

Dr. M.G.R. EDUCATIONAL AND RESEARCH INSTITUTE
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Maduravoyal, Chennai – 600 095, Tamilnadu, India
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SYLLABUS & CURRICULUM
for
M.D. COMMUNITY MEDICINE

2020 onwards

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M.D. COMMUNITY MEDICINE

PREAMBLE

The purpose of this document is to provide teachers and learners illustrative guidelines to achieve defined outcomes through learning and assessment. The purpose of PG education is to create specialists who would provide high quality health care and advance the cause of science through research & training.

IMPORTANCE

- Standardize Community Medicine teaching at Post Graduate level throughout the country.
- Community Medicine is an academic subject, a branch of Medicine which deals with promotion of health and prevention of diseases, involving people's participation, utilizing professional management skills.
- The Community Medicine specialist, will inculcate a holistic view of health and medical interventions primarily focused on Community Health/Population Health.
- Thus, he/she should be equipped with the knowledge, skills, competencies in primary, secondary & tertiary care, control and prevention of outbreaks/ epidemics, community diagnosis, health needs assessment, epidemiological assessment, research and planning evidence-based health policies and programmes.
- The Guidelines for teaching Community Medicine, therefore, should be designed to create a cadre of professionals who are competent to meaningfully contribute their expertise in planning, implementation, co-ordination, monitoring, evaluation of Primary Health Care Programs based on scientific evidence.

- The competencies must cover a wide spectrum of skills viz., technical, managerial, administrative, planning, organizational skills, applied skills in Health Information Management, software application and soft skills of communication, motivation, decision-making, team building, training in scientific communication and medical writing.

GOAL

The goal of postgraduate medical education shall be to produce competent specialist and /or Medical teacher:

- He/ She shall recognize the health needs of the community, and carry out professional obligations ethically and in keeping with the objectives of the national health policy;
- He/ She shall have mastered most of the competencies, retraining to the specialty, that are required to be practiced at the secondary and the tertiary levels of the health care delivery system:
- He/ She shall be aware of the contemporary advances and developments in the discipline concerned;
- He/ She shall have acquired a spirit of scientific inquiry and is oriented to the principles of research methodology and epidemiology; and
- He/ She shall have acquired the basic skills in teaching of the medical and paramedical professionals.

GENERAL OBJECTIVES

At the end of the postgraduate training in the discipline concerned the student shall be able to:

- Recognize the importance of the concerned specialty in the context of the health need of the community and the national priorities in the health sector.
- Practice the speciality concerned ethically and in step with the principles of primary health care.

- Demonstrate sufficient understanding of the basic sciences relevant to the concerned speciality.
- Identify social, economic, environmental, biological and emotional determinants of health in a given case, and take them into account while planning therapeutic, rehabilitative, preventive and promotive measures/strategies.
- Diagnose and manage majority of the conditions in the speciality concerned on the basis of clinical assessment, and appropriately selected and conducted investigations.
- Plan and advise measures for the prevention and rehabilitation of patients suffering from disease and disability related to the speciality.
- Demonstrate skills in documentation of individual case details as well as morbidity and mortality data relevant to the assigned situation.
- Demonstrate humane approach towards patients and their families and exhibit interpersonal behaviour in accordance with the societal norms and expectations.
- Play the assigned role in the implementation of national health programmes, effectively and responsibly.
- Organise and supervise the chosen/assigned health care services demonstrating adequate managerial skills in the clinic/hospital or the field situation.
- Develop skills as a self-directed learner, recognise continuing educational needs; select and use appropriate learning resources.
- Demonstrate competence in basic concepts of research methodology and epidemiology, and be able to critically analyse relevant published research literature.
- Develop skills in using educational methods and techniques as applicable to the teaching of medical/nursing students, general physicians and

paramedical health workers. Function as an effective leader of a health team engaged in health care, research or training.

SUBJECT SPECIFIC OBJECTIVES

- To create a skilled cadre of medical professionals having expertise in application of principles of Public Health, Community Medicine and applied epidemiology, contributing meaningfully in formulating National Health Policies & Programmes with a systems approach for overall human development.
- To standardize the teaching & training approaches at post- graduate level, for Community Medicine.
- Research: To formulate research questions, do literature search, conduct study with an appropriate study design and study tool; conduct data collection and management, data analysis and report.

PROGRAM OUTCOMES

At the end of the MD programme in Community Medicine, the student will:

- Know the structure and functioning of the health system at the state national and international levels and its historical perspectives.
- Know the principles of nutrition, maternal health, family welfare, health planning & management & evaluation of health services & programmes and apply the recent developments and put the same in to practice
- Apply the principles of epidemiology and biostatistics to health practice including the design and implementation of health related research studies and clinical preventive medicine trials
- Know the principles of communicable and non-communicable diseases control and assist in the implementation of national health programmes.

- Identify the socio cultural dimension in health and disease and apply this knowledge in the design and implementation of an integrated health and development programme
- Apply the principles of environmental and occupational health & the relevant legislations in the design of health programs & health services aimed at improving health status
- Assess specific health situations in a population, plan, organize, implement and evaluate programmes aimed at improving health situations
- Identify the health needs of the special groups within populations especially
 - the aged, the disabled & workers and to respond to their needs & coordinate with appropriate Govt. Health Services, National Health Programmes, Relevant Health Schemes & Health Legislations, applicable to the identified individuals & special groups.
- Know the principles of learning and apply this knowledge in facilitating the learning process in groups of people involved in health
- Relate his/her knowledge of curative medicine to the improvement of the health status of a given population
- Identify the role of the government, private and voluntary sector in health and understand the principles of innovations in health practices and research

PROGRAM SPECIFIC OUTCOMES

- Define and manage the health problems of the community
- Organize epidemiological studies to identify health problems.
- Plan, implement and evaluate various health programs especially national health, family welfare, disease control/eradication programs.

- Select, train, supervise and manage various categories of health personnel
Organize health care services, routine and for special groups and during periods of special needs such as disasters/calamities and epidemic.
- Plan and execute a research study, including clinical trials.
- Use/organize bio-statistical analysis using computers and software and prepare reports/ papers
- Critically evaluate research activities
- Make recommendations on policy and procedures
- Plan and conduct an educational session/programme.
- Assist in development of curriculum, teaching and learning activities and methods of evaluation

COURSE OUTCOMES

- At the end of the Postgraduate training in Community Medicine students will should be able to nurture as Primary Care Physicians who can recognize and mange common health problems in the community.
- The Community-oriented Primary Care Physician will have the ability to identify, prioritize and manage the health problems of the community.
- He She would be an effective leader of the health team at primary care level.
- The Community Physician demonstrates excellence in academics, health research, and leadership skills.
- He/she is instrumental in development of public health policy, design, implementation and evaluation of health programs and applies them to a broad range of community health

TEACHER/TRAINER

- Plan and conduct an educational session/program. He/she will be able to draw up lesson plan with details of educational objectives, content, process and essential inputs.
- Assist in development of curriculum, teaching and learning activities and methods of evaluation.
- Assist in manpower planning and development. He/she should be able to participate in programs for the selection, training and supervision of various cadres of health personnel

RESEARCHER

- Plan and execute a research study including clinical trials.
- Use/Organize bio-statistical analysis using computers and software and prepare reports/papers.
- Critically evaluate research activities.
- Make recommendations on policy and procedures.

PUBLIC HEALTH SPECIALIST

- Define and manage the health problems of the community, which he/she serves. He/she should be able to organize epidemiological studies to identify health problems.
- Plan, implement and evaluate various health programs in his/her area, especially National Health, Family Welfare and disease control / eradication programmes.
- Select, train, supervise and manage various categories of health personnel working with him/her.
- Organize health care services, routine and for special groups and during periods of special needs such as disasters/calamities and epidemics.

