHILOSOPHY OF METHOD**

Course Code: **ART 9102**

Credit Units: **3**

Credit Hours: **45**

Brief Description

As a candidate leaves formal education, method is the last educational act meant to accompany him/her in life, not just as a skill, but above all as an attitude. Humanity is never satisfied; we are ever searching for a better life, exploring new areas, ever interested in what is (or may be) beyond our reach.

The final act of formal education (Ph.D research thesis) sensitizes a candidate to the fundamental vocation of method which provides one with a sense of purpose and direction. We may recall the etymological Greek roots of the word "method", which were *meta* (to be, to follow) and *odos* (the way, the path, the road). Method therefore etymologically meant to follow the way, path or road.

Following the way, path or road required of a follower - discipline, orderliness, systematicity, continuity, and perseverance - and at the end of the day, there was always that "more", the "horizon" to be traversed.

Objectives of the Course

1. To give a student a historical perspective on knowledge science and research to stimulate him/her to relate his/her own research to this perspective.
2. To help the student to form a considered opinion about the concepts of knowledge, science and research.
3. To give the student a deeper understanding of the concepts of causation, correlation, scientific explanation, and scientific law.
4. To enhance the student's perspective in comparing the evaluating quantitative and qualitative methods.
5. To give the student some training in analyzing the hypothetic-deductive/inductive structure in research papers.
6. To enhance the student's awareness about ethical conflicts and problems relating to science and research.
7. To provide the student with a forum in which he/she can discuss his/her own research proposal with other PhD students.

Expected Outcomes

- Students conversant with the vocation of method wand having a sense of purpose and direction in the conduct of research
- Better appreciation of the underpinnings of ethical conflicts
- Better understanding of the hypothetico-deductive-inductive process

Course Content

1. **The Human Creative Process in History**

A. General Cultural Perspective

The conditions of creativity; The birth and death of ideas; The process of creative thinking; conformity and creative thinking;

The human journey in history: From the Emergence of *homo sapiens*, THROUGH the Development of social organization, culture, religion, To the Global Society.

B. Human Creativity at Work

Satisfying basic needs, like food, shelter, clothing and the discoveries of fire, metal, and wheel, the taming of animals, agriculture.
Following the urge of searching, exploring, migrating, traveling, and the inventions related to land, sea, and air transport (vehicles, roads, maps, logistics)
Mapping (places and times) of specific inventions: The history of technology and science and the philosophy of it. The present technological age.

2. **Valid Knowledge: Its Source and Purpose**

A. Nature and Method of Knowledge

Defining characteristics of knowledge; Knowing 'how' and knowing 'that'; Knowledge, opinion, and belief; Knowledge, data, and information; Common features of knowledge; Scientific discovery and artistic creation

B. Sources of Knowledge

Skepticism and certainty; The empiricist tenets; The rationalist tenets; Naturalism (preconceptions for categorization)

C. Theories of Truth

The correspondence theory; The coherence theory; The coherence theory; The pragmatic theory; The meta-linguistic theory; The redundancy theory

D. Purpose of Knowledge

The empirical-analytical disciplines linked to technical control; The historical hermeneutic disciplines linked to social interaction; Critical theory linked to emancipation

3. Causation, Explanation, Laws

Explanation and Prediction; The Nature of Laws; Observation, Observational sentences, Data

4. Theory and Praxis

A. Theory and Praxis

Pre-theoretical approaches: science and politics in the ancient civilizations of Babylon, Egypt, and Greece; The Babylonia record of observed facts; Greek development of theory and hypothesis: Theory and *techne* in physics, theory and phronesis in politics; The positivistic conception of theory and praxis in the modern period

5. Historical Analysis of Epistemology

A. Ancient and Modern

The maieutic method of Socrates (469-399 B.C.); The dialogical method of Plato (427-347 B.C.; The inductive and deductive (logic) method of Aristotle (384-322 B.C.)

B. Contemporary

Hermeneutics (Hans-Georg Gadamer, 1900)

6. Present Situation of Epistemology

A. Karl Raimund Popper's Method of falsifiability

The Logic of Scientific Discovery

i) Structure of a theory
ii) Cognitive growth and theory change
iii) Paul K. Feyerabend's anarchistic theory of knowledge
iv) Larry Laudan's methodology of research traditions
v) Frankfurt School and critical theory

7. Applied Methodology

A. Methods in Science

Typical examples from the sciences, like medicine, physics, technology; Influence of the social sciences (Hobbes, Comte)

B. Methods in Humanities

Typical examples from humanities, like philosophy, history, language, literature, religion

C. Quantitative and Qualitative Methods

Comparing the methodologies of science and humanities

D. **Ethical Foundations**

Significance of ethics of human life; Basic principles of ethics; Relationship of ethics to research; Research and human rights; Research vis-à-vis its social, cultural and financial costs

E. Applicability Of Ethics To Research

Professional Ethics and specific ethical issues related to the medical, legal, teaching, accounting, managerial, engineering, and other professions; Codes of ethics; Responsibility towards research subjects in health, educational, social, and technologically related research; Informed consent and deception, privacy and confidentiality, Government regulations on research.

