JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF HEALTH SCIENCES

CURRICULUM

FOR

MASTER OF SCIENCE IN EPIDEMIOLOGY AND BIOSTATISTICS

P.O. BOX 210-40601
BONDO, KENYA
TEL: +254-572501804

www.jooust.ac.ke

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1.0. GENERAL INFORMATION

1.1. Vision and Mission of the University

(a) Vision

A beacon of excellence and global leader in University education for sustainable Development.

(b) Mission

To provide quality University Education that nurtures creativity and innovation through integrated training, research and community outreach for the advancement of humanity

(c) Core Values

Fairness, Professionalism, Integrity, Meritocracy, Equity, Transparency and Accountability

1.2. Philosophy of the University

The University is anchored on the philosophy of holistic approach to the service of humanity and other related areas of scholarship mediated through wisdom, science and technology.

1.3 University Admission Requirements

1.3.1. Admission Requirements for the Programme

(a) JOOUST criteria for a Master Degree Programme shall apply:

(i) Holders of at least Upper Second Class Honours Bachelor's degree in relevant field of study from JOOUST or equivalent qualification from other recognized Universities.

(ii) Holders of a Lower Second Class Honours degree in Public Health and other related

fields or postgraduate Diploma in Public Health related fields from any recognized universities and evidence of two years' of relevant work experience.

(iii) In addition to the above, applicants must meet the specific requirements of the Masters Programme as provided by the JOOUST University Senate.

(b) Other Admission Requirements

Applicants must also in addition meet other specific entry requirements as may be specified by the respective Department offering the programme from time to time.

(c) Application for Admission to the University

(i) Enquiries for all Master's Degree programmes should be made to the Registrar (Academic Affairs), Jaramogi Oginga Odinga University of Science and Technology, P. O. Box 210-40601, Bondo, Kenya.

(ii) The closing date for receiving applications for the Master's Degree programmes

shall be as determined by the Senate from time to time.

The application forms may be obtained from the JOOUST website:**(http://www.jooust.ac.ke/).**

1.4. Academic Resources

1.4.1 Facilities and Equipment

(a) Lecture Rooms
The University has adequate lecture rooms, lecture theatres and conference halls in the Main Campus and all its Campuses.

(b) Library
The University libraries have various sources of information, research, reading and instructional materials**.**

(i) Main Campus
The Main campus library is a three-floor building accommodating 300,000 volumes. The library is equipped with books, journals (both Hardcover, paperback, and online), for various programmes offered at the University and has on-going plans to strengthen the teaching and learning resources by providing more books, *e-books, journals, e-journals, CDs and DVDs*, as well as linkages with other institutions for access to other libraries worldwide. The university has acquired integrated library service software which enhances access to library resources.

(ii) Campuses
At each Campus, library resources are purchased and stocked on the basis of the programmes that are offered with recommendations and support from the Schools that houses the programme at the Main Campus.

c) Information and Communication Technology (ICT)
The University has a well established ICT Department and support sections that provide IT services to the Main Campus and other Campuses for teaching and learning. The University website (www.jooust.ac.ke) is operational. The local Area Network (LAN) link enables easy sharing of information and data across the University. In addition, the University has provisions for multi-media facilities for teaching and learning.

d) **Laboratories**

The University has a Science Complex Building at the Main Campus that houses 26 laboratories for pure and applied sciences.

e) Tuition practicum sites/Fields:

The University has over a 50 Acres ofland that support Teaching and Research in field of Public Health.

f) Student Welfare Services

(i) **Counselling Services**

Counselling services with qualified counsellors are available at the University Campuses and offer services to both students and staff.

(ii) **Sports Facilities**

Sports facilities are provided within or in the neighbourhood of the University Campuses for a variety of sports. In the Main Campus, there is a sports field for soccer, volley ball, rugby and athletics' track among other outdoor sports.

(iii) **Health Services**

Well-equipped Medical Centres are available and offers its services to students and staff, and to a limited extend to general public. In addition, the University operates a Medical Schemes for both students and staff.

(iv) **Accommodation and Catering**

Accommodation and catering facilities are available in the Main Campus. In Satellite Campuses, students arrange for their own accommodation.

(v) **Student Centre**

Modern Student Centre is available at the Main Campus while in satellite Campuses,

efforts are being made to provide such a facility for the students.

(vi) **Chaplaincy**

The University provides a conducive environment for students spiritual growth and worship.

1.4.2. Academic Staff

The University has established a pool of qualified staff both for full, part-time and School Based Mode of teaching with wide experience and expertise in various disciplines.

(a)Teaching Staff

The University operates a pool of shared staff with Satellite Campuses. In main campus, where most of the programmes are delivered through full time mode, the nearest centres draw staff for their evening and weekend classes at JOOUST Main Campus. This is beefed up with part-time lecturers depending on need and time table daily loading. In other campuses a core full time staff is retained per programme and supported by part time lecturers.

(b)Technical/Support Staff

The University has employed qualified laboratory technicians and support staff to support the programmes.The University has adequate academic staff in the area of Public Health. There are several support staff for this particular program.

1.4.3. Programmes offered by the University

A. School of Agricultural and Food Sciences

1. Doctor of Philosophy in Agricultural related areas
2. Master of Science in Agricultural Extension
3. Master of Science in Plant Breeding
4. Master of Science in Agribusiness Management
5. Bachelor of Science in Agribusiness Management
6. Bachelor of Science in Agricultural Education and Extension
7. Bachelor of Science in Horticulture
8. Bachelor of Science in Animal Science
9. Bachelor of Science in Food Security
10. Bachelor of Science in Soil Science
11. Bachelor of Science in Agricultural Biotechnology

B. School of Biological and Physical Sciences

1. Doctor of Philosophy in Plant Ecology
2. Doctor of Philosophy in Plant Taxonomy
3. Doctor of Philosophy in Parasitology
4. Doctor of Philosophy in Microbiology

