GURU KASHI UNIVERSITY

Master of Public Health (MPH)

PG Curriculum (Appendix-III)

Session: 2025-26

Faculty of Health & Allied Sciences

Graduate Attributes of the Programme: - Master's in Public Health (MHP)

Type of learning outcomes	**The Learning Outcomes Descriptors**
Graduates should be able to demonstrate the acquisition of:	
Learning outcomes that are specific to disciplinary/interdisciplinary areas of learning	Applying epidemiological methods to investigate patterns and causes of diseases and health conditions in populations.
	Applying statistical principles and methodologies to collect, analyze, and interpret health data.
	Examining the impact of environmental conditions (e.g., air, water, food quality, climate change) on community well-being.
	Evaluating and planning policies and programs designed to improve healthcare outcomes, access, and education within populations.
	Studying how social, cultural, economic, and behavioral factors influence health outcomes and disparities.
	Understanding global health challenges, health systems in different countries, and international health initiatives.
	Focusing on health issues specific to mothers, infants, children, and adolescents.
	Developing and implementing health promotion and disease prevention programs at the community level.
	Understanding the efficient use of resources for maximum health benefits and financial management in healthcare.
Generic learning outcomes	Ability to analyze complex health issues, synthesize information from various sources, and develop evidence-based solutions.
	Proficiency in conveying complex health and scientific information clearly and effectively to diverse audiences (e.g., policymakers, communities, healthcare professionals, general public).
	Skills to lead public health initiatives, manage teams, and drive strategic goals effectively.
	Ability to work effectively in interdisciplinary teams and engage diverse stakeholders for better public health outcomes.
	Ability to work effectively in interdisciplinary teams and engage diverse stakeholders for better public health outcomes.
	Sensitivity and adaptability in working with diverse populations to ensure inclusive and equitable health interventions.

	Understanding health policy frameworks and the ability to advocate for evidence-based policies that improve health in diverse populations.
	Ability to recognize system-level properties and analyze dynamic interactions between groups, organizations, communities, and environments.
	Demonstrating personal integrity, a sense of responsibility, and dependability.
	Demonstrating the ability to constantly inquire, participate in knowledge sharing, and engage in active learning.

Programme learning outcomes: A post graduate degree is awarded to students who have demonstrated the achievement of the outcomes located at level 6:

Element of the Descriptor	**Programme learning out comes relating to Post graduate degree (2years)**
The Post graduates should be able to demonstrate the acquisition of:	
Knowledge and understanding	Comprehensive understanding of public health principles, theories, and practices, including epidemiology, biostatistics, environmental health, health policy, social and behavioral sciences, and global health and able to critically analyze public health issues and evidence.
General, technical and professional skills required to perform and accomplish tasks	proficient in a range of general, technical, and professional skills, including data analysis and interpretation, program planning and evaluation, communication (written and oral), leadership, teamwork, advocacy, and the use of relevant public health technologies and software.
Application of knowledge and skills	Effectively apply their knowledge and skills to design, implement, manage, and evaluate public health interventions and policies aimed at improving population health outcomes, addressing health disparities, and preventing disease.
Generic learning outcomes	Demonstrate advanced critical thinking, problem-solving, research, and self-directed learning abilities, enabling them to adapt to evolving public health challenges and contribute to evidence-based practice.
Constitutional, humanistic, ethical, and moral values	Committed to upholding constitutional principles, humanistic values, and high ethical and moral standards in all aspects of public health practice, ensuring equitable access to health, respect for diverse populations, and protection of human rights.
Employability and job-ready skills, and entrepreneurship skills and capabilities/qualities and mindset	Possess strong employability and job-ready skills, including professionalism, adaptability, resilience, and the ability to work effectively in diverse public health settings. They will also cultivate an entrepreneurial mindset, demonstrating initiative, innovation, and the capacity to identify and pursue opportunities for public health improvement.
Credit requirements	First 2 semesters of 2-year PG programme and earns 44 credits, and then a Post Graduate Diploma in Public Health will be awarded.
Entry requirements	3-year Bachelor's Degree in Medical / Dental / AYUSH / Nursing

Program Structure

SEMESTER: 1st									
Course Code	**Course Title**	**Type of Courses**	**L**	**T**	**P**	**No. of Credits**	**Int.**	**Ext.**	**Total Marks**
MHP1400	Basic Concepts in Public Health	Core Course	4	0	0	4	30	70	100
MHP1401	Basic Epidemiology-I	Core Course	4	0	0	4	30	70	100
MHP1402	Maternal and Child Health	Core Course	4	0	0	4	30	70	100
MHP1403	Survey Methods	Skill Based	4	0	0	4	30	70	100
IKS0022	Indian Cultural Studies	VAC	2	0	0	2	30	70	100
Discipline Elective (Any one of the following)									
MHP1404	Environmental Health	Disciplinary Elective	4	0	0	4	30	70	100
MHP1405	Environmental Field Epidemiology Project/Action Research								
Total			**22**	**0**	**0**	**22**	**180**	**420**	**600**

SEMESTER: 2nd									
Course Code	**Course Title**	**Type of Courses**	**L**	**T**	**P**	**No. of Credits**	**Int.**	**Ext.**	**Total Marks**
MHP2450	Biostatistics	Core Course	4	0	0	4	30	70	100
MHP2451	Occupational Health and Safety Management	Core Course	4	0	0	4	30	70	100
MHP2452	Basic Computing and Research Methodology	Core Course	4	0	0	4	30	70	100
MHP2453	Disaster and Conflict management in Public Health	Skill Based	4	0	0	4	30	70	100
MHP2454	Project I	Skill Based	0	0	4	2	30	70	100
Discipline Elective (Any one of the following)									
MHP2455	Field Epidemiology Project/Action Research For Special Groups	Disciplinary Elective	4	0	0	4	30	70	100
MHP2456	Global Health								
Total			**20**	**0**	**04**	**22**	**180**	**420**	**600**

Programme learning outcomes: A post graduate degree is awarded to students who have demonstrated the achievement of the outcomes located at level 6.5:

Element of the Descriptor	**Programme learning out comes relating to Post graduate degree (2years)**
The Post graduates should be able to demonstrate the acquisition of:	
Knowledge and understanding	Comprehensive understanding of public health principles, theories, and practices, including epidemiology, biostatistics, environmental health, health policy, social and behavioral sciences, and global health and able to critically analyze public health issues and evidence.
General, technical and professional skills required to perform and accomplish tasks	proficient in a range of general, technical, and professional skills, including data analysis and interpretation, program planning and evaluation, communication (written and oral), leadership, teamwork, advocacy, and the use of relevant public health technologies and software.
Application of knowledge and skills	Effectively apply their knowledge and skills to design, implement, manage, and evaluate public health interventions and policies aimed at improving population health outcomes, addressing health disparities, and preventing disease.
Generic learning outcomes	Demonstrate advanced critical thinking, problem-solving, research, and self-directed learning abilities, enabling them to adapt to evolving public health challenges and contribute to evidence-based practice.
Constitutional, humanistic, ethical, and moral values	Committed to upholding constitutional principles, humanistic values, and high ethical and moral standards in all aspects of public health practice, ensuring equitable access to health, respect for diverse populations, and protection of human rights.
Employability and job-ready skills, and entrepreneurs hip skills and capabilities/qu alities and mindset	Possess strong employability and job-ready skills, including professionalism, adaptability, resilience, and the ability to work effectively in diverse public health settings. They will also cultivate an entrepreneurial mindset, demonstrating initiative, innovation, and the capacity to identify and pursue opportunities for public health improvement.
Credit requirements	A 1 year / 2 semesters Master's programme builds on a bachelor's with Honors/ Honors with research and requires 44 credits for individuals who have complete a Bachelor's degree (Honors/ Honors with research). A 2-year/4-semester Master's Programme builds on a 3-year/6 semester Bachelor's degree and requires a total of

	88 credits from the first and second years of the Programme, with 44 credits in the first year and 44 credits in the second year of the Programme at level 6.5 on the NHEQF.
Entry requirements	4-year Bachelor's degree (Honors / honors with research) of Medical / Dental / AYUSH / Nursing

SEMESTER: 3rd									
Course Code	**Course Title**	**Type of Courses**	**L**	**T**	**P**	**No. of Credits**	**Int.**	**Ext.**	**Total Marks**
MHP3500	Basic Epidemiology-II	Core Course	4	0	0	4	30	70	100
MHP3501	Health Economics and Service Planning	Core Course	4	0	0	4	30	70	100
MHP3502	Health Informatics	Core Course	4	0	0	4	30	70	100
MHP3503	Dissertation I	Research Skill Based	0	0	0	12	30	70	100
MHP3504	Project II	Skill Based	0	0	4	2	30	70	100
Total			**12**	**0**	**4**	**26**	**150**	**350**	**500**

SEMESTER: 4th									
Course Code	**Course Title**	**Type of Courses**	**L**	**T**	**P**	**No. of Credits**	**Int.**	**Ext.**	**Total Marks**
MHP4550	Public Health Law, Ethics and Human Rights	Core course	4	0	0	4	30	70	100
MHP4551	Health Education and Counseling	Skill Based	4	0	0	4	30	70	100
MHP4552	Dissertation II	Research Skill Based	0	0	0	12	30	70	100
MHP4553	Strategic management and Entrepreneurship in health care	EEC	2	0	0	2	30	70	100
Discipline Elective (Any one of the following)									
MHP4554	Health for Special Groups	Disciplinary Elective	4	0	0	4	30	70	100
MHP4555	Public Health in India and World								
Total			**14**	**0**	**0**	**26**	**150**	**350**	**500**
Grand Total			**52**	**0**	**24**	**88**			

1st SEMESTER

Course Title: BASIC CONCEPTS IN PUBLIC HEALTH	L	T	P	Cr.
Course Code: MHP1400	4	0	0	4

Total Hours 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Understand the foundational concepts of health and its various dimensions.
2. Differentiate between public health and medical care.
3. Explain the specific health needs of different population groups.
4. Students will be able to describe the infrastructure and resources necessary for public health.
5. Analyze public health problems and propose interventions.

