

## Course Description



*Welcoming the New Public Health Pioneers : Mrs. J. Kumudini Devi, Founder and Hony. Secretary, Sivananda Rehabilitation Home, handing a lamp to a student of the first batch of the APH programme. APH Inaugural ceremony 16th January, 2003.*

## Preparatory Courses

### PHG 101: Academic and Business Communication

#### # Preparatory Course

This course is designed to impart the necessary verbal and written skills for academic and business communication. Topics covered include: the communication process including nonverbal and verbal channels; interpretation of words and other symbols; defining the purpose of the message, analyzing the audience, establishing the main idea, and choosing the appropriate channel and medium for communication; application of standard English including accepted grammar; correct punctuation and proper sentence and paragraph construction; skills for fluent speaking including stress, intonation, rhythm and compensation strategies to augment and repair communication; communication via electronic media; editing, rewriting, proofreading and formatting documents; effective use of media and audiovisual aids in presentations; listening skills for the academic and business environment; effective teamwork and collaboration skills; writing literature reviews and scientific papers for publication; writing a research proposal and compiling a complete proposal packet for a specific funding organization.

### PHG 102: Personal Computing

#### # Preparatory Course

This course is designed to provide students with the necessary computing skills for efficient communication, data entry and research. Areas covered include: key board operations; mouse operation; printer handling; direct printing and network printing; creating files / folders; file operations; navigation; word processing; use of spread sheets; database operations; presentation graphics; Internet search protocol; and utilization of IHS computing resources.

## Core Courses

### PHG 100: Numeracy, Basic Mathematics and Statistics

#### Credits 5

This course is intended as a review of basic mathematics for students who need to develop a mathematical background before taking up basic public health courses. Material covered includes: basics of fractions and decimals; ratios, proportions and percentages; basic algebra; solution of simple linear equations; graphing of equations; factoring; progressions and logarithms; basic ideas of sets; inequalities; basics of probability and statistics.

### PHC 201: Comparative Study of Health Care Systems

#### Credits 5

The course adopts a theoretical framework placing the health care system in the larger context of the social system and of an exchange process. It will then develop a typology of health care systems in the contemporary world, from the pluralistic, to the insurance/ social security, the national health service and socialized medicine. A considerable focus of the course will be on the Indian health care system which will be explored in terms of the organizations, actors, resources, and processes that constitute its structure and operations; the forces responsible for shaping it; and policies that influence its performance and will likely determine its future. Topics include: organization of the health care system, including the major private-sector and public-sector institutions involved in the delivery, management, regulation and financing of care; the role of the central, state and local governments in provision of health care; review of the National Health Policy, the National Population Policy and the various National programmes; ongoing health sector reforms and decentralization initiatives.

## **PHC 202: Introduction to Demography**

### **Credits 5**

The course is designed to introduce the student to demographic data sources, concepts, basic analytic techniques, and current population facts and trends in India and the world, with a special emphasis on the use of these materials for planning, policy analysis and evaluation activities in the health field at the community level. Topics covered include: sources and quality of demographic data; concepts of population size, distribution and composition; population processes of fertility, mortality and migration and the interrelationship among them; basic demographic measures such as population ratios, crude rates, standardized rates, growth rates, fertility and reproductivity rates, gross and net migration rates, period and cohort measures; interpolation techniques; survival functions; life table functions; population trends in India and the world; population control measures in India and the population policy of India.

## **PHC 203: Biostatistics and Data Analysis**

### **Credits 5**

This course acquaints the student with the basic concepts and methods of biostatistics, their applications, and their interpretation. The material covered includes data presentation; numerical summary measures of central tendency, percentiles, and variability; rates and standardization; life tables; probability concepts; sampling methods and sample size determination; confidence intervals; hypothesis testing; comparison of two means; analysis of variance; inference on proportions; contingency tables; correlation; simple regression, multiple regression and logistic regression; analysis of survival data. The computer is used throughout the course, and the student will gain familiarity with the software package EpiInfo.