5. Doctor of Philosophy in Agro-forestry Chemistry

6. Master of Science in Plant Taxonomy

7. Master of Science in Microbiology

8. Master of Science in Parasitology

9. Master of Science in Ecology

10. Master of Science in Chemistry

11. Bachelor of Science in Biology

12. Bachelor of Science in Chemistry

13. Bachelor of Science in Physics

C. School of Business and Economics

1. Doctor of Philosophy in Business Administration

2. Master of Business Administration

3. Masters in Logistics and Supply Chain Management

4. Executive Masters of Business Administration

5. Bachelor of Business Administration with IT

6. Bachelor of Logistics and Supply Chain Management

7. Bachelor of International Tourism Management

D. School of Education

1. Doctor of Philosophy in Guidance and Counselling

2. Doctor of Philosophy in Educational Psychology

3. Doctor of Philosophy in Pedagogy

4. Doctor of Philosophy in Early Childhood Development and Education

5. Doctor of Philosophy in Special Needs Education

6. Doctor of Philosophy in Educational Administration

7. Doctor of Philosophy in Guidance and Counselling

8. Doctor of Philosophy in Curriculum Studies

9. Master of Education in Curriculum Studies

10. Master of Education in Planning and Economics of Education

11. Master of Education in Guidance and Counselling

12. Master of Arts in Guidance and Counselling

13. Master of Education in Education Psychology

14. Master of Education in Administration and Management

15. Master of Education in Curriculum Studies

16. Master of Education in Pedagogy

17. Master of Education in Educational Technology

18. Master of Education in Special Needs Education

19. Master of Education in Early Childhood Development & Education

20. Bachelor of Education (Arts) with IT

21. Bachelor of Education (Science) with IT

22. Bachelor of Education (Special Needs) with IT

23. Bachelor of Education (Early Childhood Development)

E. School of Engineering and Technology
1. Bachelor of Science in Renewable Energy Technology and Management

2. Bachelor of Science in Construction Management

3. Bachelor of Science in Technology Management

F. School of Health Sciences
1. Doctor of Philosophy in Public Health

2. Doctor of Philosophy in Community Health and Development

3. Doctor of Philosophy in Epidemiology and Biostatics

4. Doctor of Philosophy in Epidemiology

5. Master in Public Health (MPH)

6. Master of Science in Epidemiology and Biostatistics

7. Master of Science in Biomedical Sciences

8. Bachelor of Science in Community Health and Development

9. Bachelor of Science in Environmental Health

G. School of Humanities and Social Sciences
1. Doctor of Philosophy in Linguistics

2. Doctor of Philosophy in Geography

3. Doctor of Philosophy in History

4. Doctor of Philosophy in Religion

5. Doctor of Philosophy in Kiswahili

6. Doctor of Philosophy in Literature

7. Master of Arts in Linguistics

8. Master of Arts in Geography

9. Master of Arts in History

10. Master of Arts in Religion

11. Master of Arts in Literature

12. Master of Arts in Kiswahili

13. Bachelor of Arts in Religious Studies

14. Bachelor of Arts in Development and Policy Studies

15. Bachelor of Arts in Geography and National Resource Management

H. School of Informatics and Innovative Systems

1. Doctor of Philosophy in in Business Information Systems

2. Doctor of Philosophy in Information Security and Audit

3. Doctor of Philosophy in Computer Science

4. Doctor of Philosophy in Health Informatics

5. Master of Science in Information Systems

6. Master of Science in Information Technology Management

7. Master of Science in Information Technology Security and Audit

8. Master of Science in Health Informatics

9. Bachelor of Science in Software Engineering

10. Bachelor of Science in Computer Science

11. Bachelor of Science in Computer Security and Forensics

12. Bachelor of Science (Information Communication Technology)

13. Bachelor of Science (Business Information Systems)

14. Bachelor of Science in Computing Science and Technology

15. Bachelor of Science in Library and Knowledge Management

16. Bachelor of Science in Bioinformatics

School of Mathematics and Actuarial Science

1. Doctor of Philosophy in Pure Mathematics

2. Doctor of Philosophy in Applied Mathematics

3. Doctor of Philosophy in Applied Statistics

4. Doctor of Philosophy in Actuarial Science

5. Master of Science in Applied Statistics

6. Master of Science in Actuarial Science

7. Master of Science in Pure Mathematics

8. Master of Science in Applied Mathematics

9. Master of Science in Financial Mathematics

10. Bachelor of Science in Industrial Mathematics

11. Bachelor of Science in Actuarial Science

12. Bachelor of Science in Mathematics

13. Bachelor of Science in Applied Statistics

J. School of Spatial Planning and Natural Resource Management
1. Doctor of Philosophy in Planning

2. Master of Arts in Project Planning and Management

3. Master of Science in Urban Environment Planning and Management

4. Master of Arts in Spatial Planning

5. Bachelor of Science in Water Resources and Environment Management

6. Bachelor of Arts in Spatial Planning

1.5.3 **Definitions**
  a) **Lecture/Instructional hours**
Three hours per week for fourteen weeks under which the students meet with the course instructor

  b) **Contact hours**
One hour lecture per week per semester or two hour of tutorials/seminars per week per semester which the instructor meets with the students
  c) **Course 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.
1.5.4 Academic organization of the programmes reflecting academic quarters/trimesters/semesters.
  (a) The Master programme will normally take two years undertaken by Coursework, Examination and Thesis/Project. Students shall be required to take three Semesters of Course work comprising five units in semester one and four units in semester two. Students who wish to take research project shall be required to take additional Elective courses during third semester. In addition, the students will undertake Research proposal writing and Thesis writing during second year of study.
  (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 54 Hours. For this purpose, one 1-hour lecture is equivalent to 2-hours tutorial or 3-hours practical or any combination as may be approved by the Board of the School of Health Sciences

2.0 **THE CURRICULUM**

2.1 Title of the Proposed Programme
Master of Science in Epidemiology and Biostatistics

2.2 Philosophy of the Programme
This programme is designed for advancement and maintenance of a world-class leadership role in the quest for knowledge by way of quality research, capacity building and innovative approaches in order to contribute to Statistics and their applications in solving real life problems.

2.3 Rationale of the Programme
To produce graduates who are independent researchers with highest level thinking capable of making deductive reasoning and conclusions from acceptable facts as well as possessing analytical and computational skills necessary for the world of technology and related fields.
2.4 Goal of the Programme
The programme will develop human and infrastructural capacity for internationally recognized graduates in Epidemiology and Biostatistics.

2.5 Expected Learning Outcomes of the programme
    2.5.1   The expected learning outcomes of the programme
On successful completion of the programme the students should be able to:
        Solve any real-life problem that requires both analytical and computational skills.
        Apply deductive reasoning that leads to conclusion in Epidemiology and Biostatistics relationships from acceptable facts.
        Apply biostatistical knowledge to offer solutions to statistically related problems in government institutions, industries and research centres.
        Apply epidemiological knowledge to offer solutions to epidemiologically related problems in government institutions, and health research centres.
2.6 Mode of Delivery of the Programme
The programme will be delivered in English at Jaramogi Oginga Odinga University of Science and Technology. Course units will be conducted in the teaching and laboratory facilities through lectures, seminars and group discussions at the main campus. Case studies will also be undertaken by students as well as guest lectures for selected course units. Brainstorming by students will be encouraged to facilitate intellectual ability to generate ideas.