Course Contents

UNIT-I **15 Hours**

Definition and Concept of Health, Dimensions of Health, Spectrum of Health, Positive Health, Determinants of Health, Indicators of health, Burden of disease, Health promotion, Concept of Prevention, levels of preventions, Intervention, Assessing Health needs, Health for all, Millennium Development Goals, Sustainable Development Goals

UNIT-II **15 Hours**

Definition and Concept of Public Health, Historical aspects of Public Health, Changing Concepts of Public Health, Public Health versus Medical Care, Unique Features of Public Health, Public Health as a System, Interdisciplinary nature of Public Health, Role of different disciplines in Public Health, Scope of Public Health, Controversies in Public Health, Changing pattern of Health, Present Scenario of Public Health, Future challenges of Public Health.

UNIT-III **15 Hours**

Health for special groups, adolescent health. Gerontology, Demography of ageing population, Geriatric health care in India, Health problems of the elderly in India, Ayurveda and old age, rehabilitation of elderly, future scenario of geriatric care in India, Mental Health, Disability, Public Health as carrier.

UNIT-IV **15 Hours**

The infrastructure of Public Health, Human resources in Public Health, Information resources, Organizational resources. Understanding and Measuring health, Analyzing Health Problems for Causative Factors. Lessons from a Century of progress in Public Health, National and

International Public Health Agencies, Public Health Intervention, Program and services.

Transactional modes: Video based teaching, Collaborative teaching, Case based teaching, Question-Answer

Suggested Readings

- K. Park, Textbook of Preventive and Social Medicine, BanarsidasBhanot.
- M.C. Gupta and B.K. Mahajan, Textbook of Preventive and Social Medicine, Jaypee Brothers Medical Publishers (P) Ltd
- J.S. Mathur, Textbook of Preventive and Social Medicine, CBS publisher.
- Roger Detels, James McEwen, Robert BeagleholeandHeizo Tanaka, Oxford Textbook of Public Health, Helen Liepman.
- Sunderlal, Aadarsh, Pankaj, Textbook of Community Medicine, CBS Publishers & Distributors.
- Kirch, Wilhelm, Encyclopedia of Public Health, Volume 1 & 2, Kluwer Academic Publishers.
- Mary -Jane Schneider and Henrey Schneider, Introduction to Public Health, Jones and Bartlett Publishers.
- Gordon Edlin, Eric Golanty, Health & Wellness, Jones & Bartlett Publishers.
- Julia Brooking, Susan Ritter, Ben Thomas, A Textbook of Psychiatric and Mental Health Nursing,. Churchill Livingstone
- Sebastian Kraemer, Textbook of Men's Mental Health, Edited by Jon E. Grant & Marc N. Potenza. American Psychiatric Publishing.
- Nancy Hooyman, H. AsumanKiyak, Allyn& Bacon, Social Gerontology: A Multidisciplinary Perspective.
- J. Grimley Evans, T. Franklin Williams, B. Lynn Beattie, J-P. Michel, G. K. Wilcock, Oxford Textbook of Geriatric Medicine, Oxford University Press.
- Tom Shakespeare, Disability Rights and Wrongs, , Routledge Pub
- James Lake, Textbook of Integrative Mental Health Care, Thieme Med. Pub
- Susan B. O'Sullivan, Thomas J. Schmitz, Physical Rehabilitation.

Course Title: BASIC EPIDEMIOLOGY-I	L	T	P	Cr.
Course Code: MHP1401	4	0	0	4

Total Hours: 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Understand the fundamental concepts, history, and applications of epidemiology.
2. Calculate and interpret key epidemiological measurements, such as rates, ratios, and prevalence.
3. Differentiate between and apply various epidemiological study designs.
4. Analyze and interpret epidemiological data, identifying potential sources of bias and confounding.
5. Explain the principles of infectious disease transmission, control, and prevention through screening and vaccination.

Course Contents

UNIT-I **14 Hours**

Historical aspects of epidemiology, Basic concepts, definition and significance, aims of epidemiology, Clinical versus epidemiological approach, The epidemiology triad, Issues and problems of epidemiology, Applications and uses of epidemiology Concept of diseases, concept of causation, natural history of disease, spectrum of disease, concept of control, frequency and distribution of disease, determinants of disease, disease classification (ICD 10/ICD 11)

UNIT-II **14 Hours**

Basic measurements in epidemiology (rates, ratios and proportions), Measurements of mortality Measurements of morbidity (prevalence and incidence), Demography: Definition and Concept Demographic cycle. Global trends in demography, Indian trends in demography (age pyramids, sex ratio, dependency ratio, density, family size, life expectancy, birth and death rates, growth rates).

UNIT-III **16 Hours**

Outline of various study designs. Methods of descriptive epidemiology, analytical epidemiology, experimental epidemiology. Environmental epidemiology, role of Environmental epidemiology in public health, epidemic curve, sampling design and data collection, sources of data, criteria for quality and utility of epidemiologic data, confidentiality, sharing of data and recall linkage, data interpretation issues, Bias, Confounding

UNIT-IV **16 Hours**

Infectious disease epidemiology, Disease transmission. Disease prevention and control, Screening, Host defenses/immunizing agents, Vaccines under National Immunization Schedule, Newer Vaccines, Concept of screening,

screening and diagnostic tests, concept of lead time, sensitivity and specificity, uses of screening

Transactional modes: Video based teaching, Collaborative teaching, Case based teaching, Question-Answer

Suggested Readings:

- K. Park, 2013, Textbook of Preventive and Social Medicine, BanarsidasBhanot.
- M.C. Gupta and B.K. Mahajan, Textbook of Preventive and Social Medicine,Jaypee Brothers Medical Publishers (P) Ltd.
- J.S. Mathur, 2007 (1st edition), Textbook of Preventive and Social Medicine, CBS publisher.
- Roger Detels, James McEwen, Robert Beaglehole and Heizo Tanaka, Oxford Textbook of Public Health, Helen Liepman.
- Wayne W. Daniel, Epidemiology and Prevention- A System based Approach, Oxford.
- Sunderlal, Aadarsh, Pankaj, Textbook of Community Medicine, CBS Publishers & Distributors.
- Kirch, Wilhelm, Encyclopedia of Public Health, Volume 1 & 2, Kluwer Academic Publishers.

Course Title: MATERNAL AND CHILD HEALTH	L	T	P	Cr
Course Code: MHP1402	4	0	0	4

Total Hours: 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Understand the principles of family planning and various contraceptive methods.
2. Able to identify key nutritional risk factors and public health measures for their amelioration.
3. Learn about reproductive and perinatal epidemiology and programs aimed at reducing maternal and child mortality.
4. Able to apply demographic concepts, including measures of fertility and mortality, to population analysis.
5. Gain knowledge of key public health programs such as RMNCH and the Universal Immunization Program.

Course Contents

UNIT-I **15 Hours**

Family Planning: Definition, Scope, and Concepts, Health aspects of family planning, small family norms, eligible couple, target couple, couple protection rate, Contraceptive methods, Unmet need for family planning, Reproductive, Maternal, Neonatal and Child Health (RMNCH) services, Innovations in services delivery

UNIT-II **15 Hours**

Nutrition and Public Health, Principles of food and nutrition, Nutrition relevant to health, nutrition related carbohydrates, protein, fat, vitamin, mineral etc. Recommended dietary allowances, Epidemiology, classification of nutrition risk factors. Amelioration of nutrition risk factors through public health measures, Nutritional deficiencies and related diseases, Under and Overnutrition, Role of community nutrition, Nutritional need assessment, Nutrition program, nutrition requirement of pregnant and lactating mothers.

UNIT-III **15 Hours**

Reproductive and perinatal epidemiology, Factors specific to Indian situations leading to maternal and child health, Linkage between health of women and babies, Preventive and therapeutic concepts of reduction of morbidity and mortality among mothers and children, RMNCH Program, Indicators of MCH care, Breast feeding, Universal Immunization program, Mother friendly childbirth initiatives.

Unit-IV **15 Hours**

Demography and population sciences, Factors affecting population, measures of fertility and mortality, standardization methods, population

growth and projections, demographic transition, implication of rapid population growth, Growth standards/ norms, demographic dividend, life table, urbanisation.

Transactional modes: Video based teaching, Collaborative teaching, Case based teaching, Question-Answer.

Suggested readings:

- J.S. Mathur, Textbook of Preventive and Social Medicine, CBS Publishers.
- Roger Detels, James McEwen, Robert Beaglehole and Heizo Tanaka, Oxford Textbook of Public Health, Helen Liepman
- Frances Sizer and Eleanor Whitney, 1977 (7th edition), Nutrition-Concepts and Controversies, West Wadsworth.

