

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 – NIECer - Courses. The first in this series, NIECer 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 :

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. For more details please visit www.nie.gov.in

COURSE PLAN :

Week 1: Conceptualizing a research study: Introduction to health research – Prof. Sanjay Mehendale; Formulating research question, hypothesis and objectives – Prof. P Manickam; Literature review – Prof. P Ganeshkumar

Week 2: Epidemiological considerations in designing a research study (1/2): Measures of disease frequency - Prof. R Ramakrishnan; Descriptive study designs - Prof. Prabhdeep Kaur; Analytical study designs - Prof. Manoj Murhekar

Week 3: Epidemiological considerations in designing a research study (2/2): Experimental study designs: Clinical trials - Prof. Sanjay Mehendale; Validity of epidemiological studies - Prof. Tarun Bhatnagar; Qualitative research methods: An overview - Prof. Tarun Bhatnagar

Week 4: Bio-statistical considerations in designing a research study: Measurement of study variables – Prof. R Ramakrishnan; Sampling methods – Prof. R Ramakrishnan; Calculating sample size and power – Prof. R Ramakrishnan

Week 5: Planning a research study (1/2): Selection of study population – Prof. P Ganeshkumar; Study plan and project management – Prof. Sanjay Mehendale; Designing data collection tools – Prof. Tarun Bhatnagar

Week 6: Planning a research study (2/2): Principles of data collection – Prof. Prabhdeep Kaur; Data management – Prof. P Manickam; Overview of data analysis - Prof. P Manickam

Week 7: Conducting a research study: Ethical framework for health research – Prof. Sanjay Mehendale; Conducting clinical trials - Prof. Sanjay Mehendale;

Week 8: Writing a research protocol: Preparing a concept paper for research projects – Prof. P Manickam; Elements of a protocol for research studies – Prof. Tarun Bhatnagar ; Publication ethics – Prof. Sirshendu Chaudhuri; Manuscript writing – Prof. Jayashree K; Grant proposal writing – Prof. S.A. Rizwan