2.7 Academic Regulations for the Proposed Programme
Regulations on Credit Transfer in a programme
This does not apply according to university policy
Course Requirements
     a) Student class attendance, attachment/practicum/internship, community service.
  i.   The students will be required to attend at least two thirds of lectures and practicals in all the recommended course units to qualify to sit for the final University examinations.
 ii.   Students will be required to undertake field practicum as planned by the course lecturer.

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    b) Obligations of the lecturer which should entail aspects of course delivery and facilitation.

    i.   The Lecturer will develop the course outline to be used in delivery of the course.

    ii.   The Lecture will deliver the course according the prescribed mode

    iii.   The Lecture will evaluate the students.

2.7.3 Student Assessment Policy/Criteria

The University policy on teaching and Examinations management shall apply

a) Continuous Assessment Tests (CATs);

The ordinary examination shall be graded on the basis of percentage marks consisting of 40% as continuous assessment tests (CATs).

b) End-Semester;

The student will undertake university examinations

Examinations shall be held at the end of the semester in which the courses are taught. The ordinary examinations shall be graded on the basis of percentage marks consisting of forty per cent (40%) as continuous assessment and and 60% as final examinations. Continuous assessment on research shall be reflected in the candidates' progress reports submitted by the supervisors.

c) Practicals

Where practicals are offered, students will be assessed as part of the continuous assessment Tests, and will contribute 10% of the totals CAT marks.

d) Other Assessments.

Where case studies are undertaken, students will be expected to submit a report which will be graded as part of the Continuous assessment Test. This will contribute 10% of the total CAT marks.

Grading System

The grading shall be done as follows:

Grade	Score
75- 100%	A (Excellent)
65 – 74%	B (Credit)
50 – 64%	C (Pass)

Designations related to examinations shall be as follows:

P: Pass

I: Incomplete

K: Course in Progress

CT: Credit Transfer

Au: Audit

The passing grade shall be **C = 50%** in each course taken and examined.

(b) A candidate who fails a semester examination shall re-sit the same when next offered. If the candidate fails the re-sit examination, he/she shall be discontinued.

(c) Marking and grading of the examinations are done by the course instructor who also

enters the grade in the Instructors Grade Sheet. The results are then moderated by the Departmental Examination Board (DEB).

(d) The scripts are then forwarded to the external examiner who reviews them and returns them to the Dean of the School.

2.7.5 Examination Regulations

(a) Written Examinations

(i) Examinations for the Master Degree shall be conducted under the authority of the University Senate as specified under various rules and regulations.

(ii) Examinations shall consist of:

✓ Continuous assessment based on assignments, laboratory practicals and such other tests as the regulations of the department may prescribe, which shall constitute forty per cent (40%) of the total marks for each course.

✓ The final examinations shall constitute sixty per cent (60%) of the total marks for each course.

(iii) Courses which are purely of a practical nature and/or seminars may be assessed entirely by continuous assessment.

(iv) Marks obtained in examinations shall be converted into letter grades as follows:

75 % and above	A (Distinction)
65-74%	B (Credit)
50-64%	C (Pass)
Below 50 %	F (Fail)

(v) Re-sit Examinations

✓ A candidate who fails in twenty five per cent (25%) or less of the total courses taken in an academic year shall be required to re-sit examination once only.

✓ Candidates shall be awarded grade "C" (50%) in all courses passed in re-sit examination.

(vi) Discontinuation

A student shall be discontinued for:

✓ Failing more than twenty five percent (25%) of the total courses taken in an academic year.

✓ Failing a re-sit examination

✓ Committing serious examination malpractice as defined under Section 6.1 of these regulations

✓ Failing to register for and attend scheduled lectures for two (2) weeks or longer without the consent of the University Senate.

(vii) Special Examinations

a. Special examinations will be offered to candidates who, due to circumstances acceptable to the University Senate, were unable to sit for the ordinary examinations.

b. Special examinations shall be graded on the same guidelines as those for the ordinary examinations

c. No student shall be permitted to proceed to the next year of study without having satisfied all examination requirements.

d. Examination results shall be processed and approved by the School Board of Examiners and submitted to the Board of Postgraduate Studies for ratification before being presented to University Senate by the relevant School/ Dean.

(b) Thesis
   (i) A candidate will proceed to conduct thesis research upon successful
        completion of the coursework.
   (ii) A candidate will be required to identify a research area and write a thesis on
        original work.
   (iii) A candidate shall prepare and write the thesis according to regulations
        governing postgraduate studies.
   (iv) A candidate must defend the thesis according to supervision and examination
        guidelines as stipulated in the Board of Postgraduate Studies Rules and
        Regulations.

(c) Supervision
   (i) A candidate shall choose a supervisor(s) in consultation with the Dean of the
        School or coordinator of postgraduate studies in the school or the Dean and the
        School of Postgraduate Studies Committee. The candidate shall have a minimum
        of two supervisors – one of whom shall be the major supervisor.
   (ii) One of the supervisors may be from outside the School or University. However,
        one of the supervisors must be a member of staff of the School of Health
        Sciences.
   (iii) The appointment of the supervisors shall be done within six months from the
        time of   registration.

   (d) Consultation and Progress on Thesis/Project
   (i)   A candidate is required to consult with supervisors regularly. The major
         supervisor shall submit to the Board of Postgraduate Studies and the School, a
         progress report on the candidate each semester.
   (ii) A candidate is required to exhibit steady progress in the coursework and
         thesis/project work. If the progress is not satisfactory, the Board of Postgraduate
         Studies through   recommendations by the School will warn the student in
         writing. If a candidate does not show improvement within one semester after a
         warning, he/she shall be recommended to Senate for deregistration.
   (iii) If a candidate does not receive adequate supervision, the candidate shall write
         to the Board of Post Graduate Studies explaining inadequacies in supervision,
         in which case the Board may change the supervisor(s) upon recommendation
         by the department.

(e) Defense of Thesis/Project Report
   (i) The candidate after successful completion of coursework will be expected to
        write a thesis.
   (ii) The final examination of the thesis will be administered as an oral defense.
        Successful defense qualifies the candidate for graduation.
   (iii) The defense will take place only after the candidate has satisfied all other
        requirements of the programme.
   (iv) The Board of Postgraduate Committee shall constitute a Board of Examiners
        for the thesis. The Board of Examiners shall include:
        1. The Dean of the School-Chair
        2. The Director or representative-Secretary, Board of Postgraduate Studies
        3. The Dean of the School or representative

4. The supervisor(s) as internal supervisors
5. The External Examiner or his/her written report
6. A Senate representative
7. Administrative Officer, Board of Postgraduate Studies, Secretary
8. Other members may attend to listen to the defense but cannot vote on any matter relating to the defense.

(v) The outcome of the defense shall be communicated to the candidate immediately.

(vi) All members of the Board of Examiners shall sign a certificate to indicate whether the candidate has passed, deferred or failed. If a candidate is requested to make some corrections, a certificate of correction shall be issued.