SUBJECT SPECIFIC COMPETENCIES

At the end of the course the student should be able to acquire the following competencies under the three domains, Cognitive, Affective and Psychomotor:

A. Cognitive domain (The student should be able to:)

1. Describe conceptual (and applied) understanding of Public Health, Community Medicine, clinical and disease-oriented approach, preventive approach & health promotion, disease control & promotion.
2. Have knowledge about communicable and non-communicable diseases, emerging and reemerging diseases, their epidemiology, control and prevention.
3. Apply the principles of epidemiology, health research and Bio-statistics, application of qualitative research methods
4. Calculate Odds Ratio, Relative Risk, Attributable risk and other relevant health and morbidity indicators.
5. To describe nutritional problems of the country, role of nutrition in health and disease and to describe common nutritional disorders
6. Develop nutrition plan for an individual based on his requirements and with concerns to special situations if applicable
7. Plan comprehensive programme to address issue of malnutrition in a given area for a specific group
8. To describe the concept of Environmental Health and its various determinants.
9. Identify environmental health issues in a given area/community
10. Assess impact of adverse environmental conditions on health of human beings

11. Plan awareness programmes at various levels on environmental issues and mobilize community resources and participation to safeguard from local adverse environmental conditions
12. Should be able to provide technical advice for water purification, chlorination, installing gobar gas plant, construction of soakage pits etc.
13. Be a technical expert to advice on protection measures from adverse environmental exposure
14. To describe the working of Primary Health Care system, Panchayat Raj system, National Health Programmes, urban/rural differences, RCH, Demography and Family Welfare.
15. Do orientation of the inter-linkage of health sector and non-health sector for promotion of Health & control and prevention of diseases.
16. Have familiarity with administrative procedures and protocols
17. Have knowledge about role of media and its use in health.
18. Have knowledge of Health Care Administration, Health Management and Public Health Leadership
19. To describe Health Policy planning, Medical Education technology, Information Technology and integration of alternative Health system including AYUSH.
20. To describe the intricacies of Social & Behavioral sciences and their applications.
21. To describe Public Health Legislations
22. To understand and describe International Health & Global Diseases surveillance.
23. To relate the history of symptoms with specific occupation, diagnostic criteria, preventive measures, identification of various hazards in a specific occupational environment and legislations.

24. To keep abreast of recent advances in Public Health & formulate feasible, optimal, sustainable, cost effective strategies in response to the advances in public health & development.
25. To describe the principles of Health Economics and apply it in various public health settings.
26. To explain and correlate common health problems (medical, social, environmental, economic, psychological) of urban slum dwellers, organization of health services in urban slum areas
27. Develop workable interventions for control and prevention of emerging and re-emerging diseases at local, national and global level.
28. Identify behavior pattern of individual or group of individuals detrimental or adversely affecting their health
29. Define and identify vulnerable, under-privileged high risk communities and their special needs
30. To create awareness about various public health laws
31. Evaluate cost effectiveness and cost benefits of a Health Program
32. Understand and express implications of 'Poverty Line', 'Social Inclusion', 'Equity', 'taxations', 'Insurance' on Health care management.
33. To categorize hospital waste and be able to guide for proper disposal.
34. To provide a comprehensive plan for disaster management and mitigation of sufferings.

B. Affective domain

1. Should be able to function as a part of a team, develop an attitude of cooperation with colleagues, and interact with the patient and the clinician or other colleagues to provide the best possible diagnosis or opinion.
2. Always adopt ethical principles and maintain proper etiquette in dealings with patients, relatives and other health personnel and to respect the

rights of the patient including the right to information and second opinion.

3. Develop communication skills and interact with patients, relatives, peers and paramedical staff, for effective teaching.

C. Psychomotor domain: The student should be able to perform independently the following :

1. Conduct community surveys for assessment of health & morbidity profile, epidemiological determinants, assessment of health needs, disease surveillance, evaluation of health programmes and community diagnosis
2. Conduct epidemic investigations, spot maps, predict disease trends, preparation of reports, planning and implementation of control measures
3. Demonstrate clinical skills of preparing case history, examination, provisional diagnosis, treatment and clinical case management and interpretation of laboratory findings. Conduct common procedures such as incision, drainage, dressings & injections.
4. Do data collection, compilation, tabular and graphical presentation, analysis and interpretation, applying appropriate statistical tests, using computer-based software application for validation of findings
5. Conduct epidemiological research studies to establish cause-effect relationships in elaborating the epidemiology of diseases and health events
6. Develop appropriate IEC Material, assessment of community communication needs, training skills, counseling skills, conduct Health Education Programmes in urban and rural settings
7. Conduct dietary surveys, assessment of nutritional status, nutritive values of common food menus, detection of food adulterants, use of lactometer, recording and interpretation of growth and development charts.

8. Use and apply various instruments and processes concerned with environmental health and biological waste management e.g. waste collection, segregation and disposal as per protocols, needle-disposers, disinfection procedures. Also use of Dosi-meters, Kata / Globe Thermometer, Slings Psychrometer, Gobar Gas Plant, Soakage pit, Solar Energy, functioning of ILRs, Deep Freezers, Cold Boxes, Vaccine Carriers.
9. Identify different types of mosquitoes, detect vector breeding places and orientation of the methods of elimination of breeding places and placement of a mosquito-proof water tank.
10. Conduct clinical screening of various diseases and organize community health camps involving community participation in urban and rural settings. Use of Snellen charts for vision, Ishihara's chart for colour blindness, tourniquet tests for dengue diagnosis in fever, BMI and other physical measurements of infants, children and adults etc., copper-T insertions and preparation of pap smear.
11. Conduct tests for assessment of chlorine demand of water (Horrock's Apparatus), procedure of well-water and urban water-tank chlorination, assessment of chlorination levels, physical examination of water, methods domestic water purification, oriented in use of water filters.
12. Prepare health project proposals with budgeting based on the project objectives.

Miscellaneous skills: (The student should be able to)

1. Devise appropriate health education messages for public health awareness using various health communications strategies.
2. Identify family level and community level interventions and facilitate the implementation of the same e.g. food hygiene, food storage, cooking

demonstrations, community kitchen, kitchen garden, empowerment of women for promoting nutritional health etc.

3. Demonstrate counselling skills for family planning services.
4. Plan and execute Behaviour Change Communication strategy for individuals.
5. Conduct measurement of occupational exposure to harmful influences.
6. Diagnose occupational hazards and undertake surveys to identify occupational exposures as and when necessary.
7. Elicit appropriate response at individual and community level to prevent occupational hazards including IEC activities at different levels.
8. Use modern IT applications especially internet & internet-based applications.

SYLLABUS

COURSE CONTENTS

1. History of Public Health

Learning objectives

- Historical Lessons Learnt from the success and failure of Public Health strategies around the world.
- Historical influence and importance of Indigenous System of Medicines in Health Care in India.
- Historical Review of Implementation of the Bhole committee's and other Committee Reports on Health Services, Health Care and Health Professional Education in India.
- Historical Review of the development of National Health Policies.
- The trend of achievements of the country vis-à-vis the Health for All concept.
- Comparative study of development of Health System models globally and nationally

2. Conceptual (and applied) understanding of Public Health, Community Medicine, clinical disease-oriented approach, Preventive approach & Health promotion, disease control .