## **PHC 204: Principles of Epidemiology**

### **Credits 5**

This course will provide an orientation to epidemiology as a basic science for public health. Topics covered include: the history and scope of epidemiology; principles of causation; measures of disease rates, proportions and standardization of rates; concepts and sources of data of population, mortality and morbidity; place- geographical entities; interpretation of time in epidemiology; epidemiological transition; measures of association; descriptive epidemiology; observational, ecologic, cross sectional, case control, cohort and experimental study designs; screening for disease control; reporting, risk perception and communication; validation of study designs; bias and confounding errors. This course is an introduction to the skills needed by public health professionals to critically interpret epidemiologic literature. It will provide students with the principles and practical experience needed to initiate the development of these skills.

## **PHC 206: Programme Evaluation and Assessment in Health Care**

### **Credits 5**

This course provides students with an understanding of the fundamentals of evaluation research as applied to public health programs, policies and other types of interventions. The course covers impact, outcome, process and participatory evaluation, and a number of research designs common in public health evaluation research. Students will gain skills in framing evaluation questions and designing evaluation plans to answer those questions. In addition, students will gain skills needed to understand an critique published evaluation literature, and skills in measurement/data collection strategies.

## **PHC 207: Ethical Basis of Health Care**

### **Credits 5**

This course provides students with a broad overview of some of the main philosophical and moral ideas that are used as a basis for resolving issues in health care research, management and policy. The course provides guidance in preventing and solving managerial and biomedical ethical problems; suggests substantive ethical principles and procedural methodologies necessary to understand, analyze, and resolve ethical problems; and encourages and helps students to develop a personal ethic to guide their practice. The course covers such topics as business ethics versus health care ethics; organizational philosophy and mission

statements; professional codes of ethics; conflicts of interest; ethical committees; the allocation of scarce resources; informed consent; confidentiality; privacy protection; balancing of risks and benefits; multiple authorship issues; issues in mentoring; and human experimentation.

### PHC 208: Introduction to Health Sciences

#### Credits 5

This course provides a foundation for understanding the complexities of the human body. The course is designed as a survey of the basic anatomical, physiological and biochemical organization of the human body. Students are encouraged to place individual structures and functions into an integrated and multifunctional framework. The integrating principle of homeostasis is used to show how the normal interaction of the structure and function is achieved and maintained by dynamic counterbalancing forces within the body. Pathology is also studied as examples of disruption to normal body homeostasis. Laboratory exercises will include computer labs, models, and experimentation

### PHC 209: Social Sciences for Public Health

#### Credits 5

The course introduces students to sociological and psychological concepts, theories and research methods as ways to understand public health problems and develop interventions to tackle those problems. The course is deliberately broad and not intended to give students an in-depth understanding of any particular theories, specific practice models, or selected research methods. Rather, its intent is to encourage an appreciation of the wealth of conceptual and methodological approaches in the social sciences that can inform public health practice and research.

### PHC 210: Independent Study

#### Credits 5

An opportunity for independent study is offered for interested and qualified students who wish to go beyond the content of regular courses. Arrangements must be made with individual faculty members and are limited by the amount of faculty time available. The independent study contract detailing the topic, structure of the study and mode of evaluation, must be signed by the student and concerned faculty prior to the registration of courses.

### PHC 300: Comparative Study of Medical Systems

#### Credits 5

This course explores different medical traditions and analyzes historical processes that mediate their relationship to modern science and technology. The course focuses on Ayurveda, Naturopathy, Homeopathy, folk and other indigenous medical systems; their historical development, epistemological foundations, structure and character, principles of treatment, and their coexistence with modern medicine, which draws upon modern science and modes of professional organization.

### Sanjeev Verma

APH student from  
Jammu & Kashmir



Having graduated in Medicine, I worked for the voluntary health sector in Jammu as a medical practitioner, which led me to realize that health status of individuals requires, not only medical skills but a broader perspective of, and skills for intervention on, a wide range of public health issues. Having followed developments in public health world wide, I was aware of the opportunities for a rewarding career in public health and was on the look out for a course that could add public health knowledge and skills to my medical background. Reading about the Institute's pioneering work in such areas as burden of disease estimation and health informatics, its faculty base, its wide range of activities, and the Advanced Studies in Public Health programme, I came to understand that the best place to obtain excellent training in various aspects of public health was the IHS, and I have not been disappointed.