(vii) The final grade for the thesis shall be graded on a PASS or FAIL basis.

(viii) A candidate who fails in the thesis shall be allowed to resubmit the thesis within a period of not more than three months, failing which the candidate will be discontinued.

(ix) On passing the final examination, the candidate will be required to submit six (6) copies of the final thesis and then proceed with preparation for graduation.

(f) Programme Evaluation and Change

The Master degree in Epidemiology and Biostatistics curriculum is dynamic and requires continuous monitoring and evaluation to ensure that it remains relevant, current, competitive and responsive to the needs of the individual students, country and educational sector.

(i) The curriculum shall be evaluated every three years or when need arises.
(ii) The changes made shall be presented in the School Board meetings.
(iii) Course and teaching evaluation shall be conducted at least once a year.
(iv) Evaluation of teaching staff will be conducted through appraisals from students and Senate. The evaluation of lecturers will be conducted in line with the University Quality Assurance guidelines.
(v) Evaluation of students will be conducted through students' examinations. For quality assurance students shall evaluate their lecturers based on:

1. Degree of preparedness.
2. Presentation of course content (skills) communication.
3. Punctuality in starting and ending classes.
4. Promptness in returning marked assignments.

2.7.6 Moderation of Examinations

The examinations shall be set by internal examiners and moderated by external examiners. Marking of examinations shall also be done by internal examiners and moderated by external examiners before the final moderated result is taken to Senate for approval. After the results are approved by Senate, they will become the official examination results of the university.

2.7.7 Graduation Requirements

a) A candidate shall be conferred the Degree of Master of Science in Epidemiology and Biostatistics if the student has successfully completed the 11 course units as shown in the course summary. 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 54 Hours. For this purpose, one 1-hour lecture is equivalent to 2-hours tutorial or 3-hours practical or any combination as may be approved by the Board of the School of Health Sciences.

In addition, a candidate shall be conferred the Degree of Master of Science in Epidemiology and Biostatistics if he/she:

(a)   Has been registered for the degree as a student of the University for a period of not less than twenty-four (24) months and after satisfying the requirements for the award concerned, or after admission to the status of that degree, or after admission as a research student;

(b)   Has worked in consultation with a supervisor or supervisors as the University Senate may direct; and

(c)   Has submitted a thesis which makes a distinct contribution to the knowledge and understanding of the subject in the subject area and affords evidence of the exercise of independent critical thinking.

In addition the student must have

(d) Publish at least an articles in a referred journal.

(e) Successful defense of the thesis.

2.7.8   Classification of Degrees
The degree is not classified

2.7.9   Description of Thesis/Project

a) Institutional definition of thesis/project
An essay or dissertation involving personal research, written by a candidate for a college degree

b) Rationale of the thesis/project
Thesis will demonstrate scholarship through generation and analysis of data for creation of new knowledge in relevant areas and solve societal challenges. Capacity of the student to consolidate Thesis is an output of students research and will be demonstrated though logical presentation of ideas.

c) Facets of the thesis/Project
The thesis will normally consist of the following key sections: Title page, abstract, introduction, literature review, materials and methods, results, conclusions, recommendations and references.

d) Regulations of the thesis
(i)   A candidate will proceed to conduct thesis research upon successful completion of the coursework.

(ii)   A candidate will be required to identify a research area and write a thesis on original work.

(iii)   A candidate shall prepare and write the thesis according to regulations governing postgraduate studies.

(iv) A candidate must defend the thesis according to supervision and examination guidelines as stipulated in the Board of Postgraduate Studies Rules and Regulations.

2.8 Course Evaluation
Course evaluation should include the procedures of course evaluation and the evaluation of all aspects of the course including;
Course content
The course content consists of the scope, theories and main topics including emerging issues to be covered in the course unit.
Instructional process
Student's registration for the units, class attendance, the course outline, delivery of the course (Lectures, practicals, case studies, seminars and guest lectures), CATs, setting and marking of examination and internal and external moderation of examinations.
Infrastructure and equipment
Lecture rooms, farms, LCD,
Instructional and reference materials
Core text books and other books, reference books, e resources and journals
Assessments
ISO students' evaluation form in which the students are able to evaluate the course and the lecturer at the end of the semester. This is conducted by the office of Quality assurance and enhancement. Internal and external moderation of examinations and internal and external moderation of results is conducted to ensure quality.

2.9 Management and Administration of the Programme
    (i) Master of Science in Epidemiology and Biostatistics programme is designed to be offered at the main campus of JOOUST by the Department of Public and Community Health & Development

    (ii) School of Health Sciences (SHS) will supervise the delivery of the programme.

    (iii) Lecturers from the School of Health Sciences as well as from other schools in JOOUST will provide lectures and monitor class tutorials. Where such approach is inadequate, qualified part time lecturers will be recruited to support the programme. In addition, lecturers from collaborating universities and research institutions, will be engaged in the Programme as visiting or exchange staff.

    (iv) The program shall be implemented at the department level under the supervision of the head of the department.

    (v) During the implementation of the program, the JOOUST university policy on quality, CUE and ISO standards shall be observed.

LIST OF COURSES

YEAR ONE SEMESTER ONE

COURSE CODE	COURSE TITLE	Contact hours			Weight (Unit)
		Lecture	Practical	Total	
HMP 5111	Principles of Epidemiology	28	14	42	1C
HMP 5114	Biostatistics	28	14	42	1C
HMP 5115	Research Methods	28	14	42	1C
HES 5111	Bioethics	28	14	42	1C
HES 5112	Demography And Population Health	28	14	42	1C
HES 5113	Computational Statistics and Data Analysis	28	14	42	1C
	Total	**140**	**70**	**210**	**5**

YEAR ONE   SEMESTER TWO (STUDENTS TO TAKE ALL COURSES)

COURSE CODE	COURSE TITLE	Contact hours			Weight (Unit)
		Lecture	Practical	Total	
HES 5121	Epidemiologic Methods	28	14	42	1C
HES 5122	Biostatistics for Epidemiologic Methods	28	14	42	1C
HES 5123	Advanced Biostatistics	28	14	42	1C
HES 5124	Epidemiological Study Designs	28	14	42	1C
HES 5127	Epidemiology and Control of Non-Communicable Diseases	28	14	42	1C
HES 5128	Epidemiology and Control of Communicable Diseases	28	14	42	1C
	Total	**168**	**84**	**252**	

YEAR TWO SEMESTER ONE AND TWO

Course Code	Course Title	Contact Hours			Weight (Units)
		Lecture	Practical	Total	
HES 5212	Thesis	0	960	960	1R

COURSE DESCRIPTION

YEAR ONE SEMESTER ONE

HMP 5112: Principles of Epidemiology

Course Purpose

The course shall provide learners with a background ………..

