

GURUGRAM UNIVERSITY, GURUGRAM

(Established under Haryana Act 17 of 2017)

MASTER OF PUBLIC HEALTH

(COMMUNITY MEDICINE)

(Two Year Post Graduate Program)

(Structure & Syllabi)

Effective from the Academic Session- 2024-2026



Department of Public Health

Faculty of Life Sciences

Gurugram University

Gurugram-122018

HARYANA (INDIA)

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Semester 4														
Course ID	Course Title	Course ID	L	T	P	L	T	P	Total Credits	MARKS				
			(Hrs.)			Credits				TI	TE	PI	P E	Total
Ability Enhancement Course(s)														
AEC-2	Communication and Training in Health		2						2	15	35			50
Dissertation / Project Work														
Dissertation								20	20			150	350	500
Total Credits									22					550

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Semester 4

1. Communication and Training in Health

Course Objectives

- To understand the principles and models of communication relevant to public health.
- To develop skills in designing and delivering health communication strategies.
- To explore training methodologies for building capacity in the health workforce.
- To integrate behavior change communication (BCC) and IEC approaches into public health programs.

Unit I: Fundamentals of Health Communication

Definitions and elements of communication

Types and channels: interpersonal, group, mass media, digital media

The communication process: sender, message, medium, receiver, feedback

Barriers to effective communication

Role of culture and literacy in health communication

Unit II: Behavior Change Communication (BCC) and IEC

BCC: concepts, importance, and strategy design

IEC (Information, Education, Communication) in health promotion

Health belief models and theories used in BCC

Designing and evaluating IEC materials

Case studies of BCC in national programs (e.g., Mission Indradhanush, Family Planning)

Unit III: Training in Public Health

Concept and importance of training in health systems

Training cycle: needs assessment, planning, implementation, and evaluation

Adult learning principles and participatory training methods

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Tools and techniques for training: role-plays, case studies, group discussions

Designing training modules for ASHA, ANM, and frontline workers

Unit IV: Communication Strategies and Advocacy

Advocacy vs. communication in public health

Stakeholder mapping and engagement

Social marketing approaches in public health

Use of ICT in training and communication (mobile health, e-learning)

Monitoring and evaluation of communication and training programs

Suggested Readings:

Gupta R. Health Communication: Theory and Practice

WHO. Effective Communication in Outbreak Management

Hubley J., The Psychology of Health Communication

Ministry of Health & Family Welfare. BCC Operational Guidelines

Freire P. Pedagogy of the Oppressed (for adult learning concepts)

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Semester 5														
Course ID	Course Title	Course ID	L	T	P	L	T	P	Total Credits	MARKS				
			(Hrs.)			Credits				TI	TE	PI	P E	Total
Core Course(s)														
CC-A07	Epidemiology	MPH 111	4			4			4	30	70			100
CC-A08	Demography, Family Planning and MCH	MPH 112	4			4			4	30	70			100
CC-A09	Human Behavior and Personality	MPH 113	4			4			4	30	70			100
Discipline Specific Elective Courses (Select any one course from the following)														
DSE-03	Disease Screening in Public Health		3						3	25	50			75
Multidisciplinary Course(s)														
MDC-03	Health Planning, Administration and Management		3						3	25	50			75
Ability Enhancement Course(s)														
SEC-02	Information Technology in Public Health		2						2	15	35			50
Value-added Course(s)														
VAC-02	Public Health Ethics and Laws		2						2	15	35			50
Seminar														
Seminar				2					2	15	35			50
Internship/Field Activities														
									4					100
Total Credits									28					700

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Detailed Syllabus

Semester 3

1, Epidemiology

Course Objectives:

To deepen understanding of advanced epidemiological concepts and methods.

To apply epidemiological principles in the design and evaluation of studies.

To analyze, interpret, and present epidemiological data effectively.

To understand and implement public health surveillance and outbreak investigations.

