

RESEARCH METHODS

COURSE SYLLABUS

Program	Bachelor of science in Public Health	
Module category	Core	
Module name	Health System Research and Application	
Module Code	PubHM2091	
Module Credit	21 ECTS	
Course: Research methods	Course code: PubH2094	ECTS: 3
Mode of delivery	Block	
Instructor's information	Name: <u>Assefa A.</u> email address: assefaand@gmail.com	

Course Description:

- This course is intended to equip the health officer students with a basic working knowledge of health research methods. It also gives the trainee an acquaintance with research proposal writing, critical appraisal of scientific paper and application of common statistical packages.

Course Goals or Learning Outcome:

- After successfully completion of this course the students will be able to:
 - List the major types of study designs
 - Describe the main issues in the design, conduct and presentation of a research
 - Prepare a research protocol and conduct a simple research
 - List the major elements that need to be examined when making a critical assessment of a research paper.
 - Demonstrate how to deal with each of these elements with reference to a published paper
 - Describe common statistical packages useful for data processing and analysis

Prerequisites:

- It is good if the students take biostatistics and epidemiology prior to this course. However, it can also be given side by side with these courses,

Required Texts:

1. Degu G. and Tessema F. Biostatistics for health science students, Lecture Note series Universty of Gondar. 2005.
2. Kebede Y, Weldemichael K, Lulu K. Lectre note of epidemiology for health sciences. 2003.
3. Degu G, Yigzaw T. Research Methodology Lecture Notes for Health Sciences Students. University of Gondar. 2006.
4. Training module on Health and Health Related Research proposal writing, module I. The Ethiopian Science and Technology Commission in Collaboration with Regional State Health Bureaus, Nov. 2004.
5. Training module on Health Research Methods, module II, ESTC in collaboration with RHBs & EPHA, November 2004.
6. Training Module on Data Processing, Analysis and Interpretation for Health Research, module III, ESTC in collaboration I RHB & EPHA November 2004.
7. Training module on Health Research Ethics , module IV , ESTC in coll. with RHBs and EPHA, November 2004
8. Training Module on Communicating Research Findings: oral & written communication techniques. ESTC in coll. with EPHA and CDC - Ethiopia, Nov. 2004.
9. Training module on Health Research Methods, module II. Ethiopian Science and Technology commission in collaboration with Regional Health Bureaus and EPHA. Nov. 2004.

Course Expectations:

- **Preparedness:** You must come to class, ward and to the community based on the schedule with fully prepared and ready with the necessary materials and by reading the given assessment
- **Participation:** Each student is strongly encouraged to participate in class room discussion, group work activity, group presentation and field practice.
- **Materials:** reference materials are expected to be available in the library.
- **Mobile phone:** Please turn/off or switch of your mobile phone during class and practical activity. Phone disturbs the flow of the class and practical work.

Summary of Teaching Learning Methods:

- **Lectures and other interactive instruction:** for the majority of the topics in the course there will be brief lectures being given by the instructor(s) as per the schedule given below.
- **Question and answer in the form of home-take assignment:** students will be given two home-take assignments at different times and addressing different topics of the course.
- **Group discussion and presentation:** in all topics and sub topics there will be group discussion and presentation.
- **Tutorial session:** tutorial classes will be arranged to work on home-take assignments or other suggested questions.
- **Project work:** the students will be made to develop a research protocol (proposal) aiming to scientifically investigate a given relevant health or health related issue or problem.
- **Seminar:** seminar topic will be selected and will be given to the students and they will and followed by discussion.
- **Written assignment:** selected question will be given for individual assignment at the beginning of the course.
- **Self-reading:** for all topics reading assignment will be given to the students earlier the class.
- **Asking & Answering questions:** students are encouraged to actively participate by asking question and giving answer

Assessment Arrangement

No	Assessment methods	Marks in %	Assessment time
1	Test 1	10	Week 2
2	Group work with presentation 1	5	Week 4
3	Test 2	10	Week 6
4	Assignment	10	Week 8
5	Test 3	10	Week 10
6	Group work with presentation 2	5	Week 12
7	Practice 1	5	Week 14
8	Practice 2	5	Week 15
9	Final	40	Week 16
	Total	100%	