Expected Learning Outcomes

By the end of the unit, the learner should be able to:

1. Understand, compute and interpret measures of disease occurrence and association
2. Understand the concepts of timing and directionality in the design of epidemiological studies
3. Describe the key design features, strengths and limitations of the cross sectional, case control, cohort, clinical trial and community intervention trials.
4. Compute and interpret basic measures of disease occurrence and association from the commonly used epidemiological studies
5. Understand alternative explanations to causality, notably, the role of confounding and bias in the interpretation of an exposure-disease association
6. Critically appraise a paper on an epidemiological study and recognize flaws in the study design

Course content

Definition, the scope, variations in severity of disease, models of disease causation. Epidemiological aspects of infectious disease**:** host-parasite relations, transmission mechanisms, Definitions: outbreaks, epidemic, incubation period, attack rate. Descriptive epidemiology**:** Person - age, sex, ethnicity, social class, occupation; place, time measures of morbidity and mortality; incidence and prevalence rates. Classification of causes of death and limitations. Disease determinants; host, agent and environmental factors; natural history of disease; levels of disease prevention. Screening in the detection of disease and maintenance of health: criteria for evaluation of screening and screening tests; principles underlying screening programmers in Kenya and other developing countries. Vaccination: clinical and immunological aspects, schedules, adverse effects, vaccine efficacy; Sources of data on health status: census, vital statistics, morbidity data, health record linkages, surveys (cross-sectional); Limitations of routine data. Population and health: Population trends - World, developing countries, Kenya; demographic and epidemiologic transition. Age-specific health care needs, dose-response relationship. Screening, Randomized controlled trials. Systematic reviews. Outbreak investigation. Measures of association. Analysis and interpretation of epidemiological data

Teaching Methodology

Lectures, discussions, presentations, e-learning and case studies

Teaching Equipment: LCD projector, Smart Board, Text books, Journals.(Replicate)

Course Evaluation

End of semester examination   60%
Continuous assessment test   40%
Pass mark   50%

Core Course Textbook
1. William Oleckno: Epidemiology: concepts and methods
2. Willaim Oleckno: Epidemiology: Principles and Applications
3. Anne Aschengrau and George Seage: Essentials of Epidemiology in Public Health
4. Robert Friis: Epidemiology for Public Health Practice
5. Rothman Kenneth: Epidemiology; An Introduction
6. Leon Gordis: Epidemiology.

HMP 5114: Biostatistics

Course Purpose

The course shall provide learners with a background ………..

Expected Learning Outcomes

By the end of the unit, the learner should be able to:

1. Understand the role of Biostatics in public health and epidemiology
2. Differentiate between numeric and categorical variables and best approach in summarizing such variables
3. Understand the concept of probability and its application
4. Apply knowledge learnt in this course to analyze/describe numerical and categorical variables

Course content

Concepts of probability; normal distribution, binomial distribution, poisson distribution; Bayes' theorem. Types of data. Summarizing and presenting data. Sample size determination. Data analysis: confidence limits and confidence intervals, hypothesis testing; statistical tests; z-score, student t-test, chi-square test, odds-ratio and relative risk. Quantitative and qualitative techniques for describing, assessing and displaying data including patterns of disease morbidity, mortality and disease control measures. Quantitative treatment of biological data. Statistical analysis: variability, probability, parametric and non-parametric test of significance; Continuous vs. categorical variables, Descriptive statistics. Statistical tests of association and trends: Categorical vs. non-categorical variables. Relative risks and odds ratios; Data transformation, residuals, outliers, leverage, Influence and cook' distance, F-test, dummy variables, Principles of

demographic surveys including morbidity and mortality statistics and structure of human populations; Computer statistical packages. Clinical measurements, biometrics and survival data Application of biostatistics in the evaluation of health services and determination of the impacts of health policy. cohort studies, case-control studies: matching in case control studies, nested case control studies, case cohort studies. Clinical trials: advanced topics in the design of clinical trials. Systematic reviews

Teaching Methodology

Lectures, discussions, presentations, e-learning and case studies

Teaching Equipment: LCD projector, Smart Board, Text books, Journals.(Replicate)

Course Evaluation

End of semester examination	60%
Continuous assessment test	40%
Pass mark	50%

Core Course Textbook

1. Kirkwood, B.R. & Sterne J.A.C. (2003). Essential Medical Statistics. Blackwell Science
2. Altman, D.G. (1992). Practical Statistics for Medical Research. Chapman and Hall
3. Berry, G. & Armitage, P. (1994). Statistical Methods in Medical Research. Blackwell Science
4. Selvin, S. (2004). Statistical Analysis of Epidemiologic Data. Oxford University Press

HMP 5115: Research Methods
Course Purpose

The course shall provide learners with a background ………..

Expected Learning Outcomes

By the end of the unit, the learner should be able to:

1. Apply most appropriate study design based on the research topic at hand
2. Appreciate the impotence of sampling and when to use appropriate sampling technique
3. Understand the ethics associated with research
4. Apply knowledge learnt in this course to come up with a research proposal and write a report based on the research undertaken by the student

Course content

Research: definition, nature of use and application. Scientific enquiry; concept, nature of, the process. Types of research: participatory, qualitative, quantitative, operations, evaluative. Types of research designs: Descriptive; cross sectional. Analytical; prospective cohort studies, retrospective studies, case-control. Experimental – randomized clinical trials, community trials/field trials. Quasi - experimental. Bias; confounding. Qualitative-focus groups, key informants, case studies, interviews, observation. Quantitative –

observational, experimental, case studies. Health Services Research: Techniques for monitoring and evaluation of performance; stakeholder analysis; health systems research; operationalization of research. Sampling Methods. Ethics in Health Research. Proposal development. Report writing. Dissemination of research findings.

Teaching Methodology

Lectures, discussions, presentations, e-learning and case studies

Teaching Equipment: LCD projector, Smart Board, Text books, Journals.(Replicate)

Course Evaluation

End of semester examination	60%
Continuous assessment test	40%
Pass mark	50%

Core Course Textbook
1. Dawson, C. (2002). *Practical Research Methods.* New Delhi, UBS Publishers' Distributors
2. Kothari, C.R. (1985). *Research Methodology- Methods and Techniques;* New Delhi, Wiley Eastern Limited.
3. Kumar, R. (2005). *Research Methodology-A Step-by-Step Guide for Beginners* (2nd ed.); Singapore, Pearson Education.
4. John W. Cresswell (2009): Research Design
5. Dahlia K. Remler and Gregg G. Van Ryzin (2011). Research methods in Practice

HES 5111: Bioethics
Course Purpose

The course shall provide learners with a background on the principles and tenets ethical practice of research involving humans.