8. Some Crucial Issues for Research

A. Crucial Issues In General

Creation and distribution of wealth, World Poverty, New Economic Order, Globalisation and Localisation, Cultural Heterogeneity, Human Rights, The power of multinational corporations vis-à-vis the interests of smaller communities; The widening gap between developing and developed countries.

B. Crucial Issues in Africa and Uganda

Political issues in (Sub-Saharan) Africa: African government; African democracy; development; militarization; instability; migrations; health (aids); education (UPE); privatization, planning, prioritizing and implementation of research

9. **From A Skill To Attitude**

Acquiring the right approach to study and research within an ethical context ; Transferring theory into life (*Bios-theoreticos*) and emancipating life from the enslavement of "opinion" (*doxa)*

A. Characteristics of Research Attitude

Critique Assessment; Systematicity, orderliness; Continuity, perseverance, meekness

Course Delivery

- Didactic Lectures
- Discussion groups
- Students' research presentations

Reading List

Rene Decrates. A Discourse of Method

Other reading material to be provided during the course delivery

Course Name: **SCHOLARLY WRITING AND COMMUNICATION SKILLS**

Course Code: **ART 9105**

Credit Units: **3**

Credit Hours: **45**

Brief Description

Many PhD students struggle with scholarly writing and presentations in English, and normally much time in a PhD study is spent revising papers and preparing for conference talks. Given the amount of time that PhD students spend writing and preparing to present, students should invest in a systematic study of scholarly writing and communication. The aim of the three credit unit course is to equip students with the knowledge and skills in effective writing and presentations. The course deals with the publication process from the perspective of the author of a scholarly piece of work and the editor of a journal.

Learning Objectives

At the end of this course, students will be able to:

- Make a quality conference presentation
- write a quality journal article
- appreciate ethics-related issues when writing a scholarly/scientific paper.
- understand the prerequisites for choosing the market for publishing

Course Content

Introduction to scholarly Communication; Overview of communication contexts; Language and style in communication; Structuring and Editing scholarly work;
The Publication Process; Scholarly Communication in the Sciences and social sciences/humanities; Citation Methods; Ethics in scholarly writing and communication; Using Library resources for Scholarly work; Critical review of scientific papers by groups of participants.

Course Delivery

The course is intended to provide a valuable experience for students and utilizes a variety of formats including:

- instruction

- group exercises
- Discussions & presentations

Reading List
Huff S.A.(1998): Writing for Scholarly Publication. SAGE Publications. 200p

Course Name: **ADVANCED QUANTITATIVE DATA ANALYSIS**

Course Code: **ISE 9106**

Credit Units: **4**

Credit Hours: **60**

Brief Description

The four credit unit course is designed to help PhD students embarking on research to understand the principles and practical application of statistics for analysis of research data. The course revisits standard statistical techniques together with a comprehensive hands on illustration of their application using a standard statistical package (e.g. STATA). By the close of the course, students are expected to have acquired the ability to choose the appropriate statistical technique(s) to use for the type of data to be collected as well as correct interpretation of the results.

Course requirements

The course does not assume any prior knowledge of statistics beyond the introductory courses offered in most undergraduate programmes. The course, however, assumes familiarity with microcomputers, in particular knowledge of the Windows Operating System.

Course Content

Data Description and Summarization - Types of numbers and scales; Types of variables; Frequency distributions; Means and standard deviations; Diagrams

Basic Probability Theory - Basic probability concepts; Discrete distributions; Binomial; Independence

The Normal Distribution - Introduction to the Normal distribution; Tables of the Normal distribution; Sampling; distribution of the mean; Student's t-distribution; Central Limit Theorem: Practical relevance

Elements of Statistical Inference I - Statistics and parameters; Point estimation; Confidence intervals; Independence. I.i.d. data
Examples:

One sample (mean)
Comparison of two means: independent samples
Comparison of two means: paired samples
Comparison of two proportions

Elements of Statistical Inference II - The nature of statistical hypotheses; Type I and Type II errors; p-values. Examples:

