

**ORDINANCES AND SYLLABUS FOR MASTERS OF PUBLIC HEALTH (M.P.H) (2023-24
ONWARDS)**

REGULATIONS FOR THE COURSE MASTER OF PUBLIC HEALTH (MPH)

Nomenclature of Degree:

The name of the course shall be Masters of Public Health (MPH)

Background of the course

This programme has been specially designed to meet the ever increasing demand for well trained personnel with advanced & appropriate skills and knowledge to plan and implement innovative Public Health Schemes and Programs at regional, national and international level.

Objectives of the Course:

- To strengthen the Public Health system together with the technical and managerial skills.
- To train and develop a cadre of competent public health educators, researchers, practitioners, administrators, managers and policy makers.

Eligibility for Admission to MPH Course:

Candidate for admission to MPH should be a graduate in any stream (Physics, Chemistry, Mathematics, Botany, Zoology, Biotechnology, Dairy Science, Veterinary Science, Home Science, Health Science, Agriculture, Life Sciences, Microbiology, etc.)

Graduate in Social Sciences like Anthropology, Sociology, Psychology, LL.B, Journalism, Social Work

Graduate in Allied health sciences like Public Health, Hospital Administration, Health Sciences, Nursing, Physiotherapy, pharmacy, Veterinary etc.

Graduate in medical sciences - MBBS, BDS, BAMS, and BHMS, from any recognized Indian university or equivalent degree from any foreign university.

Post Graduate in any of the streams mentioned above.

Admission Process-

Those satisfying the eligibility requirements will be included in the selection process. The admission to MPH will be purely on merit basis at the qualifying examination and the procedure of the admission will be followed as per the guidelines provided by the university.

Duration of the course:

There shall be a full time Master’s Degree programme that is Master of Public Health (M.P.H). The duration of the course shall be two Academic Years. The annual examination shall be held in or around June or as decided by the university.

Seats:

There shall be a maximum of 60 seats for the M.P.H programme.

The Scheme of Course along with their Marks in the Programme shall be as follows:

First Semester

SUBJECT CODE:	SUBJECT	INTERNAL MARKS	EXTERNAL MARKS
MPH 101:	Introduction to Public Health	40	60
MPH 102:	Human Biology & Public Health Chemistry	40	60
MPH 103:	Human Anatomy and Physiology	40	60
MPH 104:	Epidemiology	40	60

Second Semester

SUBJECT CODE:	SUBJECT	INTERNAL MARKS	EXTERNAL MARKS
MPH –201:	Biostatistics	40	60
MPH –202:	Social and Behavioural Aspects of Public Health	40	60
MPH- 203:	Environmental Health & Sustainable Development	40	60
MPH- 204:	Health Care Planning	40	60

Third Semester

SUBJECT CODE:	SUBJECT	INTERNAL MARKS	EXTERNAL MARKS
MPH 301:	RMNCH+A	40	60
MPH 302:	Research Methodology	40	60
MPH 303:	Healthcare Policy and Legislation	40	60
MPH 304:	Healthcare Financing	40	60

Fourth Semester

SUBJECT CODE:	SUBJECT	INTERNAL MARKS	EXTERNAL MARKS
MPH –401:	Healthcare Economics	40	60
MPH –402:	Public Health Nutrition	40	60
MPH- 403:	Women and Child Health	40	60
MPH- 404:	Research Project	50	100

Credit and Teaching Hours : It is 70 Credit Course with 1250 Teaching Hours

First Semester

SUBJECT CODE:	SUBJECT	Credit	Teaching hours
MPH 101:	Introduction to Public Health	4	60
MPH 102:	Human Biology & Public Health Chemistry	4	60
MPH 103:	Human Anatomy and Physiology	4	60
MPH 104:	Epidemiology	4	60
Total		16	240

Second Semester

SUBJECT CODE:	SUBJECT	Credit	Teaching hours
MPH –201:	Biostatistics	4	60
MPH –202:	Social and Behavioural Aspects of Public Health	4	60
MPH- 203:	Environmental Health & Sustainable Development	4	60
MPH- 204:	Health Care Planning	4	60
Total		16	240

Third Semester

SUBJECT CODE:	SUBJECT	Credit	Teaching hours
MPH 301:	RMNCH+A	4	60
MPH 302:	Research Methodology	4	60
MPH 303:	Healthcare Policy and Legislation	4	60
MPH 304:	Healthcare Financing	4	60
Total		16	240