Learning objectives

- Understand and explain the concept & application and give suitable analogies/examples related to Public Health/Community Medicine (with differences), Disease-oriented v/s Preventive approach, health promotion disease control & prevention.
- Explain correlation between health and human development with analogies/ examples.
- Explain concept of Primordial, Primary, Secondary and Tertiary prevention with examples.
- Evolutionary History and mile-stones in Public Health – National and International levels.
- Concept of Disease control strategies.
- Public Health importance of the Health Promotion Approach.
- Concept of Health for All, Millennium development goals.
- Multi-sector approach in Health care programs.
- Health Care as part of Community Development
- Advantages of Community Participation in health care programs.

3. Communicable and Non-Communicable diseases, emerging and re-emerging diseases

Learning objectives

- Understand and explain Epidemiology of Communicable/Non-communicable diseases- its causes, precipitating factors, social & other non- health causes, mechanisms of transmission,

signs/systems, management, control & prevention measures, related national Health

- Programmes & national Guidelines, Directives, special projects, if any.
- Explain application of Disease surveillance system in control of Communicable/Non communicable diseases.
- Explain & undertake steps to investigate & control outbreaks, epidemics and take measures to prevent the same.
- Evolve prevention & control measures based on local & regional epidemiological funding, synchronizing with National guidelines.

4. Applied Epidemiology, Health Research, Bio-statistics

Learning objectives

- Explain/Apply Principles of Epidemiology
- Types and detailed methodologies of Epidemiological studies such as Descriptive, Analytical, Experimental and importance of Multi-Centric studies.
- Appropriate choice of epidemiological approach for given situations.
- Interpretation of Epidemiological studies.
- Explain the concept & application of Epidemiology of Disease and Health giving suitable examples.
- Explain Epidemiological approach, the terms Distribution & Determinants, uses, types of Epidemiological studies, interpretation, merits/demerits and limitations, odds ratio, relative risk, attributable & population attributable risks, Hybrid designs (with examples), validity of Epidemiological Data and application in practice at field level.

- Explain Epidemiological Research methods, Research related protocols, Literature review, estimating sample size, data collection/ compilation/Analysis/ Research, interpretation.
- Develop Health interventional programs based on Epidemiological Finding & create evidence for Public Health action.
- Understand difference between data, information & intelligence, types of data, survey methods, formulating questionnaires, interview schedule, data presentation types & analysis.
- Apply computer based software application for data designing, data management & collation analysis e.g. SPSS, Epi-info, MS office and other advanced versions.
- **Preparing dissertation synopsis**
 - Identifying need for research study
 - Problem statement
 - Formulating Objectives
 - Methods of Literature Review (References and Bibliography)
 - Conceptual framework of study
 - Research design choice
 - Choice of Methodologies
 - Analysis, discussion and presentation
 - Collection / Organisation of data / Measurement scales
 - Presentation of data and Record keeping
- Measures of central tendency
- Measures of variability
- Sampling and Planning of health survey
- Probability, Normal distribution and inductive statistics
- Estimating population values
- Tests of significance (Parametric / Non-parametric)

- Analysis of variance
- Multi-Variate Analysis and Meta analysis
- Association and correlation and Regression
- Vital Statistics
- Evaluation of health and measurement of morbidity / mortality
- Life table and its uses
- Use of computers
- Census
- Qualitative Research methodologies
- Evaluation methodologies

4. Nutrition

Learning objectives

- Identify various nutritional problems in the region, state and country and contributing factors for the same, with due emphasis on ecology perspectives.
- Explain importance of various nutrients (including micronutrients) in health, their sources, requirements and problems associated with their deficiencies as well as over consumption,
- Plan balanced diet and dietary requirements of various age and sex groups.
- Dietary/nutritional concerns of vulnerable groups – young children, adolescents, ANC/PNC/Lactating mothers/senior citizens/ individuals with various health problems e.g hypertension, diabetes, renal problems etc.
- Classification of food, food additives, food fortification, food enrichment, food toxins and food adulteration.
- Explain Food production, Food hygiene and safety, food storage, food preparation, food wastage and feeding practices.

- Assessment of nutritional status of a community by adopting different methodologies.
- Nutritional supplementation, surveillance, education and rehabilitation.
- National programmes in nutrition and their evaluation
- National nutrition policy.
- Nutrients and their daily Requirements.
- Classification of Foods
- Balanced Diet
- Nutritional Profiles of Major Foods
- Nutritional Deficiencies
- Protein Energy Malnutrition
- Nutritional Importance of Trace elements
- Assessment of an individual's Nutritional Status
- Assessment of Community Nutritional Status
- Nutritional Problems in India including Food Borne Diseases
- Nutritional Programmes in India
- Methods and impact of nutritional Surveillance
- Social Problems in Nutrition
- Food Hygiene – domestic and commercial levels
- Food Adulteration including PFA Act - review of implementation
- Primordial Prevention of Lifestyle related nutritional diseases.

5. Environmental health

Learning objectives

At the end of this course, the student should be able to:-

- Highlight importance of external environment (air, water, noise, radiation, temperature, ventilation, solid waste disposal, insects and

vectors, domestic and country yard pests, industrial waste disposal etc. and its impact on ecology and human health.

- Elaborate on health issues related to housing, air, water, noise, radiation pollution i.e. size of problems, area and specific groups affected, measurement of pollution levels and health impact of the same, corrective measures
- Elaborate on requirements of water, water chlorination and household purification measures, measurement of chlorine demand, Break-point chlorination levels, water quality.
- Assessment of quality of water and air, control of air pollution
- Explain environmental sanitation and control measures (including appropriate technologies) – modern methods of sewage disposal, mechanical ventilation, soakage pits, gobar gas plants, smokeless Chula, solar energy, rainwater harvesting, sewage water recycling plants at society level etc.
- Explain global warming and its health impact.
- Elaborate on forest reserves, social forestry and health, deforestation
- Study vectors of medical importance and integrated control measures against them.
- Explain dynamics of transmission of vector borne diseases
- Explain pest control measures
- Explain environmental health issues in urban and rural areas
- Understand functioning of public sector measures to safeguard environmental health e.g water purification plant
- Explain Legislative measures for protection of environmental health
- Water

- Applied importance of Sources of water
- Water Pollution and review of control and monitoring methods
- Purification of water and its storage and distribution
- Water quality standards – its implementation and monitoring
- Epidemiology and Control of Water borne diseases
- Epidemiological Investigation of outbreak of water borne disease

Air

- Indices of thermal comfort and their applied importance
- Air Pollution including monitoring, control and prevention
- Ventilation and its applied importance
- Importance of domestic and industrial Housing standards
- Impact and control of Noise Pollution
- Radiation Hazards from natural, industrial, hospital, communication devices
- Meteorological Environment and its Health impact
- Domestic and industrial Lighting Standards
- Disposal of Waste and Sanitation
- Sources and Classification of wastes
- Disposal of Solid Wastes
- Excreta Disposal
- Sewage treatment and safe recycling guidelines
- Health Care and Hospital Waste Management
- Guidelines on Industrial Toxic wastes and Nuclear wastes.

6. Primary Health Care System, Panchayat Raj, National Health Programmes including RCH, Demography & Family Welfare:

Learning Objectives

- Explain the meaning of Primary Health Care with suitable analogies with reference to India, and be able to define the systems approach for implementation of Primary Health Care.
- Enumerate the elements, principles, population coverage norms, staff patterns, day to day activities, programme schedule, stakeholders at PHC level.
- Explain the scope and implications of 3-tier system of Primary Health Care.
- Understand functioning of Rural Panchayat Raj system of development and its co-relation with health.
- Promote community participation in Primary Health Care programme and motivate various stakeholders for the same.
- Understand and comply with medico-legal procedures related to Primary Health Care activities.
- Integrate, coordinate both health and non-health sectors for implementing various national health programmes.
- Deliver the provisions of various health schemes to eligible beneficiaries such as Janani Suraksha Yojana, Rashtriya Swasthya Beema Yojana, Rajiv Gandhi Jeevandayi Arogya Yojana etc.
- Impart training in health programmes for paramedical workers, lab technicians, community health volunteer's, interns and provide health education in the community.
- Implement Public Health Skills for investigations and containment of outbreaks & epidemics.