Expected Learning Outcomes

By the end of the unit, the learner should be able to:

1. Appreciate the role of ethic in research

2. Design study protocols that meet ethical requirements of given study settings

3. Critique and identify ethical issues in study protocols provided

   Course content

Definition of ethics and bioethics. Human dignity and human rights. Benefit and harm. Autonomy and individual responsibility Consent. Persons without the capacity to consent. Respect for human vulnerability and personal integrity. Privacy and confidentiality. Equality, justice and equity. Non-discrimination and non-stigmatization. Respect for cultural diversity and pluralism. Solidarity and cooperation. Social responsibility and

health. Sharing of benefits. Protecting future generations. Protection of the environment, the biosphere and biodiversity

Teaching Methodology

Lectures, discussions, presentations, e-learning and case studies

Teaching Equipment: LCD projector, Smart Board, Text books, Journals.(Replicate)

Course Evaluation

End of semester examination	60%
Continuous assessment test	40%
Pass mark	50%

Core Course Textbook

1. Dawson, C. (2002). *Practical Research Methods.* New Delhi, UBS Publishers' Distributors
2. Kothari, C.R. (1985). *Research Methodology- Methods and Techniques;* New Delhi,
3. Wiley Eastern Limited.
4. Kumar, R. (2005). *Research Methodology-A Step-by-Step Guide for Beginners* (2nd ed.); Singapore, Pearson Education.

5. John W. Cresswell (2009): Research Design
6. Dahlia K. Remler and Gregg G. Van Ryzin (2011). Research methods in Practice

HES 5112: Demography and Population Health
Course Purpose

The course shall provide learners with a background ………..

Expected Learning Outcomes

By the end of the unit, the learner should be able to:

1. demonstrate an understanding of some key techniques used in demographic analysis for the measurement of fertility and mortality;
2. identify the key steps in interpreting basic demographic data; and
3. explain the usefulness of a demographic approach for the study of population and health issues.
4. demonstrate a wider understanding of techniques used in demographic analysis for the measurement of fertility, mortality, migration, and population structure and change;
5. appreciate how different types of demographic information may be collected and used.

Course content

Techniques used in demographic analysis for the measurement of fertility, mortality, and population structure and change, including migration in human populations; steps in interpreting basic demographic data; usefulness of a demographic approach for the study of population and health issues; how different types of demographic information may be collected. Introduction to global population health, including causes of morbidity and mortality, fertility, surveillance systems and vital statistics, and trends over time. Overviews of epidemiology of cancer, cardiovascular, infectious, environmental, psychiatric and nutritional diseases. Fundamentals and methods for studying burden of disease in populations, and how these differ across time, space, groups, demographic transition

Teaching Methodology

Lectures, discussions, presentations, e-learning and case studies

Teaching Equipment: LCD projector, Smart Board, Text books, Journals.(Replicate)

Course Evaluation

End of semester examination   60%
Continuous assessment test   40%
Pass mark   50%

Core Course Textbook
1. William Oleckno: Epidemiology: concepts and methods
2. Willaim Oleckno: Epidemiology: Principles and Applications
3. Anne Aschengrau and George Seage: Essentials of Epidemiology in Public Health
4. Robert Friis: Epidemiology for Public Health Practice
5. Rothman Kenneth: Epidemiology; An Introduction
6. Leon Gordis: Epidemiology.

HES 5113: Computational Statistics and Data Analysis
Course Purpose

The course shall provide learners with a background ………..

Expected Learning Outcomes

By the end of the unit, the learner should be able to:

1. apply the various statistical softwares for data analysis

2. identify the best software for particular data sets in epidemiology

3. create and manage various data analysis outputs from different statistical analysis softwares

Course content

Introduction to R (why use R, obtaining R), R-interface (R-studio, getting help, the work space, input/output, packages, graphics user interfaces, customizing start-up, publication quality output, batch processing, re-using results); data input, importing data, key board input, exporting data, viewing data, variable labels, value labels, missing data, date values; data management, creating new variables, operators, built-in functions, control structures, user-defined-functions, sorting data, merging data, aggregating data, reshaping data, subsetting data, data type conversion; Graphs, creating a graph, histogram and density plots, dot plots, bar plots, line plots, boxplots, scatter plots; graphical parameters, axes and texts, combing plots, lattice graphs, ggplot2 plots, probability plots, mosaic plots correlograms, interactive graphs; statistical data analysis with R, descriptive statistics, frequencies and cross tabulation, correlation analysis, t-tests, non-parametric statistics, simple and multiple regression analysis with least squares method, generalized linear models (glm), regression diagnostics, Analysis of variance (ANOVA), Analysis of covariance (ANCOVA), multivariate analysis of variance (MANOVA), resampling statistics, power and sample size calculation and analysis; Advanced statistics, discriminant analysis, time series, correspondence analysis multidimensional scaling, cluster analysis, tree based models, boot strapping, matrix algebra

Teaching Methodology

Lectures, discussions, presentations, e-learning and case studies

Teaching Equipment: LCD projector, Smart Board, Text books, Journals.(Replicate)

Course Evaluation

End of semester examination	60%
Continuous assessment test	40%
Pass mark	50%

Core Course Textbook
1. Kirkwood, B.R. & Sterne J.A.C. (2003). Essential Medical Statistics. Blackwell Science
2. Altman, D.G. (1992). Practical Statistics for Medical Research. Chapman and Hall
3. Berry, G. & Armitage, P. (1994). Statistical Methods in Medical Research. Blackwell Science
4. Selvin, S. (2004). Statistical Analysis of Epidemiologic Data. Oxford University Press

YEAR ONE SEMESTER TWO
HES 5121: Epidemiologic Methods
Course Purpose

The course shall provide learners with a background ………..

Expected Learning Outcomes

By the end of the unit, the learner should be able to:

1. Compute and interpret basic measures of disease occurrence and association from the commonly used epidemiological studies

2. Understand alternative explanations to causality, notably, the role of confounding and bias in the interpretation of an exposure-disease association
3. Describe the key design features, strengths and limitations of the cross sectional, case control, cohort, clinical trial and community intervention trials.
4. Critique a paper on an epidemiological study and recognize flaws in the study design

Course content

The search for causal relations: hypothesis generation, descriptive and cross-sectional studies.
Observational studies: prospective approach, prospective studies, retrospective approach, retrospective studies/case-control studies. Evaluation of evidence-association vs. causation. Prospective vs. retrospective studies/advantages and disadvantages. Experimental methods: clinical trials (therapeutic trials) community trials (prophylactic trials). Confounding bias: Sources of confounding, and strategies in dealing with confounding in observational and clinical studies. Interpretation of results: Differential exposure misclassification, non-differential exposure misclassification, differential disease misclassification, non-differential disease misclassification, strategies in dealing with selection bias. Bias in experimental studies: allocation of subjects, random allocation, attrition and strategies for elimination of bias in experimental studies. Appraisal and critique of published papers. Ethical considerations: Confidentiality, consent and principle of no harm to subjects; procedures and process of ethical approval. Causality, effect modification, bias, Meta-analysis. Interaction
Teaching Methodology

Lectures, discussions, presentations, e-learning and case studies

Teaching Equipment: LCD projector, Smart Board, Text books, Journals.(Replicate)

Course Evaluation
End of semester examination   60%
Continuous assessment test   40%
Pass mark   50%

Core Course Textbook
1. Willaim Oleckno: Epidemiology: Principles and Applications
2. Anne Aschengrau and George Seage: Essentials of Epidemiology in Public Health
3. Robert Friis: Epidemiology for Public Health Practice
4. Rothman Kenneth: Epidemiology; An Introduction

HES 5122: Statistical Methods in Epidemiology
Course Purpose

The course shall provide learners with a background ………..