Assignments:

- The assignment in this course includes reading assignment, daily response paper, group work assignment, individual assignment with in fixed time;
- Students are expected to read all assignments prior to the class for which they are assigned.
- Class participants may be asked to prepare questions and/or discussion points on aspects of the readings that are particularly interesting or difficult to understand.
- at list one individual assignment will be given and it will account 10% of the total mark. This written assignment will be given at the middle of the semester.
- Assignment should be submitted within the given time table. Late submission may result 10%-mark reduction from that specific assignment.

Policies:

- **Attendances:** It is believed that attendance during all class in lecture, presentation and practical session greatly improves the probability of success in a course. Students are expected to attend all theoretical classes and during community practices
- **Assignment:** The students are expected to carefully read all assignments before the class in which the material is to be discussed. Written assignments should be submitted on time. Any assignment turned in late shall result in an automatic 10 percent reduction in from the allocated mark.
- **Tests/Quizzes:** You will have short quizzes and tests at the end of each unit or topic, if you miss the class or late to class. You will miss the quizzes or tests; no makeup test will be given. final exam will be given on the date scheduled, unless prior arrangements have been made and it is expected that all students should take the exam
- **Cheating/plagiarizing:** any cheating on an exam, test or quiz, plagiarizing assignment, not actively participating in group work and presentation will result in zero mark in that specific assignment or test or exam etc.

Schedule:

On...	We will discuss...	Hr	So, before class, please read...	And be prepared to discuss these questions...
1 st week	Introduction to research methodology: definition, types and importance of research.	2	References 'c'	What is research? What is a health research? Why is research needed? What are the types of researches?
2 nd week	Study designs: descriptive designs, analytic designs	2	References 'b' or 'c'	What are study designs? What are the different types of study designs? What are the advantages and limitations of each design?
3 rd week	Sampling: definition, types & errors	2	References 'a' or 'c' or 'e'.	What is sampling? Why is it important? What are the different types sampling? What are the advantages and limitations of the different sampling techniques? What are the errors associated with sampling and how can they be tackled?

4 th week	<ul style="list-style-type: none"> - Sample size determination - Types of data 	2	References 'a' or 'c' or both.	<p>How are sample sizes determined?</p> <p>What are the assumptions in sample size calculation?</p> <p>What are data? What are the types of data?</p>
5 th week	<p>Methods of data collection</p> <p><i>Plus</i></p> <p>1st Home-take assignment (on the preceding topics)</p>	2	References 'a' or 'c'	<p>What are the different types of data collection techniques?</p> <p>What are the advantages and limitations of each method?</p>
6 th week	<p>Developing data collection tools</p> <p><i>Plus</i></p> <p>Students return 1st Home-take assignment</p>	2	References 'a' or 'c'	<p>How are the different types of data collection tools developed?</p>

7 th week	Tutorial session <i>Plus</i> Graded 1 st home-take assignment will be returned to students	4	Questions included in the 1 st home-take assignment.	
8 th week	1 st exam (mid-term)			
9 th week	Data processing, analysis and presentation.	4	References ‘a’ or ‘c’ or ‘f’.	What are the different data processing, analysis and presentation techniques?
10 th week	Research proposal writing. <i>Plus</i> 2 nd Home-take assignment (proposal writing)	4	References ‘c’ or ‘d’.	What is a research proposal? Why is it needed? What are its parts? What does each part convey?
11 th week	Private study			
12 th week	Private study			

13 th week	Research report writing <i>Plus</i> Critical appraisal of a scientific paper <i>Plus</i> Students return the 2 nd home-take assignment (proposal)	4	Referenc es ‘c’ or ‘h’.	What is a research report? Why is it needed? What are its parts? What does each part convey? How is a scientific paper appraised?
14 th week	Application of common statistical packages	4	Referenc e ‘c’	
15 th week	Evaluation			
16 th week	Final summative written exam			