Fourth Semester

SUBJECT CODE:	SUBJECT	Credit	Teaching hours
MPH –401:	Healthcare Economics	4	60
MPH –402:	Public Health Nutrition	4	60
MPH- 403:	Women and Child Health	4	60
MPH- 404:	Research Project	10	350
Total		22	530

FIRST SEMESTER

MPH 101: Introduction to Public Health	
UNIT	TOPIC
1	<ul style="list-style-type: none">• Introduction- Definition, Significance, Evolution of Public & Community Health.• Genesis and Development of the concept, Healthcare versus Medical Care,• Approaches to Public Health
2	<ul style="list-style-type: none">• Concept of Health & Disease• Determinants of Health – Biological, Behavioural, Socio-economic, Cultural, Environmental, Geographical etc.• Concept of Primary Health Care• Indicators of Health
3	<ul style="list-style-type: none">• Concept of Primary Health Care• Community Diagnosis

	<ul style="list-style-type: none"> • Community perception and priorities on health and disease • Public Health care delivery system in India • Disease profiles & Epidemiological transition • Right to health • Ecology of health
4	<ul style="list-style-type: none"> • Introduction to National Health Policy • National Population Policy • National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM)
5	<ul style="list-style-type: none"> • National Public Health Programs <ul style="list-style-type: none"> ➤ National Vector borne Disease Control Programme. (NVBDCP) ➤ National AIDS Control Programme. ➤ National Malaria eradication Programme. ➤ National TB Control Programme. ➤ National Polio eradication Programme. ➤ National leprosy eradication Programme. ➤ IDSP ➤ National Tobacco control program

MPH 102: Human Biology & Public Health Chemistry	
UNIT	TOPIC
1	<ul style="list-style-type: none"> • Public Health Biology – Introduction, Scope and Applications • Human Life Cycle
2	<ul style="list-style-type: none"> • Medical Terminology- Introduction to bacteriology/virology/Mycology/Parasitology/Genetic diseases /Pediatric diseases Neoplasia/Inflammation & healing.
3	<ul style="list-style-type: none"> • Human Immunology-Basic Principles & concepts of Immunology & Role of Nutrition, immunity to infection and role of vaccination.
4	<ul style="list-style-type: none"> • Human Pathology - General Pathology, Disease pathogenesis, diagnosis, diagnostic techniques – its role, importance and applications in public health.
5	<ul style="list-style-type: none"> • Human Microbiology - Introduction, Sterilization, Anatomy of Bacteria, Bacteria in Water and Milk, Culture Media/Methods, T.B., Malaria, STI, RTI, AIDS.

MPH 103: Human Anatomy and Physiology	
UNIT	TOPIC
1	<p>Introduction to Human Anatomy and Physiology Introduction to medical sciences, Structural Organization of the Human Body (Basic components of the body, Basic life processes, Survival needs, Homeostasis and its control system, Levels of structural organization, Cell organization , fundamental tissues of the body, Organ systems: an overview, Basic terminology used in organization of human body- Major cells/ Major glands/ Body fluids/ Different membranes in the body/ Body positions/ Body cavities/ Abdominopelvic regions/ Body quadrants/ Body planes and sections/ Regional terms/ Directional terms)</p>

2	Digestive system Anatomy of organs and glands of digestive system, mechanism of digestion
3	Respiratory system Anatomy of respiratory organs, mechanism of respiration, factors affecting respiration, nervous control of respiration, lung volumes and capacities
4	Circulatory system Composition of blood, Functions of blood, types of blood corpuscles with their functions, blood groups, Blood Coagulation, Blood vessels, Heart-structure, Cardiac cycle, Heartbeat, Blood pressure, pulse, ECG, Conducting system of heart Lymphatic system Lymph, lymph vessels, lymphatic organs and tissues- lymph nodes, spleen, thymus gland, MALT
5	Excretory system Urinary system of humans- structure, parts and their functions, Internal Structure and functions of kidney, Juxta-glomerular apparatus, structure of nephron, mechanism of urine formation, constituents of normal urine
6	Musculoskeletal system The skeleton -functions, classification of bones, structure of a typical long bone, skeleton-classification of skeletal system of humans- Axial and Appendicular, sutures, fontanelles, air sinuses, ribs, vertebral column-features, Girdles-Pelvic and pectoral, Joints-classification , functions, examples, movements Muscles- classification, properties of muscles, skeletal muscles- structure, types, functions, mechanism of muscle contraction
7	Nervous system Division of nervous system, functions, structure of neuron, classification of neuron, properties of nerve, organization of nerve fibres, brain- structure and functions, spinal cord, ANS-Sympathetic and parasympathetic nervous system
8	Reproductive system Male and female reproductive system- parts, functions, Puberty, menstrual cycle, Ovarian cycle, spermatogenesis
9	Sense organs Eye, Ear, Physiology of hearing and sight
10	Endocrine system Major endocrine glands in the body, their anatomical features, hormones secreted by the glands