Course Title: SURVEY METHODS	L	T	P	Cr.
Course Code: MHP1403	0	0	8	4

Total Hours 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Able to design and structure effective surveys using various question types and scales.
2. Gain the ability to administer surveys, ensuring reliability and validity while adhering to ethical guidelines.
3. Learn to select appropriate sampling methods and determine sample size for different research designs.
4. Develop skills in analyzing and interpreting survey data using common statistical methods and data visualization techniques.
5. Prepared to effectively report survey findings through both written and oral presentations.

Course content

UNIT-I **15 Hours**

What is a survey?, When is a Survey Best?, Self-Administered Questionnaires and Interviews: The Heart of the Matter, The Friendly Competition, A Survey Continuum: From Specific to General Use. The content is the message, define the terms, select your information needs or hypotheses, make sure you can get the information, do not ask for information unless you can act on it, writing questions, organizing responses to open-ended survey items: do you get any satisfaction?, rules for writing closed survey questions, responses for closed questions, rating scales, online survey questions, scaling

UNIT-II **15 Hours**

Length counts, getting the survey in order, questionnaire format: aesthetics and other concerns, branching questions, or the infamous “skip” pattern, Administration: who gives what to whom? The survey is put on trial, reliability and validity: the quality of your survey, guidelines for pilot testing, ethics, privacy, and confidentiality, a far-reaching world: surveys, language, and culture. Sample size and response rate: who and how many?, random sampling methods, stratified random sampling, systematic sampling, convenience samples, other convenience sampling methods

UNIT-III **15 Hours**

Finding the samples: who is in? who is out?, how large should your sample be?, statistical methods: sampling for two groups and an intervention, response rate. Which designs are available?, cross-sectional survey designs, longitudinal surveys or cohorts, comparison group survey designs: quasi- and true experiments, other survey designs: normative and case control, survey design validity, research design and internal and external validity

UNIT-IV **15 Hours**

Some commonly used methods for analyzing survey data, surveying differences: Usual Methods, To be or not to be: statistician or qualitative analyst?, content analysis, openended reposes, and comments, putting the horse in front of the cart: selecting analysis methods, data management, creating a code book Reproducing the Questionnaire, using tables, drawing pie diagrams, using bar graphs, using line graphs, drawing diagrams or pictures, writing the results of a survey, the oral presentation, slide presentations, oral versus written reports: a difference in conversation, oral health survey.

Transactional modes: Video based teaching, Collaborative teaching, Case based teaching, Question Answer

Suggested Readings:

- Edward L. Korn, Barry I. Graubard, Analysis of Health Surveys.
- Koepsell, T and Weiss, N., Epidemiologic Methods, Studying the Occurrence of Illness. Oxford University Press.
- K. Park, Textbook of Preventive and Social Medicine, BanarsidasBhanot.
- AshaKaul, The effective presentation, Sage publication. 11
- Michael Jay Polonsky, David S. Waller, Designing and managing a research project, saga Publication
- Nicholas Walliman, Your Research Project, Vistaar Publication
- World Health Organisation, Oral Health Surveys - Basic Methods, WHO Geneva

Course Title: Indian Cultural Studies	L	T	P	Cr.
Course Code: IKS0022	2	0	0	2

Total Hours: 30

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Understanding Modern Indian Thought: Students will gain a theoretical foundation to explore how Indian philosophical and cultural ideas since the early 20th century have shaped individual and collective experiences.
2. Analyzing Cultural Transformations: Learners will investigate the impact of modern Indian thought on personal identity and cultural context, understanding its role in shaping societal values and worldviews.
3. Developing Conceptual Vocabulary: Students will become familiar with key ideas and terminologies introduced in the course, enabling them to critically engage with and interpret modern Indian intellectual traditions.
4. Articulating Personal and Shared Experiences: Learners will cultivate the ability to express their own and others & experiences using the conceptual and philosophical frameworks discussed in the course.

Course Content

Unit 1 **7 Hours**

Introduction: (Orientalist, colonial and contemporary representation of India)

Unit 2 **8 Hours**

Indian difference: (Aurobindo, Ramanujan, Bankimchandra, Malhotra and others),
Self and subjectivity: (Gandhi, Upadhyay, M.N. Roy, Ashis Nandy, Dharmapal and others)

Unit 3 **7 Hours**

Home, Nation and the World: (Nehru, Tagore, Ambedkar, Savarkar, Mazumdar,
Malaviya and others)

Unit 4 **8 Hours**

Swaraj: (Lajpat Rai, Gandhi, Tilak, Rajaji, Alvares, Balagangadhar and others), Art and aesthetics: (Coomaraswamy, Hiriyana, Radhakrishnan, Aurobindo, Naipaul, Devy and others)

Transactional Mode

Seminars, Group discussion, Team teaching, Focused group discussion,
Assignments, Project-based learning, Simulations, reflection and Self-assessment

Suggested Readings

- Knut A. Jacobsen. Ed. Modern Indian Culture and Society. Routledge: London,
- 2009.
- Upadhyay, Deendayal. Integral Humanism. 1965. http://www.chitrakoot.org/download/IntegralHumanism.pdf
- Savarkar, V.D. The Essentials of Hindutva. http://savarkar.org/en/encyc/2017/5/23/2_12_12_04_essentials_of_hind tva.v001.pdf_1.pdf
- Vasudha Dalmia & Rashmi Sadana. Eds. The Cambridge Companion to Modern Indian Culture. Cambridge University Press: Cambridge, 2012.
- Alvares, Claude. “A Critique of the Eurocentric Social Science and the Question of Alternatives”. Economic and Political Weekly. 46. 22, 2011.
- Ambedkar, B.R. Pakistan or the Partition of India. Columbia University:
- http://www.columbia.edu/itc/mealac/pritchett/00ambedkar/ambedkar_partition
- Balagangadhara,S.N. Reconceptualizing India Studies. Oxford University Press: New Delhi, 2012.
- Chatterjee, Partha. Nationalist Thought and the Colonial World: A Derivative Discourse. Zed Books: London,1993.
- Chattopadhyay, Bankimchandra. “Is Nationalism a Good Thing?” and “Critics of Hinduism”. In Awakening Bharat Mata, ed. Swapan Dasgupta. Penguin: New Delhi,
- 2019.
- Coomaraswamy, A.K. “Indian Nationality”. Indian Philosophy in English: From Renaissance to Independence. Oxford University Press: New York, 2011.
- Gandhi, M.K. Hind Swaraj. Navjeevan Publishing: Ahmedabad, 1938.
- Ghosh, Aurobindo. “A Defence of Indian Culture”. The Renaissance in India and other Essays on Indian Culture. Sri Aurobindo Ashram: Pondicherry, 2002.

Course Title: ENVIRONMENTAL HEALTH (OPEN ELECTIVE)	L	T	P	Cr.
Course Code: MHP1404	4	0	0	4

Total Hours: 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Understand the basic concepts of environmental health and the role of professionals in this field.
2. Able to explain the impact of air quality, pollution, and climate change on human health.
3. Able to identify water quality issues, pollutants, and their effects on health.
4. Learn about the relationship between housing, sanitation, and solid waste management on a healthy environment.
5. Able to explain food safety issues, including contaminants, additives, and food borne diseases.

Course Content

UNIT-I **15 Hours**

Basic concepts and definition of Environment, Different aspects of Environment (Physical, Biological and Social) Impact of Environmental factors on health, Nature of environmental hazards (Biological, Chemical, Physical, Mechanical and Psycho-social), Role of environmental health professionals, Meteorological environment, ventilation, Light, Noise, Radiation, Nature of adverse effects on health and interventions, Role of national and international agencies in protecting the environment and promotion of environmental health.

UNIT-II **15 Hours**

Air quality and health, Composition of atmosphere, atmosphere structure, Primary and secondary pollutants and their effects, criteria pollutants, air quality standards, Vehicular pollution, Indoor air pollution, Climate Change, Global warming, Green House Gases, Ozone layer depletion, acid rain etc., Current and emerging issues in environmental health

UNIT-III **15 Hours**

Water quality and health, water pollutants, sources of pollutants, organic pollutants, inorganic pollutants, DO, BOD, COD, surveillance of drinking water quality, water quality standards, water quality index, water borne diseases, Hardness in water, Eutrophication, thermal pollution.

UNIT-IV **15 Hours**

Basic requirements for a healthy environment, Housing and health, Swachhbharatabhiyan, National green tribunal, Pollution control board, Sanitation and health, Solid waste problems in India, Solid waste management, Bio medical waste management Food contaminant food additives, Food quality criteria and assurance, Food borne diseases, food poisoning, Vector and rodent control.

Transactional modes: Video based teaching, Collaborative teaching, Case based teaching, Question Answer

Suggested Readings:

- AnnaleYassi, TordKjellstorm, Theo de Kok and Tee L. Guidotti, Basic Environmental Health, OxfordUniversity Press
- Williams, PL, James RC, and Roberts SM, Principles of Toxicology: Environmental and Industrial Applications,. John Wiley & Sons, Inc.

Course Title: ENVIRONMENTAL FIELD EPIDEMIOLOGY PROJECT/ ACTION RESEACH (OPEN ELECTIVE)	L	T	P	Cr.
Course Code: MHP1405	4	0	0	4

Total Hours 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Able to identify and analyze various environmental issues.
2. Learn to conduct research and collect data on a specific environmental problem.
3. Develop skills in writing a detailed project report.
4. Able to present their research findings effectively.
5. Gain an understanding of how to address and propose solutions for environmental challenges.