One sample (mean)
Comparison of two means: independent sample
Comparison of two means: paired samples
Comparison of two proportions

Introduction & Data Analysis with STATA - Running STATA; Data Definition; Variable and value labels; Recording, new variables; Descriptive statistics; T-test, confidence interval: one sample; two independence samples, two paired samples

Study Design - Sample size and precision; Sample surveys: random, systematic, stratified, cluster, multistage; Experimental designs; Comparative studies: cohort studies, case-control studies

Analysis of Cross-classified Data - Preparing a contingency table; Chi-square test; The STATA crosstabs command

Non-Parametric Statistics - Ranks; One sample tests; Two sample tests; Comparison of several samples; Ranks correlation coefficients

Bivariate Correlation - The correlation coefficient; Scatter diagrams; Plotting the scatter diagram with STATA; Significance of the correlation coefficient; The STATA correlation command; Connection with-and introduction to Regression

Linear Regression - Introduction to regression; The regression coefficient; The intercept; The relation between regression and correlation coefficients; Significance of the regression coefficient; Simple regression diagnostics; The STATA regression procedure

Multiple Regression - Partial regression coefficients; Model (variable) selection; Regression with dummy variables; The STATA regression procedure

Binary and Multinomial Regression - Binary and polytomous response variables; Binary logistic regression; Logit and probit analysis; Multinomial regression; Use of STATA logistic regression and probit procedures

Analysis of Variance - Comparison of several means: one way ANOVA; Multiple classifications; Interactions; Adjusting for covariates; STATA Analysis of variance procedures

Multivariate Analysis - The nature of multivariate data; Generalization of the t and F tests; Repeated measures analysis of variance; The STATA MANOVA procedure

Course Delivery
Lectures, tutorials, and computer labs.

Reading List
Donald J. Treiman (2009): Quantitative Data Analysis: Doing Social Research to Test Ideas (Research Methods for the Social Sciences). Wiley. ISBN 978-0-47038003

George W. Snedecor, William G. Cochran (1987): Statistical Methods. Iowa State University Press, Ames Iowa.

Course Name: **ADVANCED QUALITATIVE DATA ANALYSIS**

Course Code: **SOC 9107**

Credit Units: **4**

Credit Hours: **60**

Course Objective

To explore and appreciate the qualitative methodology as an approach to a research problem.

Learning Objectives:

At the end of this course, students will:

- Be knowledgeable in the philosophical underpinnings of qualitative research.
- Have acquired skills of literature search, critical analysis and writing.
- Be able to identify would-be qualitative research problems
- Be able to call into use appropriate qualitative research methods of investigating the identified problem(s)
- Appreciate analysis of qualitative data (manually and by use of computer software)
- Able to explore various ways of writing a qualitative research report

Course Content

The Qualitative Research Paradigm:

- What it is. Features of the qualitative research paradigm (e.g. grounded theory, phenomenology, naturalistic, interpretative, qualitative, subjectivity, triangulation and riqour…)
- Examples of the qualitative research paradigm (e.g. feminist research, historical research, action research, anthropology, enthographic
- Debate of objectivism and subjectivisim (Differences between qualitative and quantitative research paradigms and application to the research problem)

Qualitative Research Designs:

Ethnonography, Critical enthnography, Case study, Action Research, Historical/ life histories, Grounded theory

Ethical issues in qualitative research

Informed consent, Confidentiality, Ethical clearance, Ethical reporting of results, Ethical dilemmas

Qualitative research approach in the field

Accessing the field, Sampling

Data collection in qualitative research (toolbox of methods): A practical approach

- Focus group discussions
- Interviews: Key Informant Interviews, In depth Interviews, Case studies, Life histories, Genealogical methods, Social network, Narratives, Conversation, Observations
- Documents: public documents such as minutes of meetings, newspapers, private documents such as journal, diary, letter..
- Audio-visual materials e.g. film, photographs, art object, video tapes
- Discourse analysis

Instruments/tools (guides and checklists

- Focus group guide, Key informant Guide/checklist, In-depth Interview, guide, Observation guide/checklist

Qualitative Data analysis (Manual & computer-assisted)

- Constant comparative method, Categorisation, Thematic analysis, Theory generation

Writing qualitative research reports: Publishing qualitative research

Course Assessment:

Continuous Assessment (40%)

- Group Projects
- Individual projects (written & oral)
- Research Presentations

Final Research Essay (60%)

Based on mini-field work and literature review

Course Delivery:

- Lectures
- In-class Practical work (Hands-on analysis and critique of qualitative research problems in previous dissertations and research papers)