MPH 104: Epidemiology	
UNIT	TOPIC
1	<ul style="list-style-type: none"> • Introduction to Epidemiology- Definition, History, Aims, Basic principles, Uses of Epidemiology and approaches. Case Study • Epidemiological methods: Descriptive Epidemiology(cross-sectionalstudy), Analytical Epidemiology (case controlstudyand Cohort study), Experimental Study
2	<ul style="list-style-type: none"> • Natural history of disease • Epidemic investigations • Association and causation • Risk measurement -Measurement of morbidity and mortality, use of morbidity

	<p>and mortality indicators</p> <ul style="list-style-type: none"> • Disease prevention, intervention and control
3	<ul style="list-style-type: none"> • Epidemiology of Communicable & Non-communicable Diseases Pathogenesis and pathology, clinical presentation of common infections – <ul style="list-style-type: none"> ➤ Respiratory : Tuberculosis, Leprosy, ARI's including pneumonia, measles , rubella,Covid-19. ➤ Intestinal: Diarrhoea, typhoid, polio, hepatitis, worm infestations ➤ Contact: STDs and AIDS scabies ➤ Vector borne: Plague, rabies, malaria ,filaria, dengue and chicken gunea
4	<ul style="list-style-type: none"> • Epidemiology of Non-communicable Diseases Etiology, Pathophysiology, Epidemiology, Prevention and Control– <ul style="list-style-type: none"> ➤ Asthma, ➤ Cancer-lung cancer, oral cancer, Breast cancer, Cervical cancer ➤ Cardiovascular diseases-Hypertension, RHD,CHD ➤ Diabetes(type 1 and 2),Thyroid
5	<ul style="list-style-type: none"> • Concept of Mental Health <ul style="list-style-type: none"> ➤ Mental Health: Classification, clinical manifestations, diagnosis and treatment and intervention and support services ➤ Burden of Mental diseases Depression, Schizophrenia, Alzheimer's, Parkinson's, Dementia , Suicides, Substance Abuse ➤ National Mental Health Programme

Second Semester

MPH 201: Biostatistics (Medical & Health Statistics)	
UNIT	TOPIC
1	<ul style="list-style-type: none"> • Introduction, Scope & applications of Biostatistics in Medical & Public Health Sciences
2	<ul style="list-style-type: none"> • Concept & applications of descriptive statistics – collection, measurement, presentation and analysis of medical & public health data
3	<ul style="list-style-type: none"> • Measures of Central Tendency(Mean,Median,Mode), Measures of Variability, Coefficient of Variation
4	<ul style="list-style-type: none"> • Survey methods - quantitative and qualitative survey methods in medical & public health sciences • Sampling methods and techniques
5	<ul style="list-style-type: none"> • Estimation of Population Parameters – Standard Errors • Testing of Hypothesis and Significance – Introduction & Concept

6	<ul style="list-style-type: none"> • Correlation – Concept and Computation of Spearman’s and Rank Correlation Coefficient • Regression - Concept and Computation of Regression Coefficient
7	<ul style="list-style-type: none"> • Health Statistics - Measurement of Health, Sickness, and Disease in a population • Vital Statistics – Rates & Ratio’s • Hospital Statistics – Hospital Management Information Systems & Medical Records, Rates & Ratio’s • Classification of Diseases (ICD)

MPH 202: Social and Behavioural Aspects of Public Health	
UNIT	TOPIC
1	<ul style="list-style-type: none"> • Definition and Concept of Vulnerable Populations • Vulnerable groups their health and human rights • Vulnerable Groups facing Structural Discrimination in India–Women, children, SC, ST etc
2	<ul style="list-style-type: none"> • Vulnerability by different factors- Race and ethnicity (Tribal, Dalits, Indigenous populations), Gender (male, female, transgender), Geographical area (rural/urban, remote & hilly areas), Age (Child, adolescent, elderly), Disability (Physical & Mental– Social and health inequalities) Migration & Displacement, Stigma and Discrimination (HIV/AIDS, Sexual Minorities, Sex workers), High Risk Occupations (Farmers-Farm workers, Industrial workers, Mining workers, Sex Workers, Child Labour) Environment, War and Natural calamities.
3	<ul style="list-style-type: none"> • Violation of right to health of vulnerable populations- Concept of gender, Social structure and gender, Gender discrimination, Consequences of gender discrimination on health, Gender in the context of development, Violence against women, Girl trafficking, Global issues related to gender, Legal aspects and acts related to gender: MTP, PNDT, Prostitution, homosexuality etc.
4	<ul style="list-style-type: none"> • Issues related to Children and Adolescent- Child abuse/Child labour/Street Children & malnutrition, Girl trafficking & anaemia in adolescents, reproductive rights of adolescents.