Course Contents

Project/ action research related to current/global/local environmental issues like

- climate change,
- global warming,
- air pollution,
- safe drinking water,
- noise pollution,
- ewaste,
- biomedical waste,
- alternate resources,
- depletion of ground water,
- pesticides,
- poisoning metals etc.

Report writing, submission, presentation

NOTE: Students are required to submit the detailed report of field work done by them followed by the presentation.

2nd Semester

Course Title: BIOSTATISTICS	L	T	P	Cr.
Course Code: MHP2450	4	0	0	4

Total Hours 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Understand and apply fundamental statistical concepts.
2. Design and execute a research study.
3. Perform and interpret statistical analyses.
4. Communicate statistical findings effectively
5. Evaluate and critique scientific literature.

Course Contents

Unit I **14 Hours**

Biostatistics: its meaning and objectives, measurement scales, Population and Samples. Data presentation, Frequency tables, graphs, Diagrams. Measures of location, measures of dispersion, variability (box and whisker plot), skewness and kurtosis

Unit II **16 Hours**

Intuitive concept of probability, conditional probability (Bayesian theorem), Specificity, Sensitivity and ROC Curve, cohort study, case control study, randomized control trials, relative risk, odds ratio. Scatter diagram, correlation and Spearman's rank Correlation Coefficient, Regression and multipleregressions, logistic regression, Random variables, probability mass function, probability density function, expectation and variance, normal distributions. (Practical using any one statistical software)

Unit III **14 Hours**

Vital statistics (standardized rates, morbidity, mortality, fertility rates) Sampling Techniques, Sample size, Distributions of sample mean, difference of means, sample proportion and difference of proportions, the basic idea of testing hypothesis , Tests of hypothesis for the parameters of a normal distribution (two sample problems also) including normal testing for population proportions, paired t-test, chi-square tests, (Practical using any one statistical software)

Unit IV **16 Hours**

Analysis of variance (ANOVA). Non-parametric: Sign-test, Wilcoxon Signed rank test, Mann-Whitney U-test. Kappa Coefficient of Agreement, Survival Analysis (Kaplan Meir Estimates, Life Table Method), (Practical using any one statistical software

Transactional modes: Video based teaching, Collaborative teaching, Case based teaching, Question-Answer

Suggested Readings

- Goon A.M., Gupta M.K.,DasguptaB,Fundamentals of Statistics Vol.

I/II,World Press, Calcutta.
- Alan Agresti, Categorical Data Analysis, John Wiley & Sons.
- GoletiBalaKrishanmurty, Patricia Kasoviaschmitt, David J. Ostrott, Statistics, Jones Bartlett
- Martin Bland, An Introduction to Medical Statistics, New York, NY: Oxford University Press.
- R. Peck, C. Olsen, and J. Devore, Introduction to Statistics & Data Analysis.Thomson Learning: Belmont, CA
- R. Peck and J. Devore, Statistics: The Exploration and Analysis ofData, Brooks/Cole – Thomson Learning: Belmont, CA

Course Title: OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT	**L**	**T**	**P**	**Cr.**
Course Code: MHP2451	**4**	**0**	**0**	**4**

Total Hours 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Identify and classify various occupational health risks and hazards.
2. Differentiate between intentional and unintentional injuries and describe their prevention.
3. Explain key occupational health policies, acts, and management systems.
4. Analyze the extent of industrial pollution and its impact on workers' health.
5. Discuss the causes of industrial accidents and recommend preventive measures.

Course Contents

UNIT-I **15 Hours**

Occupational health: definition, occupational health risks, occupational hazards (physical, chemical, biological, mechanical, psychological), common occupational diseases: diseases due to metal, air pollution, water pollution, work related diseases (pneumoconiosis, Anthracosis, Byssinosis, Bagassosis, Asbestosis, Farmer's lung and lead poisoning), occupational cancer (skin cancer, lung cancer, bladder cancer, leukemia), hazardous agents in the workplace, prevention of health risks,

UNIT-II **15 Hours**

Injuries: definition, types of injuries, intentional (homicide, assault, suicide etc.) and unintentional (motor vehicle crashes, falls, poisonings, fires, etc.) injuries, preventions and control of unintentional and intentional injuries in the workplace, violence in our society and resources for prevention, cost of injuries to society, ergonomics, Firstaid

UNIT-III **15 Hours**

occupational health policy, NABH, occupational safety and health acts, Emergency preparedness and response, safety inspection, SHE audits, industrial safety, industrial Hygiene, Health and safety management systems organizing, Risk assessment and controls, monitoring, investigation and recording, audit and review, Summary of ILO, OSH conventions, legal framework and country examples

UNIT-IV **15 Hours**

Extent of industrial pollution, major chemical contaminates of concern in the general environment and the workplace, Sickness absenteeism, improving occupational health Accidents : types, causes, classification, Preventive measures, accident investigation, accidents reports and record keeping, safety at workplace, industrial accidents (Bhopal gas tragedy and London fog smog), measures of health protection of workers in India, (medical, legislation, engineering and administration, personal protective equipments, safety in hazardous area, fire prevention and fire fighting hazard identification

Transactional modes: Video based teaching, Collaborative teaching, Case based

teaching, Question Answer

Suggested Readings

- Grad, FP., Public Health Law Manual. American Public Health Association.
- Susan B. O'Sullivan, Thomas J. Schmitz, Physical Rehabilitation.
- James F. McKenzie, Robart R. Pinger, Jerome E. Kotecki, An Introduction to community Health, Jones and Bartlett Publishers. 16
- K. Park, Textbook of Preventive and Social Medicine, Banarsid as Bhanot..

Course Title: BASIC COMPUTING AND RESEARCH METHODOLOGY	**L**	**T**	**P**	**Cr.**
Course Code: MHP2452	**4**	**0**	**0**	**4**

Total Hours 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Understand the fundamental components and functions of a computer system and its role in public health.
2. Demonstrate proficiency in using various software applications like Word, Excel, and PowerPoint for data management and presentation.
3. Formulate and design a research study, including setting objectives and preparing a research protocol.
4. Learn to collect, analyze, and interpret data using statistical methods and present the results effectively.
5. Write an impressive manuscript or thesis paper, incorporating proper formatting and referencing.

Course Contents

UNIT-I **15 Hours**

Computer system and its components, control unit, ALU, input/output functions and characteristics, memory – RAM ROM and other types of memory. Storage fundamentals – primary vs secondary data storage and retrieval methods, Artificial intelligence and public health, application of machine learning in health care

UNIT-II **15 Hours**

Software's Application, software and its application and its types –Windows vista, window XP, window 7, Word, Excel:-Data entry, Statistical functions and Graphics capabilities. Power -point, characteristics, uses and examples and area of applications of each of them, virus working principles, types of viruses, virus detection and prevention. web page design, writing a report, front page, index, references, tables,graphs, hyper linking

UNIT-III **15 Hours**

Understand the basics of medical research,formulation of the research problem, setting research objectives, designing the research study, including method of data collection, Prepare the research protocol, Review the existing information, Identify and assess medical uncertainties in the investigation, Control uncertainties by evolving a good design, Exercise additional care in medical experiments and clinical trials

UNIT-IV **15 Hours**

Draw an adequate sample, Collect, record and collate the data, statistical analysis, up to the stage of interpretation and dissemination of the resultsAssess health and disease, Measure degree of uncertainty in the results by odds and risk, Evaluate statistical significance, confidence intervals and robustness, Assess relationship and cause-effect, Present results effectively, Write an impressive manuscript of a thesis/paper

Transactional modes: Video based teaching, Collaborative teaching, Case based teaching, Question-Answer.

Suggested readings:

- Douglas G. Altman, Practical Statistics for Medical Research, Chapman & Hall/CRC.
- Kahlon, K.S., Singh, Gurvinder Singh, Rachhpal, Computer Fundamentals and Programming,
- Douglas Goldstein, Peter J. Groen, SunitiPonkshe, Mare Wine, Medical Informatics 20/20,Jones and Bartlett Publishers.
- Singh Jagdeep, Computer Science and Application.

Course Title: DISASTER AND CONFLICT MANAGEMENT IN PUBLIC HEALTH	**L**	**T**	**P**	**Cr.**
Course Code: MHP2453	**0**	**0**	**8**	**4**

Total Hours 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Understand the definitions, concepts, and significance of disaster management.
2. Differentiate between natural and man-made disasters and their various types.
3. Learn about the different phases of disaster management, including response, preparedness, mitigation, and relief.
4. Understand the roles of various stakeholders in disaster management, such as governments, NGOs, and international agencies.
5. Familiar with specific disaster management strategies, including those for health sectors, epidemics, and psychological first aid.

Course Contents

UNIT-I **15 Hours**

Definition, Concept, Objectives, Elements and Significance of Disaster Management. Dimensions and typology of Disasters: Natural Disasters- include broad outlines regarding natural disasters such as; earthquakes, volcanic eruptions, floods, landslides, avalanches, tsunamis, cyclones, climatic change, droughts and epidemics. Manmade Disasters- include wars, industrial accidents, soil degradation, desertification, deforestation, radiation hazards, depletion of water resources, destruction of ecological, system, landslides, fire, oil spill, breakdown of essential services etc.