The programme includes a wide range of courses having a multidisciplinary approach towards learning and enhancing skills. The Institute offers great facilities and excellent teaching along with dedicated, supportive and approachable staff. The Institute actively encourages communication between students and staff and strives to accommodate students' interests and needs. The information and computer system including Internet access have been a valuable support. I am sure that I could not have chosen a better place than the IHS to further my career in public health.

## PHC 301: Disease Causation Across Time and Culture

### Credits 5

The course will focus on social and scientific contexts, content, and implications of diverse theories of disease distribution, both past and present. Theories covered include miasma, contagion, germ theory, biomedical model, lifestyle, social production of disease, and ecosocial theory. This course helps students to develop a historical and critical perspective concerning current theories of disease distribution and incorporate this perspective in the analysis of methodological issues and contemporary findings in nutritional, infectious diseases and chronic diseases epidemiology.

## PHC 302: Dissertation

### Credits 10

The dissertation represents an original contribution to the field of public health scholarship. The objective of the dissertation is to demonstrate that the candidate has synthesized the knowledge gained during the previous semesters and is able to apply this knowledge to the resolution of a concrete and substantial applied public health research problem. The dissertation is a problem-based or issue-based inquiry that will involve empirical, applied research on a selected public health, health services, development, or public policy issue, as it manifests in an actual community, public or private health care institution, organization or delivery system. The candidate should, before commencing the investigation to be described in a thesis, secure the approval of the Faculty Committee for the topic chosen.

## Concentration Courses

### Health Systems Research

## HSR 301: Survey Research Methods in Community Health

### Credits 5; # 2nd Semester

This course covers research design, sample selection, questionnaire construction, interviewing techniques, the reduction and interpretation of data, and related facets of population survey investigations. Focuses primarily on the application of survey methods to problems of health program planning and evaluation. Treatment of methodology is sufficiently broad to be suitable for students who are concerned with epidemiological, demographic, or other types of survey research.

## HSR 302: Qualitative Research Methods

### Credits 5; # 2nd Semester

This course aims to give students a solid grounding in the logic, design and techniques framing qualitative methods. The course introduces students to the conceptual frameworks underlying interpretive methodology and focuses on building knowledge and skills needed in the design, data collection, analysis, and presentation of qualitative studies. Topics covered include: development of qualitative study designs; linking research questions to appropriate sampling and data collection techniques; preliminary work needed before entering the field; ethnographic and interviewing methods; multi-method (triangulated) data collection strategies; management, coding, analysis and presentation of qualitative data; reliability and validity of data.

## HSR 303: Statistical Reasoning in Public Health

### Credits 5; # 2nd Semester

Emphasizes concepts and methods for analysis of data which are categorical, rate-of-occurrence (e.g., incidence rate), and time-to-event (survival duration). Stresses applications in epidemiology and other public health research. Topics include measures of association; 2x2 tables; stratification; matched pair; linear and logistic regression; Cox proportional hazards regression; model building; analysis of rates; and survival data analysis.

**HSR 304: Demographic Methods and Mortality Analysis****Credits 5; # 2nd Semester**

This is an advanced course in demographic methods which provides an in-depth understanding of techniques of demographic data collection and evaluation; the measurement of population processes, composition, and distribution; social and economic characteristics of population; and mortality analysis. Topics include: assessing the important concepts and measures of health status of a population; determinants of health, mortality and morbidity; epidemiological and demographic transition; demographic and socioeconomic differentials in health, morbidity and mortality; demographic data sources; measures of population change and distribution, mortality, fertility, and migration; construction and application of life tables; population models; demographic relationships in non-stable populations; indirect estimation techniques; spatial analysis tools applied to demographic research, including issues in the collection, integration, manipulation, visualization, and analysis of both primary and secondary demographic data sources

**HSR 305: Using Evidence in Health and Social Care****Credits 5**

The course examines the underlying logic of a range of research approaches, including surveys and experiments, qualitative studies and action research. It encourages questioning of ethical dimensions of research as well as its technical quality. The topics covered include: epistemological foundation of research methods; criteria for assessing quality of research; ethics in research; surveys; experimental design; qualitative research methods such as informant interviews, focus group discussion, participatory research methods, rapid qualitative research tools and indirect observation; coding and analysis of data; presentation of qualitative data; action research; combining qualitative and quantitative research methods.

