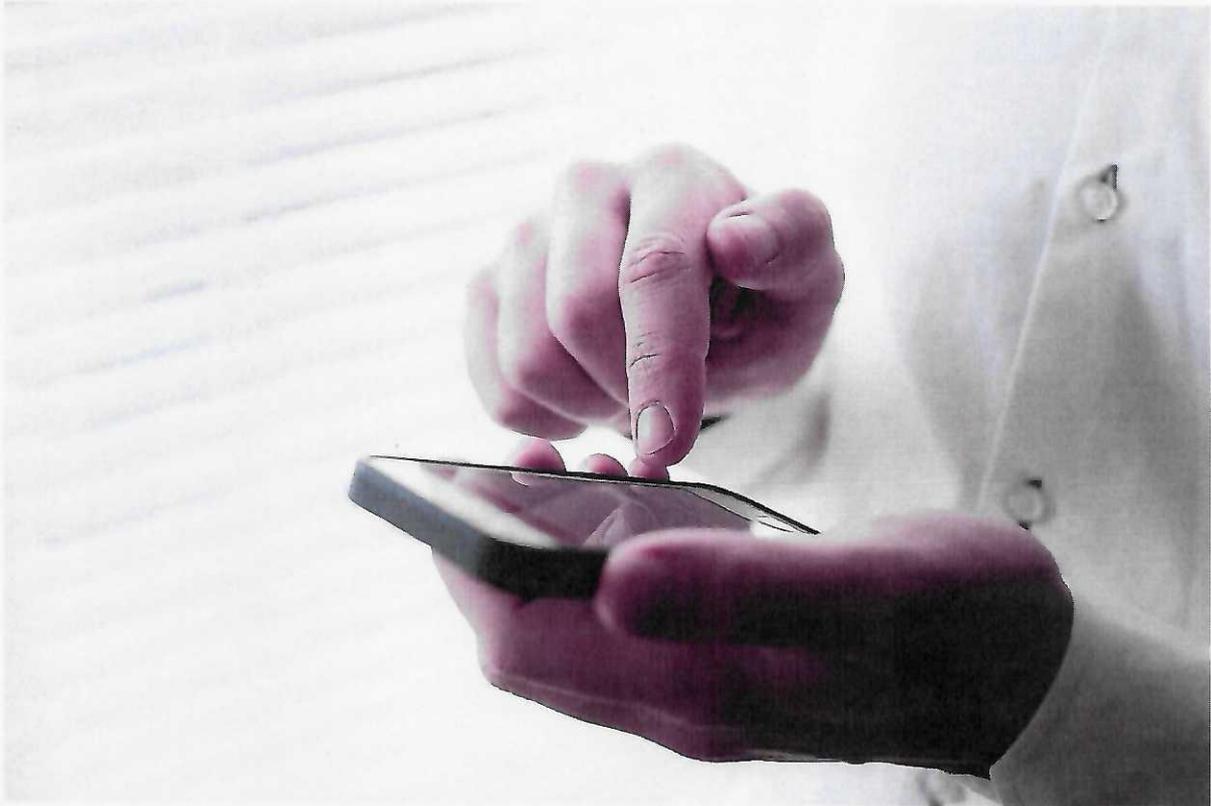


Syllabus for MD (Community Medicine) Programme



Guru Gobind Singh Indraprastha University

A State University established by the Govt. of NCT of Delhi

University School of Medicine and Allied Health Sciences

MD Community Medicine

Programme Objectives

A candidate upon successfully qualifying in the M.D. (Community Medicine) examinations should be competent in the following areas:-

- I) Public Health Management
- II) Epidemiology
- III) Health Team Leadership
- IV) Teaching and Training
- V) Research

Specific Learning Objectives

In the area of (I) Public Health Management, he/she should be able to:-

- i) Identify health problems of the community in the context of the socio-cultural milieu.
- ii) Priorities Health problems.
- iii) Identify threats to the environment.
- iv) Identify groups which require special attention (elderly, adolescents, gender, the poor and other marginalized groups) including those facing occupational hazards.
- v) Set objectives, prepare action plan, implement programmes and monitor, supervise and evaluate them.
- vi) Manage Health Information System and respond appropriately to the information gathered.
- vii) Assess costs and carry out programme budgeting;
- viii) Implement public health laws.
- ix) Initiate, implement and supervise National Health Programmes.
- x) Establish Surveillance System and respond to public health threats efficiently and effectively.
- xi) Anticipate, prepare for and respond to disaster.
- xii) Plan human resources development
- xiii) Manage logistics and materials effectively.
- xiv) Monitor and assure quality in programme implementation.