Unit I: Advanced Epidemiologic Study Designs

Cohort studies: types, strengths, and limitations

Case-control studies: design, matching, and analysis

Nested and case-cohort designs

Randomized Controlled Trials (RCTs): phases, ethical considerations, blinding, and randomization

Practical considerations in field epidemiologic studies

Unit II: Measures of Association and Causality

Relative risk, odds ratio, attributable risk

Concepts of population attributable risk

Causal inference and Hill's criteria

Confounding, interaction (effect modification)

Use and interpretation of stratified and multivariate analysis in epidemiology

Unit III: Bias and Errors in Epidemiology

Types of bias: selection, information, and recall

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Methods to minimize bias

Validity and reliability in epidemiologic measurements

Misclassification (differential and non-differential)

Sensitivity, specificity, predictive values, and ROC curves

Unit IV: Public Health Surveillance and Outbreak Investigation

Principles and systems of public health surveillance (e.g., IDSP)

Data collection, analysis, and dissemination in surveillance

Steps in outbreak investigation

Case definitions, epidemic curves, attack rates

Field epidemiology techniques

Suggested Readings:

Gordis L. Epidemiology (6th ed.), Elsevier

K.Park, Textbook of Preventive & Social Medicine, Bhanot Publishers

Merrill RM, Introduction to Epidemiology, Jones & Bartlett Learning

Bonita R, Beaglehole R, Kjellstrom T. Basic Epidemiology, WHO

Szklo M, Nieto FJ. Epidemiology: Beyond the Basics, Jones & Bartlett

2. Demography, Family Planning and Maternal & Child Health (MCH)

Course Objectives:

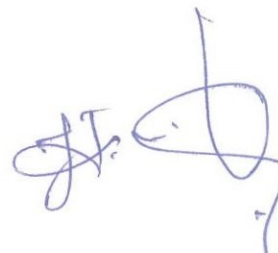
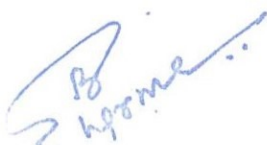
To understand population dynamics and demographic indicators.

To learn the concepts and practices in family planning and reproductive health

To gain knowledge about maternal and child health programs and challenges in India.

To develop analytical skills for interpreting demographic and MCH data.

Unit I: Demographic Concepts and Population Dynamics



Introduction to demography: definitions, scope, and importance

Demographic cycle and its stages

Vital statistics: crude birth rate, death rate, fertility rate, IMR, MMR, etc.

Population pyramid and demographic transition

Sources of demographic data: Census, NFHS, SRS, HMIS

Unit II: Family Planning and Reproductive Health

Family planning: concept, objectives, and importance

Contraceptive methods: temporary and permanent

Natural family planning methods

Unmet need for contraception

Government policies and national programs (e.g., National Family Welfare Program)

Unit III: Maternal Health

Antenatal, natal, and postnatal care

High-risk pregnancies and referral systems

Safe Motherhood initiatives (JSY, JSSK, PMSMA)

Maternal mortality: causes, prevention, and interventions

Role of ASHA, ANM, and PHC in maternal health services

Unit IV: Child Health

Neonatal and child mortality indicators

Immunization schedule and Universal Immunization Program (UIP)

Integrated Management of Neonatal and Childhood Illness (IMNCI)

Nutritional programs for children: ICDS, Mid-Day Meal, etc.

Child health interventions under RMNCH+A framework

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Suggested Readings:

K. Park, Textbook of Preventive and Social Medicine
Sundar Lal & Adarsh, Textbook of Community Medicine
Population Foundation of India publications
NFHS-5 National Reports
WHO, Family Planning: A Global Handbook for Providers
UNICEF, State of the World's Children

3. Human Behavior and Personality**Course Objectives:**

To understand the fundamentals of human behavior and the factors influencing it.
To explore various personality theories and their applications in public health.
To assess behavioral patterns and psychological traits relevant to health outcomes.
To develop communication and interpersonal skills for community engagement.