UNIT-II **15 Hours**

Aspects of Disaster Management, Response, Preparedness, Mitigation, Relief Phase, Role of union & state Governments., Non-Governmental Organizations, International Agencies and friendly countries, Epidemiological Surveillance and disease control, Vaccination, Nutrition, Rehabilitation. Post-Traumatic stress Disorder, Personal Protection in different emergencies, yoga and meditation.

UNIT-III **15 Hours**

Disaster management in health sectors, Disaster preparedness, Policy development, Disasters in India, Conflicts, Radiation Hazards, Stress and Strains, Urban slum, Climate variations and publichealth. NDM Policy Disaster Management in India. Disasters Management Act 2005. Disaster management plan for schools, emerging trends in disaster management.

UNIT-IV **15 Hours**

Epidemics: Definition, Types of Epidemics, Major Epidemics, Control, Preventions. Outbreak investigation, Safe and Hygienic food, Maintenance of infection free environment, maintaining mental health during and after disasters. Rehabilitation after the outbreak, Pandemics. Psychological First Aid (What is Psychological First Aid? Psychological First Aid (PFA), basic component of PFA, PFA Action Principle, PFA aims to reduce stress

symptoms and assist in a healthy recovery following a traumatic event, natural disaster, public health emergency, or even a personal crisis.

Field Visit - SDMA
Meteorological Deptt.

Transactional modes: Video based teaching, Collaborative teaching, Case based teaching, Question Answer

Suggested Readings

- World Health Organization, regional Office for the Western Pacific, 1998, District Health Facilities: guidelines for development & operations, WHO, regional publications, Western Pacific Series No. 22.
- Michael I. Greenberg, Encyclopedia of Terrorist, Natural and Man Made Disasters, Jones & Bartlett Pub
- World Health Organization, 2000, The Management of Nutrition in Major Emergencies, WHO, Geneva.
- Textbook on Disaster Management, Together Towards A Safer India III, 2008. NCERT Publication

Course Title: Project I	L	T	P	Cr.
Course Code: MHP2454	0	0	4	2

Total Hours 30

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Students will be able to independently research a specific topic related to the field of study, identify key questions or problems, and gather relevant information from reliable sources.
2. Students will be able to design a clear and feasible project plan, including objectives, methodology, timeline, and resource management.
3. Students will demonstrate the ability to collaborate effectively within a team, contributing to group discussions, decision-making, and the completion of the project.
4. Students will reflect on their learning experiences throughout the project, evaluating their strengths and areas for improvement, and setting goals for future projects.
5. Use foundational concepts and techniques relevant to the discipline to inform project planning and execution.

List of Project I **30 Hours**

1. **Impact of Climate Change on Public Health:** A study analyzing the correlation between changing weather patterns and the prevalence of vector-borne diseases in a specific region.
2. **Health Equity and Access:** An investigation into the disparities in healthcare access and outcomes among different socioeconomic groups in an urban setting.
3. **Maternal and Child Health:** A project evaluating the effectiveness of a community-based intervention program on improving maternal and child health indicators in a rural area.
4. **Non-Communicable Diseases (NCDs):** A research project assessing the risk factors and prevalence of a specific NCD, such as diabetes or hypertension, in a target population.
5. **Mental Health Services:** A study on the availability, accessibility, and utilization of mental health services in a specific district, identifying gaps and suggesting policy recommendations.
6. **Infectious Disease Surveillance and Response:** A project analyzing the public health system's response to a recent disease outbreak and identifying areas for improvement in surveillance and communication.
7. **Occupational Health and Safety:** An assessment of occupational health hazards and safety practices in a specific industry, with recommendations for policy and intervention.
8. **Nutrition and Food Security:** A project evaluating the impact of a government-run nutrition program on the nutritional status of children and women in a particular community.

9. **Health Policy Analysis:** A critical analysis of a recent health policy, examining its potential impact on health outcomes, equity, and the healthcare system.
10. **Water, Sanitation, and Hygiene (WASH):** A study on the impact of poor WASH facilities on the health of school-going children in a low-resource setting.
11. **Health Communication and Education:** A project developing and evaluating a health communication campaign to raise awareness about a specific public health issue, such as vaccination hesitancy or substance abuse.
12. **Digital Health and Telemedicine:** A study on the effectiveness and challenges of using telemedicine to provide healthcare services in remote or underserved areas.

Course Title: FIELD EPIDEMIOLOGY PROJECT/ ACTION RESEACH FOR SPECIAL GROUPS (OPEN ELECTIVE)	**L**	**T**	**P**	**Cr.**
Course Code: MHP2455	**4**	**0**	**0**	**4**

Total Hours 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Gain practical experience in conducting research for vulnerable populations.
2. Learn to identify and address the unique challenges faced by marginalized groups.
3. Acquire skills in data collection, analysis, and report writing for a specific social issue.
4. Develop proficiency in presenting research findings to an audience.
5. Understand the ethical considerations and protocols involved in working with special populations.

Course Contents

Project/ action research related to special group like

- children,
- uneducated mothers,
- adolescents,
- youth,
- disabled,
- juvenile,
- migrants,
- displaced,
- refugees,
- slums,
- prisoners,
- transgender,
- hospice dependents,
- substance/drug addicts,
- beggars,
- child labor,
- HIV/AIDS,
- marginalized/ disadvantaged population,
- laborers,
- geriatrics, etc.

Report writing, submission, presentation

NOTE: Students are required to submit the detailed report of field work done by them followed by the presentation.

Course Title: GLOBAL HEALTH (OPEN ELECTIVE)	**L**	**T**	**P**	**Cr.**
Course Code: MHP2456	**4**	**0**	**0**	**4**

Total Hours 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Understand the core concepts of global health, including its determinants, priorities, and key indicators.
2. Analyze the relationship between global health, equity, economics, and development.
3. Able to describe and compare different global health systems and the role of various sectors.
4. Understand the impact of natural disasters and complex humanitarian emergencies on global health and the strategies for addressing them.
5. Recognize the importance of collaboration and the roles of various organizations and partnerships in improving global health.

Course Contents

Unit-I **15 Hours**

Concept of Globalization- Global health and public health, critical global health concepts, global health priorities, SDGs, smallpox eradication, the determinants of global health, key global health indicators, the global burden of disease, causes of global deaths by: region, age and gender, the burden of global diseases & deaths within countries, demographic & epidemiological transitions

Unit-II **15 Hours**

Global health education, global poverty, global economy, global health and equity, global health expenditure and health outcomes, public and private expenditure on global health, the cost- effectiveness of global health interventions, global health and development, the Copenhagen consensus, challenge of guinea worm in Asia and Sub-Saharan Africa, ethical and human rights concerns in global health

Unit-III **15 Hours**

Introduction to global health systems: the public, private and NGO sectors, health systems in high-income, middle-income and low-income countries, culture and global health, global health behaviors and behavior change, environment and global health, nutrition and global health, globalscenarioofmaternal,childhealthandemerginginfectiousdiseases,globalh ealthpayersa nd players.

Unit-IV **15 Hours**

Working together to improve global health, natural disasters and complex humanitarian emergencies, the characteristics and health burden of natural disasters, the characteristics and health effects of complex humanitarian emergencies, addressing the health effects of natural disasters and complex humanitarian emergencies, future challenges in meeting the health needs of

disasters, role of United Nations in global health, Public-private partnerships and global health; science, technology and global health

Transactional modes: Video based teaching, Collaborative teaching, Case based teaching, Question-Answer

Suggested Readings

- Turnock, BJ, Public Health: What It Is and How It Works. Boston: Jones & Bartlett.
- LaVeist, T, Race, Ethnicity & Health: A Public Health Reader. Jossey-Bass

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3rd Semester

Course Title: BASIC EPIDEMIOLOGY-II	L	T	P	Cr.

Course Code: MHP3500	4	0	0	4

Total Hours 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Understand the epidemiology of a wide range of communicable diseases.
2. Learn about the epidemiology and investigation of various infectious disease outbreaks.
3. Describe the epidemiology of major non-communicable diseases.
4. Gain knowledge of clinical epidemiology, including diagnostic tests and evidence-based practice.
5. Familiar with the fundamentals of genetic and oral health epidemiology.

Course Contents

Unit-I **16 Hours**

Epidemiology of communicable diseases: Smallpox, chickenpox, Measles, Rubella, Mumps, Influenza, Diphtheria, Whooping cough, Meningococcal meningitis, Acute respiratory infections, SARS, Tuberculosis, Poliomyelitis, Viral hepatitis, Acute diarrheal, diseases, Cholera, Typhoid fever, Food poisoning, Amoebiasis, Ascariasis, Hookworm infection, Dengue, Malaria.

Unit-II **14 Hours**

Epidemiology of communicable diseases: Rabies, Yellow fever, Japanese encephalitis, KFD, Chikungunya fever, Leptospirosis, Plague, Human salmonellosis, Rickettsialzoonoses, Scrub typhus, Murine typhus, Q Fever, Taeniasis, Leishmaniasis,Trachome, Tetanus, Leprosy, STD, Yaws, AIDS. various steps for investigation of outbreaks.

Unit-III **16 Hours**

Epidemiology of Non-communicable diseases: CVD, Coronary heart disease, Hypertension, Stroke, Rheumatic heart disease, Cancer, Diabetes, Obesity, Blindness, Accidents and Injuries.