- Understand history of evolution of public health, important milestones in the world and in India.
- Enumerate the various health committees established and their major recommendations since 1947-48 to till date.

Primary Health Care

- Need and importance for prioritizing of Primary Health Care
- Principles of Primary Health Care
- Elements of Primary Health Care
- Models of Delivery of Primary Health Care

The Health Care Systems in India

- Organizational Structure and Functions of the Govt. Health care System at the Central, State, district, Primary Health centre, Community Health Centre, Peripheral areas as also the Urban areas.
- Health Care systems for Factories / Mines / Plantations.
- Large and small scale N.G.O. sector health care system.
- Corporate and Private Health Insurance systems.
- Family Medicine, General Practitioners.
- Indigenous Medicine system.
- Feasibility of Networking the Govt. and NGO sectors for better coverage of health programs.

Maternal and Child Health Care

- Meaning and relevance of Risk Approach to Maternal and Child Health.
- Review of the public health relevance of Maternal and Child health physical, mental, social and behavioral problems

- Rationale, Components and Implementation of Antenatal, Intranatal and Postnatal Care
- Rationale, Components and Implementation of Child Health Care, Maternal and Childhood Disease control strategies
- Indicators of MCH care and their interpretation

Organizational and Functional components of the Maternal and Child Health Services Program in India

- Review of MCH related programmes in India. eg. Reproductive & Child Health (RCH – I & II), Integrated Child Development Scheme (ICDS), Integrated Management of Neonatal & Childhood illnesses (IMNCI) etc.
- Family Welfare Services in India
- Meaning and relevance of Family Planning, Family welfare and Population Control
- Methods of Family Planning – Review of mechanism, affectivity, factors for non-compliance of usage, contraindications and side-effects.
- Formulation and Evaluation of Implementation strategies of Family planning programs.
- Demography
- Significance of Demography in public health
- Interpretation and implications of Demographic Cycles on global and Indian context.
- Demographic trends in India and its application in the planning of Health programmes

School Health Services

- Objectives of school health services

- Planning for components of school health service and their implementation strategies (including child – parent – teacher and community roles)
- School level counseling for chronic absenteeism, drug abuse, gender based issues, behavioral and learning problems.
- Monitoring Health of school children and school staff

Social Pediatrics

- Interventional strategies for Juvenile Delinquency, Child Abuse, Child Labour, Street Children, Child Marriage.
- Child Guidance Clinic, Child Placement

7. National Health Programs

Learning Objectives

- Components of individual National health Programs
- Review of factors associated with the success/failure/stagnation of present status of the National Health Programmes.

8. Health Care Administration, Health Management and Public Health Leadership

Learning Objectives

At the end of this course, the student should be able to:-

- Explain the conceptual difference between Administration and Management, Power and Authority with reference to health care.
- Explain the role of fundamental principles of constitution, principles of Democracy and its correlation with health care administration.
- Explain the role of Bureaucracy, Technocracy, Political system, Judiciary, Media and people in health care administration.

- Explain and identify the key positions and their role in health administration at State, District, Taluka (Tehsil block) and village level.
- Explain the frame work of health care system at State, District, Taluka & village level and understand the mechanism of coordination between bureaucrats, technocrats, political, judiciary and media at each of these levels.
- Enumerate functions of a manager, explain concepts of management and leadership styles, various management techniques, planning process, monitoring & evaluation skills.
- Should be sensitive to quality issues in health care management and comply with relevant quality management techniques.
- Formulate and manage team approach for implementing health programmes.
- Apply skills of effective human resource management and identify relevant roles, responsibilities and duties of functionaries.
- Implement skills of motivation, communication, negotiation and conflict management at PHC level.
- Develop budgetary statements based on evidence of needs assessment and be able to maintain account of expenditure as per norms.
- Undertake community health needs survey, conduct training & communication needs assessment of paramedical and health workers, identify vulnerable, underprivileged communities, implements high risk approach.

Health Care Management

- Relationship of Planning to Management
- Situational Analysis Methods
- Vision, Mission, Goal setting and objective formulation

- Criteria setting for Prioritization
- Resource Generation Methods
- Strategies Formulation
- Participatory Approaches to plan execution
- Monitoring and Evaluation Parameters selection and implementation
- Project Report Writing and Reporting
- Selected Management Techniques relevant to Health care.
- Relevance of Qualitative methods in Health Management
- Basics of Health Economics
- Importance of Operation Research Methods in Health care Management.
- Basis of Health Systems Research.

9. Health Information System

Learning Objectives

- Uses of Health Information System in Health planning including Situational analysis, Prioritization, Monitoring and Evaluation.
- Sources and methods of data acquisition.
- Applications of health information on National and International Notification of Diseases.
- Use of Internet and Intranets including NICNET, etc.

10. Health Policy, Medical Education, Integrating Alternative system of Medicine

Learning Objectives

- Understand and elaborate implications of the policy provision with reference to the current health scenario in the country.

- Explain the role of health policy in promotion of Primary Health care, ensuring equity, inter sectoral co-ordination, appropriate technology and community participation.
- Explain the various provisions for promotion of preventive and curative health services including National Health Mission, National Health Programs, Quality Hospital based services, Medical Education and AYUSH.
- Critically appreciate merits and demerits of the Health Policy.
- Explain SWOT analysis of the policy and debate on evidence based recommendations, additions, deletions.
- Debate on suggestions or recommendations for future inclusions.

Political Environment

- Impact of Political Will on planning and implementation of Health programs

Health Legislation

- Review of provisions available under the various Acts related to health. This covers Industries, Mines, hospitals, plantations, labor, adoption, rail/road/air travel, waste treatment, child labor, handicapped, food safety, housing and public utilities, pollution, reporting of notified diseases, quarantine, medical negligence, etc.

Principles of Educational Science and Technology

- Curriculum Planning, Educational Objectives.
- Principles of Learning.
- Teaching / Learning methods.
- Teaching skills including Micro Teaching.
- Preparation and Use of Teaching Aids and Learning Research Materials.
- Methods of Evaluation

11. Social and behavioral sciences

Learning objectives:

- Understand influence of social and behavioral practices on health.
- Understand principles of behavior change of an individual and community.
- Clearly understand difference between knowledge, attitude and practices..
- Understand importance of social medicine and health.
- Importance of behavior change communication (BCC).
- Socio-cultural factors influencing behavior change.
- Formal and informal organizations in the community.
- Influence of peer pressure.
- Know the health problems, where BCC interventions are necessary.
- Understand factors promoting and detrimental to BCC.

Role of Social sciences in Health

- Need and Importance and Role of Medico- Social work in Public Health Behavioral sciences.
- Need and importance of Health – Seeking Behavior in implementing Health care programs. Meaning and relationship of Behavioral Sciences to Health.
- Principles of Social Psychology as applicable to Health.
- Principles of social Anthropology as applicable to Health

Sociology

- Relevance and use of Social structures, social organizations and cultural factors in addressing problems in Health as part of Community Development.

- Gender based issues and its relevance to impact of health care programs.
- Impact of Urbanization and Industrialization on Health.
- Difference between Advising and Counseling

12. Public Health Legislations

Learning objectives

- Explain public health legislations and need for the same.
- Know in detail each public health law – when, why, implementation, impact, issues etc.
- Enforcement of various public health laws.
- Judiciary mechanism for ensuring proper implementation of public health laws.
- Scope for integrated approach for implementation of public health laws.