- Mini-field work and report writing
- Students' research presentations

Reading List

- Feldman Martha S., (1994) Strategies for Interpreting Qualitative Data (Qualitative Research Methods, Vol 3) , Sage

- Fielding Nigel, Fielding Jane, (1985) Linking Data (Qualitative Research Methods). Sage
- Miles Matthew, Huberman Michael, (1994) Qualitative Data Analysis, Sage, 352 p

Other Books on general qualitative research design
- Books on discourse analysis in every discipline
- Books on grounded theory (Glaser & Strauss)
- Books on qualitative data analysis

Course Name: **INFORMATION COMPETENCE AND MANAGEMENT**

Course Code: **LIB 9103**

Credit Units: **3**

Credit Hours: **45**

Brief Description

Information competency and management cross-cutting course is a three credit unit course developed and conducted by the University Library in collaboration with the East African School of Library and Information Science (EASLIS) and Faculty of Computing and Information technology.

Aware that today information handling is at the heart of the research process across all disciplines, the three credit unit course focuses on the identification and use of information sources and resources, and the management and effective presentation of the research results. In this course, students are introduced to a range of facilities available within Makerere University and beyond, that can support heir research. These include electronic database and e-journals as well as literature searching and information retrieval from the various printed and electronic resources, word processing, power point presentation, and file management. The course is also focused computer application in qualitative research, the techniques of storage, retrieval and processing/handling of various types of information/data, citation methods and the academic publication process.

Course Objectives

The major objective of this cross-cutting course is to impart knowledge and skills in the effective information seeking and management by postgraduate students/researchers. The course focuses on an individual's course/research topic to provide information seeking competency and support to the student.

Learning Objectives

After undertaking this course, students are expected to:

- identify and use of information resources (print and electronic) relevant to the researcher's individual research topic
- professional citing and quoting of authors versus interviewees/respondents
- improved scholarly writing (writing skills)
- file management of the many versions of electronic files researchers work on/with
- creation and management of simple databases for the bibliographic data/references, e.g. using Endnote software, and their subsequent updating
- computer applications in qualitative research e.g. using Atals.ti software.

Course Content

Introduction to bibliographic searches for literature review:

Literature searches, information retrieval and literature review: identification of relevant bibliographic sources, primary versus secondary sources of information, identification of subject keywords, synonyms, etc, role of thesauri;

Professional citing and quotation:

Citations: footnote, reference or bibliography, printed and the Internet publication. Quotations - authors versus interviewees/informants/respondents.

Management of multiple electronic files and word processing:

Outline a systematic way of storing, use and updating of multiple versions of files.

Bibliographic database:

Creation, management and updating simple database for the bibliographic data/references using Endnote software.

Computer applications in qualitative research:

Introduction to the use of Atlas.ti in analyzing qualitative data.

Presentation of research work:

The use of power point to present a summary of research work, and the academic publication process

Course Delivery

- Lectures
- In-class Practical work/Demonstrations
- Mini-field work and report writing
- Students' research presentations

Course Name: **ADVANCED GENDER RESEARCH METHODOLOGY**

Course Code: **WGS 9104**

Credit Units: **3**

Credit Hours: **45**

Brief Description

The graduate course in Advanced Gender Research Methodology is interdisciplinary and directs itself to students enrolled in doctoral programs in both the humanities and science disciplines. The course enables students to become knowledgeable in approaches/perspectives of conducting gender responsive research in the discipline of their interest. The course provides the opportunity to bring a gender perspective to bear on the theory and practice of the students' own area of specialisation and discipline, thereby, increasing the body of gender responsive research in the university.

Course Objectives

The major objective of the course is to provide knowledge on philosophical, theoretical and practical issues in conducting gender responsive research**.**

Learning Objectives

At the end of the course, students are expected to:

- To be aware of the issues of gender in research and research for development.
- Be knowledgeable in the feminist empiricist, standpoint and post-modern epistemologies to graduate students and to relate them to discussions of epistemology, philosophy of research and scientific discourses.
- Understand the theoretical and analytical skills in gender responsive research and discuss holistic research strategies and development initiatives.
- Be able to discuss how research can elicit change in practice and development involving gender concerns.
- Be able to present and take a critical look at quantitative and qualitative methods from a gender perspective.
- Appreciate the joys and dilemmas of doing research from a gender perspective, including: working in collaborative research team, designing and conducting an ethnography including observation and interview, interpreting numerical data

from secondary sources, reflecting on the process of doing research and analysis, writing a minor research report and giving oral presentations.