In the area of (II) **Epidemiology**, he/she should be able to:-

M.D. Community medicine
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- i) Conduct epidemiological investigation of communicable, non-communicable and other diseases of public health importance and suggest appropriate solution.
- ii) Use effectively the tools of epidemiology for understanding disease causation and determinants of diseases.

In the area of (III) **Health Team Leadership**, he/she should be able to:-

- i) Interact, communicate, educate effectively persons from diverse backgrounds, ages and preferences to promote healthy behavior through community participation.
- ii) Explain scientific information to public, decision makers and opinion leaders.
- iii) Nurture team spirit and harmonize activities of various members.
- iv) Facilitate inter-sectoral coordination
- v) Promote and establish partnerships

In the area of (IV) **Teaching and Training**, he/she should be able to :-

- i) Assess the learning needs of any given group (students, staff or community).
- ii) Formulate learning objectives.
- iii) Plan curriculum and prepare curriculum materials.
- iv) Select and implement appropriate learning methods.
- v) Evaluate learning experiences.

In the area of (V) **Research**, he/she should be able to: -

- i) Critically evaluate data, identify gaps in knowledge and formulate research questions.
- ii) Design and implement Epidemiological and Health Systems Research studies.
- iii) Analyze data and present findings.
- iv) Effectively communicate findings and Public Health Information.
- v) Apply ethical principles to the collection, maintenance, use and dissemination of data and information.

Post Graduate Training

To achieve the stated objectives, various modalities and methods are recommended:-

The proportion of these modalities and methods will vary from Institution to institutions due to varying facilities for exposure and number of postgraduate students and recognized teachers. However, modality wise minimum exposure is suggested below:-

1. Orientation- is suggested alongwith PGs of other disciplines for a **period of one week** within three months of admission. During orientation course, they should be exposed to

the concepts of human behavior, research methodology including ethics, statistics, Health Management including economics, health policies etc.

2. PG activities should be held at least thrice a week.
3. Class room and field learning-
 1. Self directed: At least twice a week in which the student will present articles, abstracts from journals, seminars, group work, epidemiological and statistical exercises, case studies, family presentation by rotation.
 2. Lectures: The recognized teachers should take lectures. The frequency of lectures should be once a month. The frequency can be increased upto one a week depending on number of teacher.
 3. Participation in scientific activities, Participation in Panel, Symposia, details, workshops, conferences.
4. Field posting and work
 1. Posting at subcentres/PHC/CHC/Urban Health Centers: Total period of one year.
 2. Posting in the hospital for exposure to clinical departments namely Pediatrics, Gynae & Obstetrics etc. for one month.
 3. Wherever possible work attachment at District Health Office and Directorate of Health Services – One month
 4. Short duration posting in various camps, melas, public health emergencies, Investigation of epidemics, implementation of National Health Programmes e.g. Pulse Polio, Leprosy etc.
 5. Visits to various institution of Public Health Importances.
5. Teaching exposure: They should conduct group teaching of undergraduate students. Each student must take 30 classes. They should participate in the training programme conducted by department and should conduct few sessions. They should use the techniques of pedagogy.
6. Research
 1. Thesis: The protocol must be submitted within 6 months and completed thesis should be submitted one year before the University examination.
 2. They should be involved in departmental research projects.
 3. They should publish at least one paper in scientific journal.

They should be exposed to computer application, internet, website, Media statistical softwares etc.

Thesis, to be submitted by each candidate at least 6 months before the date of commencement of the theory examination.

PAPER (Theory)

- 1 History of Public Health, Concepts in Community Medicine and Epidemiology
- 2 Health Services Management
- 3 Nutrition, Environmental Health and Demography
- 4 Mental Health and Health Technology

Practicals

- I. Generic Units of Evaluation
- II. Determining the Health needs of a family
- III. Family Health Exercise
- IV. 2 short cases
- V. Statistical cum epidemiological exercise
- VI. Spots
- VII. Microbiological/Public Health Laboratory practical
- VIII. Viva-Voce

COURSE CONTENT

Paper I

1. History of Public Health and Evolution of Community Medicine.
2. **Concepts in Community Medicine:** Concept of Health & Disease, Positive Health, Health Spectrum, Theories related to Disease Causation, Determinants of Health, Health indicators, Methods of Assessment of Health of Individual and Community, History of Disease, Levels of Prevention, Primary Health Care, Comprehensive Health Care, Immunity & Immunization, Evidence Bases Medicine etc.
3. **Epidemiology**
 - Definition, aim and uses
 - Measurement of disease frequency
 - Distribution of disease, time, place and person
 - Determinants of Diseases
 - Screening
 - Measures of association and potential impact
 - Casual association
 - Epidemiological study designs
 - Epidemiological biases and their control