13. International Health

Learning Objectives

- Understand the need and scope for international health measures.
- Enlist and understand functioning of various UN agencies (including WHO) playing key role in international health.
- Enlist and understand functioning of bilateral vs multilateral international donor agencies.
- Provide advice to international travelers and vaccination requirements,
- Understand International health control measures e.g. quarantine, airport management etc.
- Understand the management of international ports from health perspectives.

14. Occupational Health

Learning Objectives:

- Understand the concept of occupational health and its importance, Occupational environment and work dynamics.
- Know different types of occupational exposures at various settings.
- Enlist various occupational hazards and their relative magnitude.
- Understand measurement of exposure levels to harmful influences during occupation.
- Understand preventive and control measures against various occupational hazards – global, national and local level measures.
- Understand individual and community responses towards preventing exposure to occupational hazards.
- Understand and advise occupational safety measures.
- Understand legislative measures to prevent exposures to occupational hazards.
- Advise compensation provisions to persons exposed to various occupational hazards.
- Understand occupational health problems amongst people in unorganized sector
- Understand and advise social security and welfare provisions for workers – ESIS, Factory's Act, Role of ILO, Ministry of Labor, DGFASLI.
- Relevance of Occupational Environment to Health Hazards
- Surveying for identifying Industrial Health hazards
- Surveying for identifying Health Hazards in Agricultural / Plantation / Mining area settings.
- Surveying for identifying Health Hazards in Home based cottage Industries.

- Basic Principles of Ergonomics and Work- Physiology and their application in Occupational Health Intervention Programs.
- Health Hazards due to Industrial Pollution of air, water and land.
- Elements of Industrial waste treatment.
- Relevance and meaning of Industrial Toxicology in the management of Health hazards.
- Understanding the Basic Scope of Occupational health Legislation such as ESI Act, Factories Act, Mines Safety Act, etc.
- Causes, consequences and Intervention Strategies for occupation related diseases of public health importance.
- Principles of Industrial Safety measures and Industrial house-keeping.
- Causes and reduction of Sickness Absenteeism.
- Principles of Industrial Psychology including work related stress management.
- Gender Issues in work environment.
- Providing Social security for industrial workers by the Industrial Corporate Sector in view of Globalization and Outsourcing of work.

15. Disaster Management and public health emergencies

Learning Objectives

- Brief Review of definition, types and causes of Disaster.
- Understanding the short and long term Health Impact of Disasters
- Assessing priorities for Disaster Response.
- Planning for Administrative, Operational, Technical Intervention for Disaster Relief program including Multi-Sectoral Co-ordination.
- Community Disaster Preparedness training needs for Health Providers and Beneficiaries.
- Post Disaster Follow up care

16. Community Mental Health

Learning Objectives

- Principles of Community Mental Health
- Epidemiological factors associated with the current and emerging mental disorders of public health importance.
- Emerging mental health issues of marital, family based problems, travel related, migration, resettlement, urbanisation problems.
- Planning and Intervention strategies for community based mental health programs

17. Health care of the Aged

Learning Objectives

- **Public health implications of increasing trends in longevity of life.**
- Health planning strategies for enhancing quality of life of senior citizens.
- Need, relevance and components of Community Based Geriatrics care Programs.

18. Health care for the Challenged

- Vulnerability factors in health, for the Physically and Socio-economically challenged people.
- Intervention strategies for desired Behavioral change in the community, towards the physically challenged.
- Multi-disciplinary approach in the health care of the physically challenged.
- Community Based Rehabilitation for the physically challenged

19. Reaching Health Care for the Unreached

- Adaptations in Health Care Programs Methodologies for Inaccessible Terrain and Extreme climates.

20. Voluntary Sector in Health

- Understanding the Supplementary, Complementary and Substitution Roles of the Voluntary Sector in Health Care.
- Case Studies of Health care strategies adopted by NGOs.
- Networking strategies for Govt. and NGO sectors in Health Program implementation

21. The recent advances in Public Health & miscellaneous issues

Learning Objectives

At the end of this course, the student should be able to:-

- Identify & enlist events at local, district, national & global levels influencing or adversely affecting health /medical issues of the population.
- Adopt & practice skills related to utilization of modern technology, software, IT application in the interest of health promotion & disease prevention.

22. Health Economics

Learning Objectives

- Describe the scope of health economics.
- Understand health market & its characteristics.
- Understand & apply economic evaluation techniques.
- Assess the mechanism of Funding Health Care services, especially health insurance.
- Advise on allocation of resources appropriately in their work area.

RECENT ADVANCES AND TOPICS OF CURRENT INTEREST

(Topics may be extracted from individual area of Syllabus content above.)

- Components of National Health Policy
- Importance of Health seeking Behavior
- Basis of formulating Rational drug policy
- Relevance of Evidence Based Medicine in the planning of Disease control Programs
- Use of Computers in Public Health
- Principles of Counseling
- Role of Clinical Specialists in Community Health Care Programs
- Writing of a Research Protocol.
- Nosocomial infection and Hospital Infection Control
- Impact of Macro-Climatic changes (eg: Global Warming, etc) on Health.
- Organising health component of Relief camps during war, mass migration.
- Setting up and Implementing Quality Control of Health care programs.
- Planning of public Health measures during pandemics of new diseases.
- Selected Methods in Operation Research.
- Other Free Topics

COURSE CONTENTS FOR PRACTICALS

1. Microbiology applied to Public Health (Dept. of Microbiology)

Hand on experience in staining techniques and interpretation of:

- Leishman stain, Grams Stain, JSB Stain, Alberts Stain, Ziehl-Neilson Stain, Peripheral blood examination of thick and thin smears and reporting
- Microscopic examination of stools and interpretation

- Demonstration of Collection, storage and Dispatch of water, stools, body fluids Samples to Laboratory
 - Interpretation of commonly used serological tests such as Physical / Biological / Chemical water analysis reports / Widal / HIV / Hepatitis B/ VDRL/ Viral Antibody Titres
2. Medical Entomology
 - Demonstration of Collection and transportation of Entomological specimens
 - Identification of mosquitoes/fleas/ticks/others
 - Demonstration of mounting entomological specimens and reporting
 - Interpretation of Entomological Survey findings and Vector indices calculation
 3. Epidemiological (including outbreaks of disease) and Statistical Exercises
 4. Case Studies (including family studies) to illustrate principles and practice of Community Health
 5. Investigation of an Outbreak of a disease and suggested control Measures.
 6. Field and simulated Exercises in
 - Participatory Rural Appraisal Techniques and Interpretive Reporting
 - IEC Field Exercises organisation, execution and evaluation
 - Planning for simulated public health intervention programs including disaster relief measures.
 - Assessment of Health Needs.
 - Simulated exercises in Preparation of Budgeting at the PHC level, VED – Vital, Essential , Desirable – Analysis.
 - Demonstration of Supervisory methods and Performance Appraisal at PHC/SC and field level.