Course Content

Gender and feminist concepts and theorizing

Gender and feminists and their relation to other concepts such as class, race, ethnicity and sexuality will be addressed, as will be theories of gender and feminist theorizing.

Gender as an analytical category

Multiple gendered identities, construction of masculinity and femininity; male & female identity, social construction of gender differences and gender analytical tools

Feminist epistemologies

Feminist empiricist, standpoint, and postmodern positions and their places in discussions of philosophy of research, epistemology and scientific discourses.

Gender responsive research and research for development

Gender research and activism, gender and participatory research, gender and action oriented research, macro-level research, use of macro-data to assess status of human development.

Feminist theory and research perspectives

The discussion centers on research informed by feminist theory and epistemology as well as gender focused research methodologies, use of multiple research methods, and on qualitative and quantitative research methods and analysis.

Conducting gender responsive research

Interpretation of numerical data, ethnography and text/discourse analysis with case studies from health and (un)employment.

Practical work

Students will carry out a gender responsive research study in own area of specialization (suggestions for areas are: agriculture, education, family and marriage, governance/political participation health, identity, labour markets, policy analysis and poverty

Reflections on research practices and ethics of research

Ethical and moral issues in the research process, relationship between the researcher and the researched. Students' presentation of results of own research study including reflections on research process

Course Delivery
The course is largely participatory, involving lectures, tutorials and hands on practice. In addition to assigned readings and presentation of a critical analysis of these readings – the students are expected to carry out research and to relate the course work to their own experience of three different research methods (statistical analysis, ethnography and text/discourse analysis).

Reading List
Sharlene Nagy, Hesse-Biber, Patricia Leavy (Eds) (2008). Emergent Methods in Gender Research: Handbook of Emergent Methods. New York, Guiford Press. 740 pp. ISBN: 978-1-59385-147-7

Course Name: **CLINICAL EPIDEMIOLOGY**

CONTENT MISSIING

Course Name: **GENES AND GENOMES**

Course Name:	**Genes and Genomes**
Course Code:	**FOM 9109**
Credit Units:	**3**
Credit Hours:	**45**

Brief description
The crosscutting course on 'Genes and Genomes' is a 3 CU course that has been offered by Makerere University, Faculty of Medicine in collaboration with the Karolinska Institutet since 2002. The course is unique as it includes advanced graduate level topics in the molecular biology of animal, plant, microbes and viruses.

Makerere University offers a two-years M.Sc. course in molecular biology. However, the *'Genes and Genomes'*course provides a unique opportunity to PhD students who require a deeper understanding of molecular biology but cannot attend the full-time two years' masters degree course. Indeed, consistent with the broad plans of the University to support all graduate degree programs with didactic course work, the '*Genes and Genomes*' course constitutes a valued advantage for graduate students to obtain advanced knowledge in molecular biology.

Course Objectives
The aim of this crosscutting course is to give the student a deeper knowledge and understanding both in theory and practice of the process behind DNA, RNA and protein regulation and expression in different microbes, mammals, insects and plants with a focus on infectious pathogens. Practical areas covered are techniques such as PCR diagnostics and 2D-gel-electrophoresis.

Learning outcomes:
After the course, the students shall

- Have a basic understanding of the process behind DNA, RNA and protein regulation and expression
- Be conversant with basic molecular biology terminology
- Be familiar with the common laboratory techniques used in molecular biology

Topic (Lecturer/professor)

Epidemiology of microbial infections; *Giardia lamblia*, old and beautiful; Use of 2D-electrophoresis,Genomics of the banana & other tropical plants; PCR use in both research and diagnostics; Bio-informatics (use of NCBI home page and others) and sample preparation; The genomes of primates - Genomics of the elephant & other tropical mammals; Genomes in *Clostridium* and *Mycobacteria Toxoplasma gondii*, the protozoan parasitic model, knock outs and transfection methods and examples; *Plasmodium falciparum*, the parasite *Plasmodium falciparum*, drug resistance, Malaria and EBV; Zoonotic parasites, Anti-parasitic vaccines, Western blot analysis

Student seminar (20 minutes each)

Course delivery
The course includes both lectures and practicals, group discussions, and seminar series. The participants are required to present their ongoing research projects.

Budget

Fees

Faculties/units where the PhD Students are registered shall remit the course fee equivalent to 90% of the unit cost (as per the university unit cost for courses for nationals and foreign students, respectively) to the Directorate of Research and Graduate Training (the coordinating unit). The DRGT would then remit funds to the host unit to meet the running cost. The host unit shall be responsible for remunerating those who teach on such a course.