Unit I: Introduction to Human Behavior

Definition and scope of human behavior

Factors influencing behavior: biological, psychological, social, and cultural

Motivation: types and theories (Maslow's Hierarchy, Herzberg's Theory)

Perception, attitude, and learning

Emotions and their regulation

Unit II: Personality and Its Theories

Definition and components of personality

Personality development: heredity and environment

Major theories of personality:

Freud's Psychoanalytic Theory

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Erikson's Psychosocial Theory

Carl Rogers' Humanistic Theory

Eysenck's Trait Theory

Personality assessment tools and techniques

Unit III: Behavior in Health and Illness

Health behavior and illness behavior

Behavioral change theories:

Health Belief Model

Theory of Planned Behavior

Transtheoretical Model (Stages of Change)

Impact of stress and coping mechanisms

Mental health, stigma, and public perception

Unit IV: Application in Public Health

Behavior change communication (BCC) and IEC

Counseling skills for public health professionals

Group behavior and dynamics in community health programs

Health behavior surveillance and assessment

Role of behavior and personality in leadership and teamwork

Suggested Readings:

Morgan, King, Weisz, Schopler. Introduction to Psychology

Baron RA, Psychology: Understanding Human Behavior

Gleitman H., Psychology

K. Park, Textbook of Preventive & Social Medicine (Behavioral sciences chapter)

WHO, Health Education: Theoretical Concepts, Effective Strategies and Core Competencies

4. Disease Screening in Public Health

Course Objectives:

- To understand the principles, purpose, and types of disease screening in public health.
- To develop skills for planning, conducting, and evaluating screening programs.
- To assess screening tools using sensitivity, specificity, predictive values, and ROC curves.
- To apply ethical considerations and cost-effectiveness analysis in screening.

Unit I: Introduction to Screening

- Definition and scope of disease screening
- Differences between screening and diagnosis
- Levels of prevention and role of screening
- Criteria for screening (Wilson and Jungner's criteria)

Natural history of disease and screening window

Unit II: Evaluation of Screening Tests

- Sensitivity and specificity
- Positive and negative predictive values
- Likelihood ratios and ROC curve
- Validity and reliability of screening tests
- Biases in screening: lead-time bias, length-time bias, overdiagnosis bias

Unit III: Screening Program Planning and Implementation

- Steps in organizing a screening program
- Target population selection
- Logistics and follow-up mechanisms
- Quality assurance and program evaluation
- Communication strategies for screening programs

Unit IV: Applications and Ethical Considerations

Screening for NCDs: hypertension, diabetes, cancer (oral, breast, cervical)

Newborn and antenatal screening

Mass vs selective screening

Ethical and legal issues in screening

Cost-effectiveness and policy implications

Suggested Readings:

Bonita R., Beaglehole R., Kjellstrom T. Basic Epidemiology, WHO

Jekel JF et al. Epidemiology, Biostatistics, and Preventive Medicine

K. Park, Textbook of Preventive & Social Medicine

WHO. Screening Programmes: A Short Guide (2020)

G. Rose, Strategy of Preventive Medicine, Oxford University Press

5. Health Planning, Administration and Management

Course Objectives:

To understand the fundamentals and importance of health planning and health systems management.

To build competencies in planning, organizing, and evaluating health services.

To gain knowledge about health policy formulation, leadership, and human resource management.

To analyze the role of administration in public health program delivery.

Unit I: Health Planning and Policy

Definition, scope, and importance of health planning

Planning cycle and process

Health planning in India: Bhore, Mudaliar, Kartar Singh and other committees

National Health Policy: evolution and key features

S. Bhore

Mudaliar

K. Singh

Five-Year Plans and their impact on public health

Unit II: Health Administration at Various Levels

Structure and functions of health administration at the central, state, and district levels

Role of Ministry of Health and Family Welfare

Functions of Directorate General of Health Services (DGHS) and National Health Mission (NHM)

Urban and rural health service delivery models

Public-private partnerships (PPPs) in health care

Unit III: Principles and Functions of Management

Principles of management: planning, organizing, staffing, directing, controlling

Decision-making and problem-solving in health care settings

Supervision, coordination, and delegation

Communication and motivation in organizations

Tools of management: SWOT, PERT, CPM, and logic models

Unit IV: Human Resource and Financial Management

Human resource planning and development in health sector

Job analysis, recruitment, training, and performance appraisal

Budgeting and financial planning in health programs

Resource mobilization and allocation

Auditing and financial accountability

Suggested Readings:

Gupta & Mahajan, Health Management and Planning

Leiyu Shi & Singh, Delivering Health Care in America

K. Park, Textbook of Preventive and Social Medicine

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6. Information Technology in Public Health

Course Objectives:

To introduce the fundamentals of information and communication technologies (ICT) in public health.