- Simulated calculation of Requirement of Vaccines, Medicines, transport schedules, lab supplies, equipment , staff deployment, stationary, etc. at the PHC level
 - Simulated exercises for Organization of field and centre based camps for Family Welfare, MCH, IEC, and Specialist Camp, Immunisation camps.
7. Diet and Nutritional Survey of a Community
 8. Collection and Dispatch of Food Samples for Lab Investigations
 9. Situational analysis of selected potentially health hazardous Environments and its influence on health
 10. Industrial Health Survey and recommendation reports for Industrial and home-based Work places. Include interpretation of reports quantifying air pollution, noise pollution, temperature, humidity and other meteorological factors and their effect on health.
 11. Socio-Economic surveys in Urban and Rural areas and their interpretation on direct and indirect health care needs and usage.
 12. School Health Surveys with recommendations.
 13. Observation of Family Counseling by MSW
 14. Situational status (organizational structure and functioning with feasible recommendations) Reporting on Visits/Postings to the following institutions
 - District Health Office
 - District Hospital
 - Taluk Hospital
 - PHC/SC/CHC
 - Field Publicity Office
 - ICDS office/Anganwadi Centre
 - Public Health Laboratory

- Sewage Treat Plant
- HUDCO
- Vector control centre (Hosur)
- Meteorology department
- Any large NGO
- UFWC
- Family Welfare Camps
- Infectious disease hospital
- Malaria/DTC/Filaria units
- National Tuberculosis Institute / DOTS centre
- Leprosarium
- Malaria Research Centre
- Polio Surveillance Office
- Visit to factory / inspectorate of factories
- Home for the aged
- Blindness Rehabilitation schools
- Deaf and Dumb schools
- Spastic society
- Physically Handicapped Centre
- Market place
- Slaughter House
- Hotel food storage, cooking and food waste disposal zones.
- Milk Dairy
- Water supply and water treatment plant
- Food and Beverages Processing Units

15. Postings to Urban and Rural Health Centers with emphasis on:-

- Observing and participation in Antenatal care
- High risk pregnancy identification
- Registration and participation in care of Antenatal and under-fives
- Nutrition Status calculation, Growth and Development monitoring through analysis of cumulative under-five and Antenatal cards and follow-up programs for drop-outs, etc.
- Records design, recording procedures, data compilation and Reporting procedures for National health programs
- Disinfections and Infection control methods
- Field visits with peripheral health care staff to review problems associated with Implementation of Health programs.
- Participation in organization and management of health camps.
- Observation and reviewing methods of motivating for Family welfare.
- Health Information preparation using MCH indicators and their interpretation.
- Measuring Health care service Utilization rates for the centre.
- Observation and participation in the Laboratory work with emphasis on result interpretation.
- Medical Waste management observation and review report.
- Immunization coverage calculation and follow up.
- Cold Chain observation up to vaccine administration at field level.
- Collection and dispatching and follow-up for Vaccine Potency testing.

Log Book

Postgraduate students shall maintain a log book of the work carried out by them and the training programme undergone during the period of training including details of work experience during their postings, including programs

implemented under supervision and those performed independently. The log book shall be checked and assessed periodically by the faculty members imparting the training.

Refer Log Book for further Details

Dissertation (guidelines to student)

Research

1. Thesis: The topic for the dissertation should be registered and sent to the University after Ethics Committee approval

Every candidate shall submit to the Registrar (Academic) of the University in the prescribed proforma, a synopsis containing particulars of proposed dissertation work within six months from the date of commencement of the course on or before the dates notified by the University. The synopsis shall be sent through the proper channel.

Such synopsis will be reviewed and the dissertation topic will be registered by the University.

As per MCI Clause 14 (4)(a), thesis shall be submitted at least 6 Months before the Theory and Clinical/Practical Examination.

- | | |
|--------|---|
| Step 1 | Identifying guide and co guide |
| Step 2 | Review of available literature |
| Step 3 | Short listing of topic of interest |
| Step 4 | Workup in detail on few topics keeping in mind the feasibility and discussion at the dept level |
| Step 5 | Selection and finalisation of the topic and submission of protocol |
| Step 6 | Preparation and submission of synopsis six months after the date of admission and as notified by the University |
| Step 7 | Preparation of study instrument |
| Step 8 | Pilot survey |

- Step 9 Finalising the study
- Step 10 data collection
- Step 11 Data entry, compilation and processing
- Step 12 Analysis and interpretation
- Step 13 Presentation and Discussion at the Dept level
- Step 14 Preparation and submission of dissertation to Registrar Evaluation six months prior to university examination as notified by the University

It should be submitted to the University by each post graduate student at least 6 months before the theory and clinical/practical examination. The thesis shall be examined by a minimum of three examiners, one internal and two external examiners, appointed by the university and who shall not be the examiners for theory and practical. A post graduate student shall be allowed to appear for the theory and practical/clinical examination only after the acceptance of the thesis by two examiners.

The periodical evaluation of dissertation/log book should be done by the guide / HOD once in every six months. The HOD should ensure about the submission of dissertation within the stipulated time.

2. PGs to be involved in Departmental Research Projects
3. PGs to Publish Scientific Papers in Indexed Journals.
4. PGs to apply Computer based Software Programmes in Public Health

TEACHING AND LEARNING METHODS

Teaching methodology

The following is a rough guideline to various teaching/learning activities that may be employed:

Journal Club : Critical appreciation and discussion of research articles in indexed journals

Seminar

Lecture/Discussion : Lectures on newer topics by faculty

Case presentation : Communicable disease case presentation (focus on epidemiology, control, prevention) or Family case (focus on health needs assessment, SWOT analysis of family, social determinants and social empowerment, community management, role of primary health care and mobilizing resources for empowerment of the family). PG students will present the cases in presence of faculty and discuss various modalities of management.

Public Health Management training in Immunization clinics, Disease Surveillance Units, General Preventive OPD, hands-on training in management of national health programs at urban health centre and rural health centre along with orientation in health administrative system.

Teaching exposure

- PG student should conduct group teaching of undergraduate students. He / She should participate in the training programme conducted by the Department.
- The PG student shall be required to participate in the teaching and training programme of Undergraduate students and interns.
- The PG student must have attended Mandatory training in Research Methodology during his tenure.
- A postgraduate student of a postgraduate degree course in broad specialities/super specialities would be required to present one poster

presentation, to read one paper at a national/state conference and to present one research paper which should be published/accepted for publication/sent for publication during the period of his postgraduate studies so as to make him eligible to appear at the postgraduate degree examination.

- Special Seminars / Workshops: conducted by External Faculty on cross-cutting subjects directly or indirectly concerned with Health. e.g. Critical appreciation of National Developmental Budget, delivered by prominent Economist.
- Field learning is facilitated through field postings during forenoons. Class room teaching to be planned in the afternoons at the department.

Class room 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.
- (2) Lectures: Recognized teachers should take lectures..
- (3) Participation in scientific activities, Participation in Panel discussions, Symposia, debates, workshops, Conferences

Field posting and work

1. Posting at Urban and Rural Health Training Centers for a period of one year distributed throughout the three years.
2. Posting in the hospital for exposure to clinical departments namely Pediatrics, Gynecology and Obstetrics, Medicine and Surgery for one month each.
3. Wherever possible work attachment at District Health Office and Directorate of Health Services

4. The students will be encouraged to attend various camps, melas, public health emergencies, Investigation of epidemics and implementation of National Health Programmes.
5. Visits to various institutions of Public Health Importance and related development organizations.

**ACHIEVING LEARNING OBJECTIVES: SKILL TRAINING STRATEGY
SUBJECT SPECIFIC PRACTICAL COMPETENCIES**

Part I: General Skills: List of Skills: Refer – Log Book

Part II : Skills in Relation to Specific Topics: Refer – Log Book

Log Book - 20 marks

ASSESSMENT SCHEDULE IS AS FOLLOWS

Year of Study	Period				Total Max.20 marks
I year	Upto Dec	10 marks	Upto June	10 marks	20 Marks
II year	Upto Dec	10 marks	Upto June	10 marks	20 Marks
III year	Upto Oct	10 marks	Upto Feb	10 marks	20 Marks
	AVERAGE				20 Marks

ASSESSMENT

FORMATIVE ASSESSMENT, i.e., during the training may be as follows: Ongoing evaluation during the course Formative assessment should be continual and should assess medical knowledge, patient care, procedural & academic skills, interpersonal skills, professionalism, self directed learning and ability to practice in the system. During each posting/ Module, learning activities are evaluated as given in the activity log, by faculty in charge at the end of each month and by HOD once every 3 months.