Expected Learning Outcomes

By the end of the unit, the learner should be able to:

1. Differentiate between distribution and their application
2. Understand and Interpret the outputs based on the P-value and the confidence Differentiate
3. Differentiate between correlation and regression
4. Use appropriate statistical test in analyzing the dataset at hand

Course content

Quality control in epidemiological studies. Causes, causal models and causal inference. Analysis of epidemiological data; fundamentals and logistic. Analysis of epidemiological data; meta-analysis. Presentation of results of epidemiological studies. Data management. Graphical methods, probability, discrete and continuous distributions, estimation, confidence intervals, and one sample hypothesis testing. Two sample hypothesis testing, nonparametric techniques, sample size determination, correlation, regression, analysis of variance, and analysis of covariance. Concepts in biostatistics as applied to epidemiology, primarily categorical data analysis, analysis of case-control, cross-sectional, cohort studies, and clinical trials. Simple analysis of epidemiologic measures of effect; stratified analysis; confounding; interaction, the use of matching, and sample size determination. Multivariable models in epidemiology for analyzing case-control, cross-sectional, cohort studies, and clinical trials. Logistic, conditional logistics, and Poisson regression methods; simple survival analyses including Cox regression. Laboratory sessions focus on the use of the STATA statistical package and applications to clinical data. One-way ANOVA. Models of ANOVA: Model I (fixed); Model II (random). Assumptions of ANOVA. Two-way ANOVA. Multiple regression. Advanced logistic regression models. Poisson and negative binomial regression. Longitudinal data analysis, Data analyses, interpretation, and presentation.

Teaching Methodology

Lectures, discussions, presentations, e-learning and case studies

Teaching Equipment: LCD projector, Smart Board, Text books, Journals.(Replicate)

Course Evaluation

End of semester examination	60%
Continuous assessment test	40%
Pass mark	50%

Core Course Textbook
1. Kirkwood, B.R. and Sterne J.A.C. (2003). Essential Medical Statistics. Blackwell Science
2. Altman, D.G. (1992). Practical Statistics for Medical Research. Chapman and Hall
3. Berry, G. and Armitage, P. (1994). Statistical Methods in Medical Research. Blackwell Science
4. Selvin, S. (2004). Statistical Analysis of Epidemiologic Data. Oxford University Press

HES 5123: Advanced Biostatistics
Course Purpose

The course shall provide learners with a background ………..

Expected Learning Outcomes

By the end of the unit, the learner should be able to:

1. Interpret outputs/association between outcome and explanatory variables based confidence intervals
2. Use appropriate statistical test for small sample and large sample data
3. Use appropriate statistical test for more than two numeric explanatory variables
4. Use statistical software to obtain and interpret the outputs of data from epidemiologic and biomedical studies

Course content
Multilevel modeling. Statistical computing lessons and tutorials. Discriminant analysis. Exploratory factor analysis (EFA). Structural equation models (SEM). Multivariate analysis of variance (MANOVA). Multivariate regression analysis. Principal components analysis (PCA). Factor analysis (FA). Canonical correlation analysis. Redundancy analysis. Correspondence analysis (CA). Multidimensional scaling. Discriminant analysis. Linear discriminant analysis (LDA). Clustering systems. Recursive partitioning. Artificial neural networks. Review of estimation and hypothesis testing for categorical data. Survival analysis: contingency tables, linear models; multiple logistic regression, loglinear models; multinomial data; analysis of matched-pair data; random effects models. Introduction to statistical software and data management; including basics of entering, manipulating data and elementary statistical analysis, SAS software, and other packages of potential interest to students (R, Strata, SPSS).
Teaching Methodology

Lectures, discussions, presentations, e-learning and case studies

Teaching Equipment: LCD projector, Smart Board, Text books, Journals.(Replicate)

Course Evaluation
End of semester examination   60%
Continuous assessment test   40%
Pass mark   50%

Core Course Textbook
1. Altman, D.G. (1992). Practical Statistics for Medical Research. Chapman and Hall
2. Kirkwood, B.R. and Sterne J.A.C. (2003). Essential Medical Statistics. Blackwell Science
3. Berry, G. and Armitage, P. (1994). Statistical Methods in Medical Research. Blackwell Science
4. Selvin, S. (2004). Statistical Analysis of Epidemiologic Data. Oxford University Press

HMP 5133: Epidemiology and Control of Non Communicable Disease

Course Purpose

The course shall provide learners with a background ………..

Expected Learning Outcomes

By the end of the unit, the learner should be able to:

1. Describe the principles, objectives and elements of public health surveillance for non-communicable diseases and conditions;
2. Discuss the attributes used in the evaluation of a surveillance system for non-communicable diseases.
3. Develop and critique case definitions for non-communicable diseases and conditions under surveillance;
4. Use the epidemiological concepts of person, place and time to describe the data, calculate rates and present results in the appropriate graphical format for dissemination
5. Describe the investigation of disease outbreaks, analysis of findings and implementation of control measures for specific non-communicable diseases and conditions

Course content

Epidemiology: causes and risk factors; behavioral, social, developmental, urbanization, ecological, physical, demographic and economic. High-risk groups. Consequences: Measurement of disease burden; morbidity, mortality, disability; Disability Adjusted Life Years (DALYs), quality of life assessment - concepts and uses; Economic costs, Social impact; Health service utilization and costs. Morbidity, mortality and disability data: Sources, quality, completeness, limitations; Surveillance systems for non-communicable diseases. Classification of diseases. Study designs and their application: Ecological, Case control, cohort, intervention studies; interpretation of results; Critique of specific studies. Uses of research data: policy decisions, choice of interventions, monitoring and evaluation. Prevention and control: Policy issues; Mental Health Act, Road Safety Policy; Population vs. individual preventive strategies. Screening programmes for cancers and cardiovascular diseases. Principles of injury prevention; Haddon's matrix. Planning and evaluation of primordial, primary, secondary and tertiary prevention programmes.