**HSR 306: Health Status Measurement****Credits 5**

This course imparts the necessary skills and tools required to measure people's valuation of different morbidity or health states. Topics covered include: measuring physical disability & handicap; measuring depression; the EuroQol method; the 6D5L description system; translation methods and cultural appropriateness; general health status & quality of life; quality of well being; health state description cards, health status measurement data entry and computing.

**Health and Social Work****HSW 301: Health, Sickness and Disease in a Community****Credits 5; # 2nd Semester**

This course covers a range of topics that familiarizes students with the basics of health promotion, prevention and treatment of diseases in a community. Specific attention will be given to health issues of women in the reproductive age group, children and the aged. Topics covered include: health beliefs and health seeking behaviour in a community; examination of a sick person; taking care of a sick person; first aid; nutrition; prevention of diseases; identification and management of common diseases; health and sickness of children, women and the elderly.

**HSW 302: Good Governance for Good Health****Credits 5; # 2nd Semester**

This course provides the knowledge and skills for managing primary health care in remote, rural and tribal areas. Topics covered include: organization of public health services in tribal and rural areas; setting priorities for action; monitoring and evaluation of PHC services; community participation; nature of organization and leadership styles; personnel management; accounting and financial management; patient referral; medicolegal services by PHC in remote areas; management of national health programmes; tapping and channeling global resources for local health.

### **HSW 303: Management of Nonprofit Organizations**

**Credits 5; # 2nd Semester**

This course focuses on leadership, management and administrative issues relating to nonprofit organizations. The course examines the history of the nonprofit sector in India and other countries; role of nonprofit activity in the development of civil society and democracy; similarities and differences between for profits and nonprofits; legal requirements and restrictions for tax-exempt organizations; relations between nonprofit organizations and external actors such as funding agencies and governments; issues involving internal governance and operations; and public policy issues relating to the nonprofit sector. Students develop skills in nonprofit management, including proposal writing, budgeting, working with volunteers, and decision making with others

### **HSW 304: Hospital Administration**

**Credits 5; # 2nd Semester**

This course is intended to provide the student an orientation and overview on managing organizations that directly provide health care with primary emphasis related to hospitals. Topics include: administrative elements of hospital functions, including background and theoretical concepts; governance; execution; information management; quality of care; sustaining human resources; external responsibilities; community outreach; medical staff-governance; legal issues and problems of hospital management. The approach is from the general to the particular, to provide students with a workable overall knowledge of hospital organization as well as more particular insight into certain typical and key departments.

### **HSW 305: Financing of Health Care**

**Credits 5; # 2nd Semester**

This course explores how the means by which countries finances costs of health services can have important effects on the quantity and quality of care provided, the efficiency and equity with which scarce resources are utilized, the general level of health and welfare, the constraints on economic development, and progress in other sectors. The course provides a comprehensive survey on the major health care financing options for developing countries and introduces students to system diagnostic criteria such as equity and efficiency, as well as assessment tools such as the National Health Account technique. Drawing on economic theory and international experiences, the course analyzes strengths and weaknesses of alternative approaches to financing, including public and quasi-public sources of finance like general tax revenue and foreign aid; social insurance; user fee financing; direct household expenditure on health care; private sources of finance including private health insurance; and community financing.

### **HSW 306: Health Care Professionals and Organization Behaviour**

**Credits 5; # 2nd Semester**

This course provides the knowledge and skills for understanding and effectively managing individuals and groups within health care organizations. The course explores a wide variety of motivations that draw individuals to their jobs and keep them productive and also consider why organizations form small groups and the dynamics of these groups over time. Emphasis is on the application of sociological concepts and methods in understanding interpersonal and professional institution relationships in health care management, professionalization of medicine, the social organization of health care practice, techniques for persuasive communication and conflict management, strategies for dealing with interpersonal problems in an organizational setting, and processes for handling work teams.

### **HSW 307: Public Health Engineering**

**Credits 5**

The course is designed to provide an orientation to building, maintenance and evaluation of public health engineering systems. Topics covered include: design and maintenance of health care institutions like health centres, clinics, hospitals; health care building maintenance policy; health care building standards; designing parking lots, ramps and staircases; plumbing, masonry and carpentry; electrical systems; landscaping; organising a hospital in camps / disaster response / emergency operations; water supply systems, sanitation, and sewerage systems.