Quarterly assessment during the MD training should be based on:

- Journal based / recent advances learning
- Patient based /Laboratory or Skill based learning
- Self directed learning and teaching
- Departmental and interdepartmental learning activity
- External and Outreach Activities / CMEs

The student to be assessed periodically as per categories listed in postgraduate student appraisal form

Ongoing Evaluation: Formative assessment will be conducted during each posting.

This will include the following:

1. Health Care through documented case study reports with follow up.
2. Public Health Promotion and Disease Prevention through survey of hamlet and details of Community Diagnosis and recommendations provided.
3. Epidemiology& Biostatistics through solutions worked out for various simulation exercises, and epidemiology studies completed as research for dissertation, e journal publication, oral presentation at a conference and poster presentation.
4. Education Technology & Behavioral Change Communication through health communication to a special group and documented lesson plans for undergraduate classes
5. Public Health Policy, Planning, Leadership and Management through their analytical report and recommendations of the different components of management at the public health care units they are posted.

1. Competency Assessment: as per MGR University :

OVERALL :

Communication / commitment / Contribution / Compassion towards patients and Innovation	5 Marks
b) Implementation of newly learnt techniques/skills	
Number of cases presented in Clinical Meetings/ Journal clubs/seminars	- 5 marks
Number of Posters/Papers presented in Conferences/ Publications and Research Projects	- 5 marks
No. of Medals / Certificates won in the conference / Quiz competitions and other academic meetings with details.	- 5 marks
Total	20 Marks

- 1. SUMMATIVE ASSESSMENT, i.e.,** Final assessment after 3 years. **at the end of training,** The summative examination would be carried out as per the Rules given in Postgraduate Medical Education Regulations,2000.

SCHEME OF EXAMINATION

A. Theory Examination

Theory:

The examinations shall be organised on the basis of ‘Grading’ or ‘Marking system’ to evaluate and to certify post graduate student 's level of knowledge, skill and competence at the end of the training. Obtaining a minimum of 50% marks in ‘Theory’ as well as ‘Practical’ separately shall be mandatory for passing examination as a whole. The examination for M.D./ MS

shall be held at the end of 3rd academic year. An academic term shall mean six month's training period.

There shall be four theory papers as follows:

There shall be four question papers, each of three hours duration. Each paper shall consist of 10 short essay questions each carrying 10 marks. Total marks for each paper will be 100. Questions on recent advances may be asked in any or all the papers.

Paper I	= 100 Marks
Paper II	= 100 Marks
Paper III	= 100 Marks
Paper IV	= 100 Marks
Total	400 Marks

Paper I

- ❖ Conceptual (and applied) understanding of Public Health, Community Medicine, Communicable and Non- Communicable diseases, emerging and re-emerging diseases,
- ❖ Applied Epidemiology, Health research, Bio-statistics.
- ❖ History of Public Health, Concepts in Public Health
- ❖ Role of Social Sciences in health
- ❖ Information, Education, Communication and Counseling
- ❖ Medical Entomology, and Zoonotic diseases
- ❖ Environmental health and Ecology
- ❖ Epidemiology
- ❖ Biostatistics and Research methodology

Paper II

- ❖ Nutrition, Environmental Health, Primary Health Care system, Panchayat Raj system, National health Programs, RCH, Demography and Family Welfare, Health Care Administration, Health Management and Public Health Leadership.
- ❖ Principles of Nutrition and Applied Nutrition.
- ❖ Communicable diseases and non-communicable diseases.
- ❖ Occupational health
- ❖ National Health Programmes
- ❖ Disaster management and Public Health emergencies

Paper III

- ❖ Social & Behavioral sciences- applied aspects, Scientific communications & Medical writing, Research Methodology, Public Health Legislations, International Health & Global Diseases surveillance.
- ❖ Maternal health and Child health Care.
- ❖ Demography and Family welfare.
- ❖ Social Pediatrics
- ❖ School health, and Health Care of the Aged.
- ❖ Health Care of challenged, Community Based Rehabilitation
- ❖ Reaching health care for the unreached.
- ❖ Community Mental Health.
- ❖ Genetics and Health

Paper IV

- ❖ Health Policy planning, Medical Education technology, Information
- ❖ Technology, Integration of alternative Health system including AYUSH.
- ❖ Occupational Health, Recent advances in Public Health & Miscellaneous issues, Health Economics.
- ❖ Health Care systems in India.

- ❖ Primary Health Care
- ❖ Health legislation
- ❖ International Health
- ❖ Voluntary Sector in Health
- ❖ City/Town planning and Health.
- ❖ Health Care management.
- ❖ Health information system.

* The topics assigned to the different papers are generally evaluated under those sections. However a strict division of the subject may not be possible and some overlapping of topics is inevitable. Students should be prepared to answer overlapping topics.

B. Practical/Clinical and oral examination:

The practical examination should be conducted over two days, preferred - not more than 8 post graduate students, per batch, per day as follows :

1. One long Family case from the community:

Socio-economic, demographic, cultural and holistic history taking, of the family to understand the various risk factors affecting health and quality of life, assessment of social support system, assessment of present morbidity and its implications, evolve interventions for medical relief and social empowerment and role of family, community and primary health care system in resolving family issues. This shall be conducted preferably in the community setting.

2. One long Case (30 minutes), 2 short cases (20 minutes each) – Cases with Communicable Diseases

Students will elaborate on Clinico-epidemiological case history to assess the epidemiological factors, precipitating factors, probable source of

infection and evolve measures for diagnosis, treatment, management with reference to the case as well as major public health concerns, i.e. Control, prevention of the diagnosed disease and interventions in case of eminent outbreak / epidemic situations. Short cases may be assessed without presentation of detailed history, beginning with Differential Diagnosis in the given time.

3. Epidemiology and Statistics problem-solving exercises (5):

(Epidemiological – 3, Statistical – 2)

4. Public Health Spots (5) : including interpretation of analytical reports of water, food, environmental assessment and public health micro-biology

5. Viva-voce Examination

Oral/ Viva-Voce Examination shall be comprehensive enough to test the post graduate student’s overall knowledge of the subject.

Practicals : 200 marks

1. Family Study : (One) (50 marks)

One family will be allotted in rural/urban field practice area. Presentation and discussion will be on the health status of the family and of any case/individual in the family and on factors that contributed towards maintenance of health and occurrence of disease; management at individual, family, and community levels.

2. Clinico-social case study (One case) (50 marks)

Basic clinical presentation and discussion of diagnosis, treatment and management of common communicable or non-communicable diseases/conditions with emphasis on social and community aspects.

PRACTICALS

The practical examination should be structured and as objective as possible	
A. Family study/Clinico social Case Study	
Structured Assessment	

1.	Oral skills/presentation with clarity of observations and decisions	
2.	Comprehensiveness of Diagnosis	
3.	Management based on related National Programs and Policies	
4.	Completeness of Appropriate Recommendations	

3. Public Health Laboratory (Two) (30 marks)

Staining of smears, interpretation of common serological diagnostic tests, water, & milk analysis or interpretation of given results of any above tests.

4. Problem on Epidemiology and Biostatistics (One) (50 marks)

Based on situation analysis from communicable or non-communicable diseases, MCH & FP including demography. Environmental health including Entomology and Occupational Health.

5. Spotters (Five) (20 marks)

Identification and description of relevant public health aspects of the spotters/specimen by the student. Spotters shall be from Nutrition, Environmental health including Entomology & Occupational health, MCH & FP; Microbiology including parasites; vaccines, sera and other immunobiologicals.

