

HEALTH RESEARCH FUNDAMENTALS

MULTI FACULTY

PRE-REQUISITES : Undergraduate students in medical/dental/nursing/AYUSH streams Graduate in any discipline

INTENDED AUDIENCE : Any current or potential health researcher

INDUSTRIES APPLICABLE TO : Government/ private sector, public health service institutions/ agencies, Post graduate institutions in biomedical and allied sciences, Medical colleges/ Universities, NGOs engaged in health research, Clinical research organizations, Pharma companies and marketing research organizations

COURSE OUTLINE :

ICMR - National Institute of Epidemiology is offering online programmes on conduct of human bio-medical research. The programme will be offered as NIE-ICMR e-Certificate – NleCer - Courses. The first in this series, NleCer 101:Health Research Fundamentals, is a basic level course in health research methods. It will explain the fundamental concepts in epidemiology and bio-statistics related to research methods. This course will provide an overview of steps and principles for designing bio-medical and health research studies among human participants. We expect this course to be useful for individuals interested in pursuing health research in the roles of study investigators, clinical/public health researchers (physicians, counselors, research associates, social scientists, nurses, pharmacists, technicians, data and quality managers etc.), scientists, ethics committee members and project managers.

ABOUT INSTRUCTOR :

Dr. Sanjay Mehendale, MD, MPH, FAMS, FIMSA, FACE
Ex - Additional Director General, ICMR

Dr. Manoj Murhekar, MD
Scientist 'G' & Director, ICMR - National Institute of Epidemiology

Dr. R Ramakrishnan, MAE, PhD
Formerly Scientist 'G', ICMR - National Institute of Epidemiology

Dr. Prabhdeep Kaur, MAE, DNB
Scientist 'E', ICMR - National Institute of Epidemiology

Dr. Tarun Bhatnagar, MD, PhD
Scientist 'E', ICMR - National Institute of Epidemiology

Dr. P. Manickam, BSMS, M.Sc., PhD
Scientist 'E', ICMR - National Institute of Epidemiology

Dr. P. GaneshKumar, MD
Scientist 'C', ICMR - National Institute of Epidemiology

All the instructors are faculty members for the two-year Master of Public Health [MPH] programme at the ICMR School of Public Health of the NIE, Chennai, India. The School is offering MSc (Biostatistics) from this July. Besides the Master's level programmes, the faculty members have been conducting PG diploma and various short-term training programmes in public health/epidemiology and biostatistics. Besides teaching, the faculty members have been conducting epidemiological/public health research.

COURSE PLAN :

- Week 1: Conceptualizing a research study
 Introduction to health research – Dr. Sanjay Mehendale
 Formulating research question, hypothesis and objectives – Dr. P Manickam
 Literature review – Dr. P Ganeshkumar
- Week 2: Epidemiological considerations in designing a research study (1/2)
 Measures of disease frequency - Dr. R Ramakrishnan
 Descriptive study designs - Dr. Prabhdeep Kaur
 Analytical study designs - Dr. Manoj Murhekar
- Week 3: Epidemiological considerations in designing a research study (2/2)
 Experimental study designs: Clinical trials - Dr. Sanjay Mehendale
 Validity of epidemiological studies - Dr. Tarun Bhatnagar
 Qualitative research methods: An overview - Dr. Tarun Bhatnagar
- Week 4: Bio-statistical considerations in designing a research study
 Measurement of study variables – Dr. R Ramakrishnan
 Sampling methods – Dr. R Ramakrishnan
 Calculating sample size and power – Dr. R Ramakrishnan
- Week 5: Planning a research study (1/2)
 Selection of study population – Dr. P Ganeshkumar
 Study plan and project management – Dr. Sanjay Mehendale
 Designing data collection tools – Dr. Tarun Bhatnagar
- Week 6: Planning a research study (2/2)
 Principles of data collection – Dr. Prabhdeep Kaur
 Data management – Dr. P Manickam
 Overview of data analysis - Dr. P Manickam
- Week 7: Conducting a research study
 Ethical framework for health research – Dr. Sanjay Mehendale
 Conducting clinical trials - Dr. Sanjay Mehendale
- Week 8: Writing a research protocol
 Preparing a concept paper for research projects – Dr. P Manickam
 Elements of a protocol for research studies – Dr. Tarun Bhatnagar
 Publication ethics – Dr. Sirshendu Chaudhuri
 Manuscript writing – Dr. Jayashree K
 Grant proposal writing – Dr. S.A. Rizwan