To understand the use of digital tools, data systems, and e-health applications for health surveillance, monitoring, and service delivery.

To build competencies in using health information systems, telemedicine, and GIS.

To promote ethical and secure handling of digital health data.

Unit I: Fundamentals of Health Information Technology

Overview of IT and ICT in health care

Types of health data: individual, aggregate, spatial

Electronic Health Records (EHRs) and Electronic Medical Records (EMRs)

Health data standards (HL7, ICD-10, SNOMED)

Cloud computing and mobile health (mHealth)

Unit II: Health Management Information Systems (HMIS)

Components and functions of HMIS

Data collection tools and software (e.g., DHIS2)

Data quality assurance, validation, and verification

Applications in planning, resource allocation, and decision-making

National Digital Health Mission (NDHM) and Ayushman Bharat Digital Mission (ABDM)

Unit III: Geographic Information Systems (GIS) and Telehealth

GIS: concepts, components, and uses in public health

Mapping health facilities, disease trends, and resource allocation

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Basics of QGIS and ArcGIS

Telemedicine: definition, applications, and challenges

E-health and remote care: case studies and implementation models

Unit IV: Data Privacy, Security & Ethics in Public Health IT

Principles of health data confidentiality and integrity

Ethical issues in data sharing and digital surveillance

Legal frameworks: IT Act, HIPAA (overview), and Indian privacy laws

Cybersecurity risks in health information systems

Data governance in public health

Suggested Readings:

WHO. eHealth Tools and Services: Needs of Member States

Shortliffe EH, Cimino JJ. Biomedical Informatics

National Digital Health Blueprint (NDHB), Government of India

K. Park, Textbook of Preventive & Social Medicine (Chapter on Health Information)

Ramesh Bhatia, Health Informatics and IT in Public Health

7. Public Health Ethics and Laws

Course Objectives:

To develop an understanding of ethical principles and frameworks in public health practice and research.

To familiarize students with legal provisions and institutional mechanisms related to public health in India.

To examine real-world public health dilemmas through ethical reasoning.

To understand the role of rights, duties, and justice in public health laws and policies.

Unit I: Foundations of Public Health Ethics

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Introduction to ethics: definitions and scope

Principles of bioethics: autonomy, beneficence, non-maleficence, justice

Ethics in individual vs. population health

Ethical theories: consequentialism, deontology, virtue ethics

Frameworks for ethical decision-making in public health

Unit II: Ethical Issues in Public Health Practice

Ethics in disease prevention, vaccination, and screening programs

Ethical considerations in health promotion and behavior change

Privacy, confidentiality, and informed consent in public health

Equity and social justice in health interventions

Ethics of resource allocation during pandemics and emergencies

Unit III: Public Health Laws in India

Overview of the Indian legal system relevant to health

Epidemic Diseases Act, 1897 and Disaster Management Act, 2005

Food Safety and Standards Act (FSSA), 2006

Environment Protection Act, 1986

Medical Termination of Pregnancy (MTP) Act, 1971 & PCPNDT Act, 1994

Unit IV: Human Rights and Legal Accountability

Health as a human right under Indian Constitution and international law

Patients' rights and responsibilities

Legal aspects of occupational and environmental health

Institutional frameworks: judiciary, NHRC, regulatory bodies

Suggested Readings:

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Beauchamp TL, Childress JF. Principles of Biomedical Ethics

Kass NE. An Ethics Framework for Public Health, American Journal of Public Health

Indian Law Institute. Public Health Law Manual

World Health Organization. Public Health Ethics: Key Concepts and Issues

Ministry of Health & Family Welfare. Manual on Laws Related to Health

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