- Surveillance of diseases/disorders/health conditions
- Investigation of outbreaks/epidemics
- Prevention & Control of communicable and non-communicable diseases and other conditions

Paper II

1. Health management

- National Health related policies and committees
- Programme planning, implementation, monitoring and evaluation
- Strategic projects management
- Organizational behavior
- Logistic management
- Medical audit
- Introduction to human resource management
- Social Marketing
- Quality management, continuous quality improvement
- Operations Research
- Introduction to Public Health Laws
- Introduction to Health Medical Information System
- Health Systems (organizations, agencies, infrastructure etc.): International & within the country
- Communication in organization, networking and advocacy
- Public Health emergencies
- Health Economics
 - ❖ Introduction to Macro and Micro-economics
 - ❖ Pharmaco-economics
 - ❖ Demand and supply
 - ❖ Health financing
 - ❖ National and District Health Accounts
 - ❖ Insurance (commercial, social security)
 - ❖ User fees
 - ❖ Resource mobilization and utilization

- ❖ Costing and budgeting
- ❖ Financial sustainability
- International Health
- Health Services for Special Groups
 - A. Reproductive and Child Health, Family Planning and Population Medicine: Problems and strategies related to various services, initiatives, policies, legislations and programmes for ANE, INC, PNC, Under 5 children population control, Women Empowerment, Gender related issues and Recent Advances.
 - B. School Health
 - C. Adolescent Health
 - D. Older persons: Health Problems, Services and Programmes
 - E. Disadvantaged Groups: Health Problems, Services and Programmes

Paper III

1. **Nutrition:** Definitions, concepts, principles, Food Hygiene, Nutritive values, Nutritional Assessment of individual and Community, Nutritional Problems, Strategies, Initiatives, Nutritional Policy and programmes at various levels, Diet for various groups, Food Adulteration and Legislation to control, Recent Advances in Nutrition.
2. **Environmental Health**
 - Principles of environmental health and human ecology
 - Environmental health risk assessment
 - Environmental health impact assessment
 - Environmental pollution
 - Toxicology related to public health
 - Food sanitation and safety
 - Medical entomology including vector and rodent control
 - Waste disposal
 - Housing sanitation
 - Environmental health policy, programmes, & legislations
 - Current and emerging issues in environmental health (e.g. slum, healthy city, global warming, etc.)
3. **Occupational health and Safety:** Evolution, Definitions, Concepts, Scopes, Work related Diseases, Initiatives, policies, strategies, programmes and legislations related to safety, welfare and work, Ergonomics, Organization and administration of medical care

in a work environment including industries in unorganized and organized sectors, Injuries types, impact on health, prevention and control and Recent Advances.

4. Population Science & Genetics

- Factors affecting the size of the population
- Measures of fertility and mortality
- Population projection
- Demographic transition
- Implication of rapid population growth
- Life table
- Urbanizations
- Genetics: Definitions, Concepts, Problems, Genetic Counselling Management.

5. Biostatistics

- Probability theory
- Level of Measurement
- Central
- Tendency and dispersion
- Sampling methods
- Sampling errors and confidence intervals
- Test of significance
- Sample size calculation
- Adjustments for confounding
- Introduction to multivariate analysis
- Correlation and regression
- Interaction

Paper IV

1. Mental Health: Definitions, Concepts, Problems, Prevention and Control of Mental Disorders including programmes and legislations
2. **Medical Sociology and Behavioral Sciences** : Definitions, Concepts, Social and Behavioral Problems, Cultural, Socioeconomic and Psychological Determinants and impacts on health problems, Methods of Assessment, Strategies, Policies for prevention and control, Community Participation, Utilization of Health Services, Knowledge, Attitude, Behavior and Practices related to various public health problems, Clinico-social evaluation of individuals, Public Relation, Doctor-Patient relationship and hospital

sociology, Urbanization and health impacts, Medical anthropology, Accelerated changes in life style.

3. **Information, Education and Communication:** Definitions, Concepts, Principles, Methods, Planning, Organization and Evaluation, Internet applicable in Community Medicine.

4. **Research Methods**

- Literature search
- Choosing research topics
- Formulating research questions
- Study designs – Quantitative & Qualitative
- Measuring reliability and validity
- Sampling
- Instrument development
- Data collection and management
- Data analysis and report
- Communicating research findings
- Scientific writing
- Development of research proposal
- Ethical issues

5. **Pedagogy:** Learning objectives, Learning methods, techniques, processes, evaluations.

6. **Health Technology** – Computer application, Software for research and statistical analysis, awareness regarding Remote Sensing, GIS and other new technologies.