Unit-IV **14 Hours**

Clinical epidemiology, normality, abnormality, need based approach for diagnostic tests natural history and prognosis of a disease, Evidence based practice, prevention in clinical practice, Genetic epidemiology- Basic Genetics, Monogenic disorders, multi factorial disorders, methods in genetic epidemiology, human genome, Oral Health-dental caries, periodontal disease, Oral cancer

Transaction Modes: Video based teaching, Collaborative teaching, Case based teaching, Question-Answer

Suggested Readings

- John Yarnell, 2007 (1st edition), Epidemiology and Prevention- A system Based Approach, Oxford University Press.
- Heymann, David, 2008 (19th edition), Control of Communicable Diseases Manual. American Public Health Association.
- Dicker, Richard, MD, MSc.2012 (3rd edition), Principles of Epidemiology in Public Health Practice. U.S. Department of Health and Human Services - CDC
- Koepsell, T and Weiss, 2003 (1st edition), N. Epidemiologic Methods, Studying the Occurrence of Illness. Oxford University Press
- Davidson's 2006 (20th edition), Principles & Practice of Medicine, Churchill Livingstone Publisher.

Course Title: HEALTH ECONOMICS AND SERVICES PLANNING	**L**	**T**	**P**	**Cr.**

Course Code: MHP3501	4	0	0	4

Total Hours 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Understand the core concepts and principles of health planning and management.
2. Learn about the history and evolution of health planning in India, including key committees and five-year plans.
3. Comprehend fundamental economic concepts and their application in the health sector.
4. Perform economic evaluations such as cost-benefit and cost-effectiveness analysis.
5. Analyze the demand and supply dynamics of health and medical care, including health insurance and financing.

Course Contents

UNIT-I **15 Hours**

Concept and Meaning of Planning, Health Planning, Health Needs and Demands, Resources, Objectives, Targets and Goals, Plan, Pre-Planning, Planning Cycle and its Steps. Concept of Management, Management Methods and Techniques. Methods based on Behavioural Sciences, Quantitative Methods, Personal, Financial and Material Management.

UNIT-II **15 Hours**

Health Planning in India, Various Committees (from Bhore Committee to Health for All 2000), Planning Commission, Health Sector Plans, Investments and Achievements during the Five Year Plans, 11th Five Year Plan. Health Systems in India at the Centre, the State and the District Level.

UNIT-III **15 Hours**

The Relevance of Health Economics, Key Economic Concepts (Elasticity, Marginal Analysis, Opportunity Cost, Efficiency, Equity). Supply and Demand – The Law of demand, Price Elasticity of Demand, The Law of Supply, Equilibrium, Consumer Theory, Production and Market Supply in different market conditions. Economic Efficiency and Basic Principle of Cost Benefit Analysis, Cost Effectiveness Analysis, Cost Utility Analysis – QALY & DALY.

UNIT-IV **15 Hours**

Demand-Side Considerations, Demand for Health, The Production of Health, The Demand for Medical Care, Measuring Demand. The Market for Health Insurance, Health Insurance and Market Failure. Supply-Side Considerations, The Market for Health Care Professionals - The Theory of Labour Markets, Input Pricing, Demand for Inputs, Human Capital Investment. Financing of Health Services in India, National Health Accounts.

Transactional modes: Video based teaching, Collaborative teaching, Case based teaching, Question-Answer.

Suggested readings:

- Fallon L.F., Zgodzinski E. J., 2012(3rd edition), Essentials of Public Health Management, Sudbury, Jones and Barlett Publishers.
- Drummond, M.F., Sculpher, M.J., Torrance, G.W. 2005(1st edition), Methods for the economic evaluation of health care programmes, New York, Oxford University Press
- Devi V.Renuka, JhanM.Gowhar, 2011(1st edition), Health Economics : Issues and Challenges, New Delhi, Deep and Deep Publications.
- Issel, L.M., 2009 (2nd edition), Health Program Planning and Evaluation: A practical systematic approach for community health, Sudbury, Jones and Barlett Publishers
- Gupta, J.P., Sood, A.K., 2005(4th edition), Contemporary public health: policy, planning, management, New Delhi, Apothecaries Foundation.

Course Title: HEALTH INFORMATICS	**L**	**T**	**P**	**Cr.**

Course Code: MHP3502	4	0	0	4

Total Hours 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Understand the definition, evolution, and various classifications of health informatics.
2. Learn about the management of health records, including the features and implementation of Electronic Health Records (EHR) and Electronic Medical Records (EMR).
3. Explain the importance of standards and regulations, and the principles of Evidence-Based Medicine (EBM).
4. Gain knowledge of Health Management Information Systems (HMIS) and Consumer Health Informatics.
5. Understand the concepts and applications of imaging informatics and telemedicine in healthcare

Course Contents

UNIT-I **15 Hours**

Health Informatics: Definition, evolution, classification, applications, challenges, bioinformatics, medical informatics, public health informatics, health informatics education in India and world, future scope of health informatics. Databases and their types: Flat files, relational databases and object-oriented databases. Informatics Retrieval: Definition, concept, performance measures, applications, data mining, information resources. Scholarly Communication: digital library ,, open access

UNIT-II **15 Hours**

Health records management: Health records, definition, classification, features, clinical data, its application, challenges, solutions, clinical data management system, clinical research informatics, nursing informatics. Electronic Health Records (EHR): Definition,features, potential benefits and cost benefit analysis of EHR, EHR adoption, steps in its implementation, Electronic medical records (EMR), personal health records (PHR), EHR/EMR software, application and resources. Health Care quality: definition and explanation, medical errors and patient safety, computerized provider/physician order entry (CPOE), functions and application, privacy and confidentiality of patient data/records

UNIT-III **15 Hours**

Standards and Regulations: Concepts, various standards and regulations in health/medical informatics, standards and interoperability, identifiers and transaction standards, maintaining confidentiality of health information exchange. Brief overview of provisions of Information Technology Act w.r.t. privacy and confidentiality of information. Evidence based medicine (EBM): Definition, concepts, advantages, applications, EBM process, quality of evidence, evidence based practice (EBP), EBP w.r.t Public health, medical

decision making, clinical decision support system (CDS), limitation of evidence based medicine

UNIT-IV **15 Hours**

Health management information system: Definition, scope, classification, application, challenges and solutions, various models of health care management. Consumer healthinformatics: Overview, consumer information access and decision making, consumer – provider communication. Imaging informatics: Concepts, types, imaging in health care,modalities of imaging, digital imaging. Telemedicine: Concepts, application, telemedicine infrastructure, efficacy and barriers of telemedicine

Transactional modes: Video based teaching, Collaborative teaching, Case based teaching, Question-Answer.

Suggested readings:

- Zoe Lacroix and Terence Critchow, 2003 (1st edition), Managing Scientific Data, Elsevier
- Ed. Salvia Nagl, John Wiley, 2006 (1st edition), Cancer Bioinformatics: from Design to Treatment, Wiley publication.
- Sharon B. Buchbinder, Nancy H. Shanker, 2007 (1st edition), Introduction to Health care Management, Jones & Bartlett publishers Issel,

Course Title: Dissertation I	**L**	**T**	**P**	**Cr.**
Course Code: MHP3503	**0**	**0**	**24**	**12**

Total Hours 180

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Demonstrate an understanding of research methodologies used in radiology and imaging technology, including qualitative and quantitative research methods, study designs, and data collection techniques.
2. Conduct a comprehensive literature review on a relevant research topic in radiology and imaging technology, synthesizing current knowledge and identifying gaps or areas requiring further research.
3. Develop a well-structured research proposal, including a clear statement of the research problem, objectives, hypotheses, and methodologies.
4. Understand and apply ethical principles in research, including obtaining informed consent, ensuring patient confidentiality, and following ethical guidelines for research involving human subjects or animal models.
5. Apply principles of research ethics by obtaining necessary approvals and understanding confidentiality, informed consent, and data protection.

Course Content

Dissertation (Phase) I will include Synopsis approval from Doctoral Advisory Committee (DAC) will be taken by the student and after that it will send to Institutional Research Committee (IRC), followed by Institutional Ethical Committee (IEC) for final approval.

Course Title: Project II	**L**	**T**	**P**	**Cr.**
Course Code: MHP3504	**0**	**0**	**4**	**2**

Total Hours 30

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Analyze complex research data using appropriate statistical tools and techniques, ensuring accurate interpretation of the findings.
2. Demonstrate advanced skills in conducting research within radiology and imaging technology, including refining research methods and overcoming challenges that arose during Project I.
3. Demonstrate proficiency in scientific writing, ensuring clarity, conciseness, and logical flow of ideas, with proper referencing and adherence to ethical writing standards.
4. Ensure that the research adheres to ethical standards, including respect for participant confidentiality, informed consent, and compliance with regulations governing human subjects or animal research.
5. Demonstrate in-depth understanding of the selected radiological topic, including relevant anatomy, pathology, and imaging principles.

