1. **Subject title:** **Research Methodology**

2. **Subject Code:** **CC 613**

3. **Contact hours:** **60**
   Self-study and assignments 30
   Credit Points: 06

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4. **Subject descriptions and expected learning outcomes**

The objective of this course is to help the students understand the basic principles of research and methods applied to draw inferences from the research findings. The research methods course will cover an introduction to health systems, health systems research, ethical issues in research, defining a research problem, research design, research tools besides basics of data management and report writing

By the end of the course, the students will be able to:

- Explain research and its relevance in the health systems
- Identify type of research designs
- Familiar with Issues related to ethics while conducting research
- Develop tools for conducting research
- Familiar with the basics of research management
- understand steps involved in management of information
- Familiarity with the basics of monitoring and evaluations
- Writing research reports and
- Drawing inferences from the research findings and use them to manage health services

5. **Mode of delivery**

The course pedagogy will be a combination of classroom teaching, group work, written examination and oral presentations. The students will be given basics of the subject and will be given assignments related to each of the topics discussed in the class. The same will be discussed the following day and at the end of the course, each student will give a presentation about each of the components discussed in the class. Tutorials will be conducted to help students solve their problems.

6. **Course Contents**

Week	Hours	Units	Contents
	4	**1**	**Introduction to Health systems**
			Introduction to systems
			Health
			Health systems
			Research and its relevance in the health systems
			How the health system work
			Stakeholders involved

Week	Hours	Units	Contents
			Decision making in health systems
			Discussion
	5	**2**	**Identifying research problem**
			The context of health systems research
			What are the issues
			Synthesis of issues
			Formulation of research questions
			Purpose of research questions and clarity of the research questions
	3	**3**	**Ethical issues in research**
			Need for ethics in research
			Its importance
			Historical perspective of ethics in health and hospital research
			Nuremberg code
			Helsinki Declaration
			On line ethics course
	6	**4**	**Developing a research proposal**
			Introduction to proposal writing
			Finding a research question
			Writing goals and objectives of a problem
			Choosing the right design for research
			Choosing the tools for research
			Data analysis plan
			Data management
			Report writing
			Communicating research
	6	**5**	**Research design**
			Types of research designs
			Descriptive
			Analytical
			Surveys
			Cohort
			Case control studies
			Quasi experimental studies
	6	**6**	**Research tools and Data collection methods**
			Choosing the right tool for the survey
			How to develop survey instruments
			Do’s and do nots of tool development
			Steps involved in tool development
			Finalizing the tools
			Methods of data collection
	5	**7**	**Sampling methods**
			Why a sample
			How to choose a sample
			How many units of a sample needed to draw inferences

Week	Hours	Units	Contents
	4	**8**	**Bias and confounding**
			Introduction to bias
			Introduction to confounding
			Importance of bias and confounding
			Ways to minimize bias and confounding
	5	**9**	**Introduction to program evaluation**
			Need for evaluation
			Methods of evaluation
			Basic steps involved in evaluation
	6	**10**	**Data management**
			Importance of data management
			Steps involved in data management
			Practicum
	5	**11**	**Analyzing information for drawing inferences**
			Why analyze
			How to analyze
			How to read the information
			Work plan
	5	**12**	**Report writing**
			The basics of report writing
			Steps involved in report writing
			Importance of a good report
			Utilization of research findings
		13	**Group presentations**
			All the students will be divided in groups of 10 and asked to develop a proposal based on the class room learning. This will give the instructor an understanding of the learning from the course
		14	**Written examination**
			A two-hour examination will be given to students to examine the basic learning from the course.

7. Assessment:

The students will be assessed by a written Examination and assignments. The distribution of marks will be as follows:

Final written examination	70%
Mid-term examination & assignments	30%

8. Readings

The standard text books published by the World Health Organization, Centers for Disease Control and others will be used as text books besides a series of reference books. Some selected ones are cited below:

- IIHMR Course Material

- Debus, M: methodological Review: A Handbook for Excellence in Focus Groups AED Washington, DC
- Designing and Conducting Health Surveys: Jossey Bass Publishers, San Francisco
- Fink, A (): How to Sample Surveys: Sage Publications, Thousand Oaks
- Fink, A (): How to Design Surveys: Sage Publications, Thousand Oaks
- Vaughan, JP and Morrow, RH () Manual of Epidemiology for District Health Management, Geneva, WHO, 1989
- Phyllis, et al., Epidemiological Approach to Reproductive Health, Geneva, WHO (1994)
- Grundy, F and Reinke, W A (1973), Health Practice Research and Formalized Managerial Methods, Geneva, WHO
- Gummersson, E (1991) Qualitative Methods in Management Research, New Delhi, Sage Publications
- Verkevieser et al., (1991) Designing and Conducting Health Systems Research Projects WHO and IDRC
- Gordis, Leon (2004) Epidemiology, 3rd Edition: Elsevier Inc. Pennsylvania