Teaching Methodology

Lectures, discussions, presentations, e-learning and case studies

Teaching Equipment: LCD projector, Smart Board, Text books, Journals.(Replicate)

Course Evaluation

End of semester examination	60%
Continuous assessment test	40%
Pass mark	50%

Core Course Textbook
1. Willaim Oleckno: Epidemiology: Principles and Applications
2. Anne Aschengrau and George Seage: Essentials of Epidemiology in Public Health
3. Robert Friis: Epidemiology for Public Health Practice

HMP 5134: Epidemiology and Control of Communicable Disease
Course Purpose

The course shall provide learners with a background ………..

Expected Learning Outcomes

By the end of the unit, the learner should be able to:

1. Describe the principles, objectives and elements of public health surveillance for communicable diseases and conditions;
2. Discuss the attributes used in the evaluation of a surveillance system for communicable diseases.
3. Develop and critique case definitions for non-communicable diseases and conditions under surveillance;
4. Use the epidemiological concepts of person, place and time to describe the data, calculate rates and present results in the appropriate graphical format for dissemination
5. Describe the investigation of disease outbreaks, analysis of findings and implementation of control measures for specific epidemics

Course content

Disease ecology: historical and biological factors affecting the dynamics of infection within the population; vector ecology, life cycles and control strategies. Life cycles of specific protozoan and helminth infections: malaria, leishmaniasis, schistosomiasis, filariasis, hookworms. Transmission and control: Groups and types, transmission and control of Bacterial and Rickettsial diseases - Salmonellas, cholera, pneumonia and plaque. Control Strategies: pathogenic and epidemiologic aspects of viral infections in man and their control strategies: Influenza, yellow fever, hepatitis, measles and poliomyelitis. Zoonotic infections of public health importance: Investigations and control. Skin and eye infections: diagnosis, treatment and control, their significance to the health of a community. Epidemiology and control of sexually transmitted diseases: gonorrhea, syphilis, chlamydia and HIV/AIDS. Communicable disease immunology: Host and agents immune reaction mechanisms. Use of vaccines in communicable disease control. Emerging and re-emerging diseases: Tuberculosis, Hemorrhagic fevers- Ebola.

Teaching Methodology

Lectures, discussions, presentations, e-learning and case studies

Teaching Equipment: LCD projector, Smart Board, Text books, Journals.(Replicate)

Course Evaluation

End of semester examination	60%
Continuous assessment test	40%
Pass mark	50%

Core Course Textbook

1. Last JM (ed.) (1995) *A Dictionary of Epidemiology*, 3rd edn. International Epidemiological Association, Oxford University Press, Oxford.

2. Raska K (1971) Epidemiological surveillance with particular reference to the use of immunological surveys, *Proceedings of the Royal Society of Medicine*, 64: 681–8.

3. World Health Organization (WHO) websites – for general epidemiology and publications: http://www.who.int/topics/epidemiology/en/. For surveillance of epidemiological risk factors: http://www.who.int/mediacentre/factsheets/fs273/en/.

4. Birkhead GS, Maylahn CM. State and local public health surveillance. In: Teutsch SM, Churchill RE, eds. Principles and practice of public health surveillance. New York: Oxford University Press; 2000.

5. CDC. National Notifiable Diseases Surveillance System. Accessed 5/26/11.

YEAR TWO SEMESTER ONE AND TWO
HES 5212: Thesis
Course Purpose

Enhancing the students' capacity to conduct independent field research and to communicate this in a research thesis and orally to the target community

Expected Learning Outcomes

1. To enable students conduct independent research in Food Security related area

2. To enable students understand the research design and planning for effective data collection

3. To enable students scientifically communicate the findings from the research in a logical and scientific language in form of a Thesis.

Course content

The thesis will be a detailed written report on a research carried out independently by individual students over a period of two semesters. Each student will conduct his or her research with the approval and under the direction of the designated Departmental Course Coordinator. Research titles are selected with reference to the research interest and capabilities of staff. Projects should be professionally relevant and demand-driven to enhance individual employment prospects

Mode of Delivery

The student will work with the supervisors to develop the proposal on an agreed topic, theme and title as necessary. The student will maintain at least a two weekly visit and discussion with the advisor

Instructional Materials

The student will use the available referral material and other research materials availed on campus, internet and other sources as directed by the supervisors.

Course Assessment

No marks or grades will be awarded for thesis proposal.

The proposal writing stage will be reported as satisfactory or not satisfactory. The supervisors will use consult with each other before advising the student on the performance observed.

Required reading

(1) *CSUS Guide For Thesis Format,* Latest Edition, Office of Research and Graduate Studies, CSUS, available free on web at www.csus.edu/gradstudies/forms/Thesis.pdf ;

(2) *A Pocket Style Manual*, 2000, Diana Hacker, Third Edition, Bedford Books; available for purchase at bookstore or on web at Amazon.Com (click on this link to find it there). Many PPA students have already purchased this manual for an earlier class;

(3) *Writing Literature Reviews*, 2004, Second Edition, Jose Galvin, Pyrczak Publishing; available for purchase at bookstore or on web at Amazon.Com (click on this link to find it there);

Kothari CR (2006). Research Methodology: Methods and Techniques. New Age
International Publishers. New Delhi. RubinA and BabbieE. (2005). Research Methods for
Social Work(5th Edition). Wadsworth/Thomson.

Kathleen M and Jonathan W(2011). How to Write Dissertationsand Project
Reports.Harlow UK: Pearson Education Ltd.

Academic Staff of the School of Health Sciences

S/No.	Name	Designation	Qualification	Speciality
1.	Prof. Fred Amimo	Associate Professor/Dean, SHS	PhD	
2.	Dr. Charles Angira	Lecturer/CoD Public and Community Health	PhD	
3.	Dr. Daniel Onguru	Lecturer/CoD Biomedical Sciences	PhD	
4.	Dr. Samson Adoka	Senior Lecturer, SHS	PhD	
5.	Dr. George Ayodo	Senior Lecturer, SHS	PhD	
6.	Dr. Erick Ogola	Lecturer, SHS	PhD	
7.	Dr. Jane Owenga	Lecturer, SHS	PhD	
8.	Dr. Rose Olayo	Lecturer, SHS	PhD	
9.	Ms. Edwinah Syagga	Lecturer, SHS	MSc	
10.	Ms. Grace Mogire	Tutorial Fellow, SHS	MSc	
11.	Mr. Akobi Akala	Tutorial Fellow, SHS	MSc	
12.	Ms. Anita Ottaro	Tutorial Fellow, SHS	MSc	