List of Project I **30 Hours**

13. **Impact of Climate Change on Public Health:** A study analyzing the correlation between changing weather patterns and the prevalence of vector-borne diseases in a specific region.
14. **Health Equity and Access:** An investigation into the disparities in healthcare access and outcomes among different socioeconomic groups in an urban setting.
15. **Maternal and Child Health:** A project evaluating the effectiveness of a community-based intervention program on improving maternal and child health indicators in a rural area.
16. **Non-Communicable Diseases (NCDs):** A research project assessing the risk factors and prevalence of a specific NCD, such as diabetes or hypertension, in a target population.
17. **Mental Health Services:** A study on the availability, accessibility, and utilization of mental health services in a specific district, identifying gaps and suggesting policy recommendations.
18. **Infectious Disease Surveillance and Response:** A project analyzing the public health system's response to a recent disease outbreak and identifying areas for improvement in surveillance and communication.
19. **Occupational Health and Safety:** An assessment of occupational health hazards and safety practices in a specific industry, with recommendations for policy and intervention.
20. **Nutrition and Food Security:** A project evaluating the impact of a government-run nutrition program on the nutritional status of children and women in a particular community.
21. **Health Policy Analysis:** A critical analysis of a recent health policy, examining its potential impact on health outcomes, equity, and the healthcare system.

22. **Water, Sanitation, and Hygiene (WASH):** A study on the impact of poor WASH facilities on the health of school-going children in a low-resource setting.
23. **Health Communication and Education:** A project developing and evaluating a health communication campaign to raise awareness about a specific public health issue, such as vaccination hesitancy or substance abuse.
24. **Digital Health and Telemedicine:** A study on the effectiveness and challenges of using telemedicine to provide healthcare services in remote or underserved areas.

4th Semester

Course Title: PUBLIC HEALTH LAWS, ETHICS AND HUMAN RIGHTS	L	T	P	Cr.
Course Code: MHP4550	4	0	0	4

Total Hours 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Understand the ethical principles of public health and medical care.
2. Familiar with the key health-related legislations in India, such as the Indian Medical Council Act and the National Health Bill-2009.
3. Explain the relationship between health and human rights, and the impact of human rights violations on health.
4. Gain knowledge of various social and consumer protection laws relevant to public health, like the Consumer Protection Act and the Pre-natal and Diagnostic Techniques Act.
5. Understand the legal and ethical issues in international health, including those related to HIV/AIDS, organ transplants, and human experimentation.

Course Contents

Unit-I **15 Hours**

Public Health Ethics, Comparison of Ethics in medical care and Public Health, Ethics in research. Legislation related to Health, National Health Bill-2009, and Role of Doctors in Society, Quality of Medical Education, The Indian Medical Council Act (Professionals Conduct & Ethics) & Regulations, 2002, the Indian Nursing Council Act, 1947, the Dentists Act-1948, the Pharmacy Act, 1948, The Rehabilitation Council of India Act, 1992, The Indian Medicine Central Council Act, 1970, The Homeopathy Central Council Act, 1973.

Unit-II **15 Hours**

General concept of human rights; the linkage between Health and Human Right, Promotion of health through human right, Impact of violation of human rights on health. Role of National/International agencies in protection of human rights, Health fascism, Health imperialism, Paternalism, Health commercialism,

Unit-III **15 Hours**

The Registration of Birth & Death Act, 1969,Child Marriage Act 1929, Bonded Labour Act 1976, Abolition Child Labour (protection & regulation) act1986, Medical Negligence & Inefficacy of Indian medical council Act 1916, Consumer Protection Act 1989, MRTP Act1969, Pre-natal and diagnostic technique Act, 1994, Legislative approach to health promotion, Drugs & Cosmetics 1940, Law of tort, PIL, Factory Act, water, Environment Act.

Unit-IV **15 Hours**

International Health instruments in Public Health in the area of AIDS/HIV, Disabled people, Human experimentation, surrogate mother, Mental health, Organ transplant, Reproductive health. The Cigrates & other Tobacco Products Act, 2003.

Transaction Modes: Video based teaching, Collaborative teaching, Case based teaching, Question-Answer

Suggested Readings

- Gifis, SH. 2003(5th edition), Law Dictionary. Barron's Educational Series, Inc
- JagannathMohanty, 2008(1st edition), Human Rights Education, Deep and Deep Publications Pvt. Ltd.
- Loyd F. Navick, Cynthia B. Morrow, Glen P. Mays, 2008 (2nd edition) Public Health Administration: Principles for Population based Management, Jones & Bartlett Publishers

Course Title: HEALTH EDUCATION AND COUNSELLING	**L**	**T**	**P**	**Cr.**

Course Code: MHP4551	4	0	0	4

Total Hours 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Understand the relationship between human behavior, culture, and health outcomes.
2. Learn the principles of effective health communication, including various components and strategies.
3. Apply different learning strategies for health education across various age groups, from children to adults.
4. Gain knowledge about the importance of community participation and the process of planning health education programs for communities.
5. Plan, execute, and evaluate a complete health education program, including the development of relevant materials.

Course Contents

Unit-I **15 Hours**

Human behavior, Defining behavior, Linkage between behavior and health. Intention, Enabling factor, Social Pressure, (Significant others, Subjective norms) Culture. Traditions, Beliefs, Norms, Customs, Values, Attitudes. The Health Belief Model The BASNEF Model, Health Education, Health Promotion. Ethics of Health promotion

Unit-II **15 Hours**

Communication (Components, of communication, hindrances in Communication. The message content. Nonverbal communication, One to one communication, Group communication (Group dynamics, Problems), Characteristics of effective health communication. Different learning strategies (Participatory, role play, problem-solving exercises, cares studies, games, other techniques) Using learning aids-Popular Media (storytelling, theatre, puppets, songs, visual art)

Unit-III **15 Hours**

Learning in adult, Working with children and young people. Health education in pre-school child, school aged child, adolescents, and young adults. Schools and Health education (significance, services, school health education programmes).Working with communities, community participation, (Benefits, process), Community and Health education (planning, objectives, needs, other sectors)

Unit-IV **15 Hours**

Practicing Health education. Planning and executing a complete programme on health education. (Aims, objectives, research, evaluation), work plan, Managing and organizing the programme/ training/workshop organizing,

IEC (information education communication) methods, Handout, teaching material. Generating teaching material in vernacular language.

Transaction Modes: Video based teaching, Collaborative teaching, Case based teaching, Question-Answer

Suggested Readings

- Arience J. Lowenstein, LymFoord- May, June C. Romano, 2009(1st edition), Teaching Strategies for Health Education & Health Promotion, Working with Patients, families and Communities, Jones and Bartlett Publishers.
- S.L. Goel, 2009 (1st edition), Education of Life style & Lifetime Diseases, Deep & Deep Publication Pvt. Ltd.

Course Title: Dissertation II	**L**	**T**	**P**	**Cr.**

Course Code: MHP4552	0	0	24	12

Total Hours 180

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Utilize advanced research methods and tools to analyze and interpret complex data, showing an understanding of the latest developments and trends in the field.
2. Synthesize and integrate findings from primary research with existing literature to provide a coherent discussion on the topic.
3. Structure the dissertation in a logical manner, including introduction, literature review, research methodology, results, discussion, conclusion, and recommendations.
4. Adhere to ethical guidelines in the execution and reporting of research, ensuring that research involving human subjects or clinical data complies with ethical standards (e.g., informed consent, confidentiality, data protection).
5. Demonstrate academic writing skills appropriate for scholarly work, including correct referencing and adherence to academic integrity standards.

Course Content

Dissertation (Phase) II - Dissertation will be evaluated for **300 marks** on the parameter laid down in the proforma for the evaluation in which the students will give a presentation on the dissertation and an open viva-exam examination will be conducted by the external examiner. Student will submit three hard copies of her/his dissertation along with soft copy as PDF file to the Department and 1 Review & Research paper based on his/her research work.

Course Title: Employability and Entrepreneurship in Radiology	L	T	P	Cr.

Course Code: MHP4553	2	0	0	2

Total Hours 30

Learning Outcomes: On completion of this course, the successful students will be able to:

1. To develop employability skills required for a successful career in hematology and blood banking.
2. To equip students with entrepreneurship skills for setting up and managing blood banks, diagnostic labs, and biotech startups.
3. To enhance communication, leadership, and problem-solving skills relevant to the healthcare industry.
4. To provide an understanding of financial management, regulatory policies, and business strategies for healthcare ventures.
5. Identify and evaluate career pathways within clinical radiology, academic radiology, medical imaging technology, and industry roles.

Course Contents

Unit-I **10 Hours**

Introduction to Strategic Management in Healthcare

- Introduction to Strategic Management: Definitions, concepts, and the strategic management process.
- The unique context of healthcare: complexities, stakeholders, regulations, and market dynamics.
- Levels of strategy: Corporate, business, and functional strategies.
- Vision, Mission, and Values: Developing and articulating a strategic direction for healthcare organizations.
- Stakeholder analysis in healthcare: Identifying and managing the interests of patients, providers, payers, and communities.
- Case Study Discussion: Analyzing the strategic direction of a major hospital or public health agency.

Strategic Analysis of the Healthcare Environment

- **External Analysis:**
  - PESTLE Analysis: Political, Economic, Sociocultural, Technological, Legal, and Environmental factors affecting healthcare.
  - Porter's Five Forces Analysis: Understanding competitive dynamics in healthcare.
  - Analyzing industry trends: Digital health, value-based care, and population health management.
- **Internal Analysis:**
  - Resource-Based View (RBV): Identifying and leveraging core competencies and unique resources.
  - Value Chain Analysis: Mapping the activities that create value for patients.