C. Viva-Voce: 100 marks

1) Viva-Voce Examination: (80 Marks)

Students will be examined by all the examiners together about students comprehension, analytical approach, expression and interpretation of data. Student shall also be given case reports, charts for interpretation. It includes discussion on dissertation.

2) Pedagogy Exercise: (20 Marks)

A topic be given to each candidate along with the Practical Examination question paper on the first day. Student is asked to make a presentation on the topic on the second day for 20 minutes.

Assessment / Evaluation of PEDAGOGY

Name of the candidate

Date:

Register No.

Centre:

Topic :

Category	Skill		Marks
SUBJECT CONTENT (10 marks)	Set induction	<ul style="list-style-type: none"> ❖ Aroused interest in the beginning by relating to previous learning, throwing a new idea, questioning etc. ❖ Specified the objectives of presentation. 	
	Planning	<ul style="list-style-type: none"> ❖ Organized material in logical sequence ❖ Used relevant content matter 	
	Presentation	<ul style="list-style-type: none"> ❖ Changed the pace of presentation by shifting emphasis, joke, etc. ❖ Used specific example to illustrate main ideas ❖ Used non-verbal cues, eye contact. Etc. 	
Audio Visual Aids usage, Voice Modulation and Attitude (10 marks)	Use of AV aids	Used proper AV aids Used the aid(s) effectively	
Question and Answers (10 marks)	Pupil Participation	Allowed questions from students Asked questioning Solicited / Raised questions Rewarded pupil effort.	
	Closure	Summarized most important points at the end of the session	
	Overall marks _____ out of 40 Signature of the Examiners		

Maximum marks for M.D. Community Medicine	Theory	Practical & Viva	Grand Total
	400	300 (Practical – 200 & Viva – 100)	700

MARKS QUALIFYING FOR A PASS

Obtaining a minimum of 40% marks in each theory paper and not less than 50% cumulatively in all the four papers for degree examination. Obtaining of 50% marks in Practical examination shall be mandatory for passing the examination as a whole in the degree examination.

Recommended reading:

A. Books (latest edition)

1. Public Health and Preventive Medicine (Maxcy-Rosenau-Last Public Health and Preventive Medicine) by Robert B. Wallace
2. Basic Epidemiology. R Bonita, R Beaglehole, T Kjellstrom. World Health Organization Geneva.
3. Epidemiology, by Leon Gordis.
4. Oxford Textbook of Public Health. Holland W, Detel R, Know G.
5. Practical Epidemiology, by D.J.P Barker
6. Park's Textbook of Preventive and Social Medicine, by K.Park
7. Principles of Medical Statistics, by A. Bradford Hill
8. Interpretation and Uses of Medical Statistics, by Leslie E Daly, Geoffrey J Bourke, James MC Gilvray.
9. Epidemiology, Principles and Methods, by B. MacMahon, D. Trichopoulos
10. Hunter's Diseases of Occupations, by Donald Hunter, PAB Raffle, PH Adams, Peter J. Baxter, WR Lee.
11. Epidemiology and Management for Health Care, by Sathe PV and Doke PP.

12. Vaccines, by Stanley A. Plotkin.
13. All reports and documents related to all National Programmes from the Ministry of Health and Family Welfare.
14. Maxcy Roseman John M.Last, Maxcy-Roseman Public Health and Preventive Medicine, Appleton-Century-Crofts, Newyork
15. Hobson W, The Theory and Practice of Public Health, Oxford Med.Publication Barker D J P, Practical Epidemiology, Churchill Livingstone
16. Park J E & K.Park, Text Book of Preventive & Social Medicine, M/S Banarsidasm Bhanot, Jabalpur
17. Mahajan B K and M.C.Gupta, Text Book of Preventive & Social Medicine Jaypee Publications
18. Bradford Hill, Principles of Medical Statistics, The Lancet Ltd. No. 7 Adam Street, Adelphine, London, 1967
19. John J.Hanlon, Public Health Administration and Practice, MOSBY
20. Mac, Mahon & Pugh, Epidemiology-Principles and Methods, Little Brown & Co.Boston, U.S.A.
21. Robert S.Goodheart Maulice E.Shills, Modern Nutrition in Health, K.M.Varghese & Co.,
22. Mawner & Kramer, Epid : An Introductory Text, 1985, W.B.Sanuders Co.,
23. Hunter's Diseases of Occupations, Edited by P.A.B Raffle, P.H. Adams, P.J.Baxter and W.R.Lee Edward Arnold Publishers (1994), Great Britain
24. Committee Reports and Policy Documents - Medical Education and Health Policy:
 - a) Bhore Committee Report (1946) **Health Survey and Development Committee**, Govt. of India, Delhi.

- b) Mudaliar Committee Report (1961) **Health Survey and Planning Committee**, Govt. of India, Delhi.
- c) Shrivastav Report (1974), **Health Services and Medical Education - A programme for immediate action**, Group on Medical Education and Support Manpower, Ministry of Health and Family Welfare, Govt. of India, New Delhi.
- d) ICSSR/ICMR (1981), **Health for All - An alternative strategy - Report of a Joint study group of ICSSR/ICMR**, Indian Institute of Education, Pune.
- e) National Health Policy, (1982) **Ministry of Health and Family Welfare**, Government of India, New Delhi.
- f) **Compendium of Recommendations of various committees on Health and Development (1943 - 1975)**, Central Bureau of Health Intelligence (1985) Directorate General of Health Services, Ministry of Health and Family Planning, New Delhi.
- g) Bajaj, J.S. et al (1990) **Draft National Education Policy for Health Sciences, I.J.M.E.** Vol. 29, No. 1 & 2 (Jan - August 1990)

JOURNALS

1. Indian Journal of Community Medicine.
2. Indian Journal of Public Health.
3. Indian Journal of Community Health.
4. Journal of Communicable Diseases.
5. Indian Journal of Maternal & Child Health.
6. Indian Journal of Preventive and Social Medicine.
7. Indian Journal of Occupational Health & Industrial Medicine.
8. Indian Journal of Medical Research.
9. National Medical Journal of India.
10. Indian Journal of Malariology.
11. Indian Journal of Environmental Health.

12. Indian Journal of Medical Education.
13. Journal of Indian Medical Association.
14. Journals of Medicine, Pediatrics', OBG, Skin & STD, Leprosy, Tuberculosis & Chest Diseases (For Reference).

International journals

1. WHO Publications – All
2. Journal of Epidemiology & Community Health.
3. Tropical Diseases Bulletin.
4. Vaccine.
5. American Journal of Public Health.
6. Lancet.
7. New England Journal of Medicine.

ADDITIONAL READING

1. Compendium of recommendations of various committees on Health and Development (1943-1975). DGHS, 1985 Central Bureau of Health Intelligence, Directorate General of Health Services, min. of Health and Family Welfare, Govt. of India, Nirman Bhawan, New Delhi. P - 335.
2. National Health Policy, Min. of Health & Family Welfare, Nirman Bhawan, New Delhi, 1983.
3. Santosh Kumar, The elements of Research, writing and editing 1994, Dept. of Urology, JIPMER, Pondicherry
4. Srinivasa D K etal, Medical Education Principles and Practice, 1995. National Teacher Training Centre, JIPMER, Pondicherry
5. Indian Council of Medical Research, "Policy Statement of Ethical considerations involved in Research on Human Subjects", 1982, I.C.M.R, New Delhi.

6. Code of Medical Ethics framed under section 33 of the Indian Medical Council Act, 1956. Medical Council of India, Kotla Road, New Delhi.
7. Francis C M, Medical Ethics, J P Publications, Bangalore, II edn, 2004.
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