    - SWOT Analysis: Integrating internal and external factors to identify strategic options.
- **Competitive Strategy:**
    - Generic strategies (cost leadership, differentiation, focus) in healthcare.
    - Developing a sustainable competitive advantage in a complex market.
- **Case Study and Group Activity:** Students will conduct a PESTLE and SWOT analysis for a specific public health challenge (e.g., managing a pandemic, addressing chronic disease).

Unit-II **5 Hours**

Strategy Formulation and Implementation

- **Formulating Strategy:**
    - Crafting strategic goals and objectives.
    - Evaluating strategic alternatives: Growth strategies, stability, and retrenchment.
    - Balanced Scorecard: A framework for translating strategy into action.
- **Strategy Implementation:**
    - Organizational structure and design: Aligning structure with strategy.
    - Leadership and culture: The role of leadership in driving change.
    - Resource allocation and budgeting for strategic initiatives.
- **Monitoring and Control:**
    - Measuring performance and progress toward strategic goals.
    - Feedback loops and continuous improvement.
    - Change management in healthcare organizations.
- **Mid-Term Examination / Group Project Presentation.**

Unit-III **10 Hours**

Entrepreneurship and Innovation in Healthcare

- **Introduction to Entrepreneurship:**
    - What is entrepreneurship? Social entrepreneurship vs. commercial entrepreneurship.
    - The entrepreneurial mindset: Identifying opportunities, risk-taking, and resilience.
    - The healthcare innovation ecosystem: Startups, incubators, and accelerators.
- **Developing a New Venture:**
    - Opportunity recognition and idea generation in public health.

    - Feasibility analysis: Market analysis, technical feasibility, and financial viability.
    - Crafting a business plan: Executive summary, market analysis, financial projections.
  - **Funding and Scaling:**
    - Sources of funding for healthcare ventures: Grants, angel investors, venture capital, and impact investors.
    - Scaling a social enterprise or public health program.
    - Legal and ethical considerations for healthcare startups (HIPAA, privacy, etc.).

Unit-IV **5 Hours**
Emerging Topics and Capstone Project

  - **Contemporary Issues:**
    - Digital transformation and health IT entrepreneurship.
    - Social entrepreneurship and public health impact.
    - Leadership in times of crisis and uncertainty.
  - **Final Project Workshop and Presentations:** Students will present their final business plans or strategic analyses, integrating all course concepts.

Transaction Modes: Video based teaching, Collaborative teaching, Case based teaching, Question-Answer

Suggested Readings

- *"The 7 Habits of Highly Effective People" by Stephen R. Covey*
- *"Crucial Conversations: Tools for Talking When Stakes Are High" by Kerry Patterson, Joseph Grenny, Ron McMillan, Al Switzler*
- *"The Power of Habit: Why We Do What We Do in Life and Business" by Charles Duhigg*
- *"The Hard Thing About Hard Things: Building a Business When There Are No Easy Answers" by Ben Horowitz*
- *"Good to Great: Why Some Companies Make the Leap... and Others Don't" by Jim Collins*
- *"Grit: The Power of Passion and Perseverance" by Angela Duckworth*

Course Title: HEALTH FOR SPECIAL GROUPS (ELECTIVE)	L	T	P	Cr.
Course Code: MPH4554	4	0	0	4

Total Hours 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Understand the key health issues and public health programs relevant to adolescents in India.
2. Learn about the concepts of gerontology, common health problems in the elderly, and relevant national policies.
3. Define mental health, understand the epidemiology of mental illnesses, and know about the National Mental Health Programme.
4. Gain knowledge about disability, the rehabilitation process, and the distinction between impairment, disability, and handicap.
5. Familiar with the concepts of women's health, their rights, and the specific problems faced by working women.

Course Contents

Unit-I **15 Hours**

Adolescent health: Definition/concept and scope, Adolescent growth and maturations, factors affecting growth and maturation, Addressing Adolescent Public Health issues and magnitude of problem, Reproductive

health, Nutrition and fitness Factors affecting adolescent health, Public health programmes (national) for the adolescents in Indian context. (ICDS, Kishori Shakti Yojna, ARSH,), Suicides, Delinquency, Addiction, Peer Pressure.

Unit-II **15 Hours**

Gerontology: Definition/concept and significance, health problems in the elderly (due to ageing process, associated with long term illness, psychological process) factors affecting health in the elderly- Addressing elderly public health issues, magnitude of problems, lifestyle, alternative medicine, treatment of old age health problem. Health status of the aged in India, Role of government and NGO's. National Policy on Older Persons.

Unit-III **15 Hours**

Mental health: Definition and classification, Epidemiology of mental illnesses, Causes of mental ill health, Factors affecting mental health, Preventive/rehabilitative aspects, Prevention and control of mental illness, National Mental Health Programme

Unit-IV **15 Hours**

Disability-Epidemiology of disability, Impairment, Disability, Handicap, Inter-disciplinary Rehabilitation Process, nature of rehabilitation, Benefits of rehabilitation. Concept of women's health, women rights, Problems of working women, IUCD

Transaction Modes: Video based teaching, Collaborative teaching, Case based teaching, Question-Answer

Suggested Readings

- K.J.S. Chatrath, 2006 (1st edition), Joy of Mental Health, Mental Health Forum, Servants of the People Society, Sec. 15-B, Chandigarh.
- John Bond, Sheila Peace, Freya DittmannKohli, Gerben J. Westerh of, 2008, (3rd edition), Ageing in Society, Sage Publications.
- John Bond, Sheila Peace, Freya DittmannKohli, Gerben J. Westerh of, 2008, (3rd edition), Ageing in Society, Sage Publications.
- Jamisn& Victor, 2002(1st edition), Researching Ageing & Later Life, Open University, Press.

Course Title: PUBLIC HEALTH IN INDIA AND WORLD (ELECTIVE)	L	T	P	Cr.
Course Code: MHP4555	4	0	0	4

Total Hours 60

Learning Outcomes: On completion of this course, the successful students will be able to:

1. Understand the historical evolution of public health in India, including key committees and policies.
2. Gain knowledge of various national health policies and their objectives in India.
3. Describe the role of international and non-governmental organizations in global health.
4. Learn about major national health programs in India for controlling communicable and non-communicable diseases.
5. Understand the implementation and evaluation of national health programs and services, including disaster management and school health.

Course Contents

Unit-I **15 Hours**

History of Public Health in India, Concepts of Ayurveda, Yoga, Unani, Sidha and Homeopathy (AYUSH). (Bhore committee, Mudaliar committee, Chadah committee, Mukerji Committee, Jungalwalla committee, Kartar Singh

Committee, Shrivastav Committee, Rural Health Scheme and Health for all by 2000 AD) Concept of Health Care, Level of Health Care, Elements of Health care. Health Status. Health Administration System in India, Centre, State and local level. Role of Community Health workers. Health Planning in India, Planning Commission.

Unit-II **15 Hours**

National Policies: National Health Policy 2002, National Rural Health Mission, National Population Policy 2000, National AIDS Prevention and Control Policy, National Blood Policy, National Policy for the empowerment of Women 2001, National Charter for Children 2003, National Youth Policy 1998, National Policy for Older Persons 1999, National Nutrition Policy, National Health Research Policy, Pharmaceutical Policy, National Policy on Education, National Water Policy 2002, National Environment Policy 2004, National Conservation Strategy & Policy Statement on environment & Development 1992, National Housing and Habitat Policy 1998, National Policy on Resettlement and Rehabilitation Project for Affected Families 2003

Unit-III **15 Hours**

Overview of Public health in developing and developed countries, International Organizations in Health care, WHO, Objectives, Work of WHO, its structure and Regions, Non-Governmental Organization and Other Agencies. Globalization and Health, Impact of health care financing, Service provision, protection and Promotion under globalization. National Health Programs: Reproductive and Child Health –II, Revised National Tuberculosis Control Program (RNTCP): DOTS strategy, National AIDS control Program, Vector Borne Disease Control Program, National Anti-Malaria program, Kala-azar Control Program, National filarial Control Program, Japanese Encephalitis Control Program, Dengue & Dengue Hemorrhagic Fever, Yaws Eradication Program, National Leprosy Eradication Program, Guinea Worm Eradication Program.

Unit-IV **15 Hours**

Integrated disease surveillance Project 2004-2009, National Surveillance Program for Communicable Diseases, Nutritional Programs, National Program for control of Blindness, National Iodine Deficiency disorders Control Program and Project against Micronutrient Malnutrition, National Mental Health Program, National Cancer Control Program, National diabetes Control Program, National Cardiovascular diseases Control Program, Rabies Control Program, India Population Projects (IPP), Oral Health Project., Program of Rational Use of Drugs in Delhi State, Programs and schemes for Disabled Persons, National Emergency Preparedness Plan: disaster Management, School Health Services, Tenth Five Year Plan, Basic Minimum Service Program, Programs for Water and Sanitation, National Program of Improved Chulha, Evaluation of a National Health Programs

Transaction Modes: Video based teaching, Collaborative teaching, Case based teaching, Question-Answer

Suggested Readings

- Issel, LM. 2009(2nd edition), Health Program Planning and Evaluation: A Practical, Systematic Approach for Community Health , Boston: Jones and Bartlett Publishers.
- HPDP,2003(1st edition)The Future of the Public's Health in the 21st Century, Institute of Medicine, NAP Publication.
- Rossi, PH, Lipsey, MW and Freeman HE. 2004(7th edition). Evaluation: A Systematic Approach Thousands Oaks, CA: Sage Publications, Inc