MPH 203: Healthcare Planning and Population Science	
UNIT	TOPIC
1	<ul style="list-style-type: none"> • Health Planning <ul style="list-style-type: none"> ➤ Health Planning –History, Concept ➤ Strategic planning, implementation ➤ Health Care Utilization Patterns
2	<ul style="list-style-type: none"> • Health care manpower planning and development
3	<ul style="list-style-type: none"> • Privatization, commercialization & globalization of health care

4	<ul style="list-style-type: none"> • Public- Private Partnership
5	<ul style="list-style-type: none"> • Healthcare Delivery System in India
6	<ul style="list-style-type: none"> • National and International Health Agencies: WHO, UNICEF, UNDP, Rockefeller Foundation, FAO, CARE, DFID, UNFPA, USAID
7	<ul style="list-style-type: none"> • Demography • Factors affecting population • Measures of fertility and mortality • Standardization methods • Population growth and projection • Demographic transition • Implication of rapid population grow

MPH 204: Environmental Health & Sustainable Development	
UN	TOPIC
1	<ul style="list-style-type: none"> • Environment-Definition, Concept, Components
2	<ul style="list-style-type: none"> • Environmental Pollution- Sources, Impacts and treatments of Air (Indoor/Outdoor), Water, Soil, Nuclear
3	<ul style="list-style-type: none"> • Development & Environmental issues -Environmental Ethics, Global Warming, Climate Change, Ozone Depletion, Acid Rain etc.
4	<ul style="list-style-type: none"> • Eco-friendly environmental practices-Waste management, Energy practices, Agriculture Practices
5	<ul style="list-style-type: none"> • Environmental Disaster- Definition, types and management • Management of environmental hazards, natural disasters
6	<ul style="list-style-type: none"> • Occupational Health- Hazards at workplace and work safety; Prevention of occupational hazards; Laws related to occupational health; Various government and other schemes for working population in India
7	<ul style="list-style-type: none"> • Biomedical Waste Management,E-waste
8	<ul style="list-style-type: none"> • Sustainable Development-Definitions & Concept • Development theories- Modernization, structuralism, dependency, basic needs theory .
9	<ul style="list-style-type: none"> • Sustainable Development –Introduction, principles, models • Developmental Planning-Macro & Micro level • Healthy Settings-Cities, Villages, Schools
10	<ul style="list-style-type: none"> • Poverty & Its Measurements • Wellbeing and its measurements
11	<ul style="list-style-type: none"> • Human Development and Its measurements • Societal Health & Development • Community Organization and participation

MPH 301: RMNCH+A	
UNIT	TOPIC
1	<ul style="list-style-type: none"> • Introduction to the RMNCH+A services – historical context, evolution, coverage and innovations • Various components of service delivery under RMNCH+A (including GoI programs) • Understanding Reproductive Health Policy; Family Welfare and Reproductive Health measures; Reproductive Health programs in India
2	<ul style="list-style-type: none"> • Maternal, New-born and Child Health (MNCH) services in the country • Evolution of RCH services in the country – Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs)
3	<ul style="list-style-type: none"> • Adolescent health • Adolescent Health status in India • Adolescent Health Development - policy and systems • Health issues specific to adolescents: anaemia, teenage pregnancy, menstrual hygiene, obesity, mental health promotion and illness prevention, substance use prevention, violence, media etc.
4	<ul style="list-style-type: none"> • Issues in the Reduction of Maternal and Neonatal Mortality; Preventing perinatal and infant mortality; Infectious Disease and Child Survival; Nutrition and Growth in Maternal and Child Health Legislations and programs in MCH

MPH 302: Research Methods in Public Health (Research Methodology)	
UNIT	TOPIC
1	<ul style="list-style-type: none"> • Introduction to Research- Definition, Types, Strategies & Designs • Research Process and Cycle, Criteria for good research
2	<ul style="list-style-type: none"> • Descriptive/epidemiological studies–Cross sectional, Operational Research and correlation studies • Analytical Studies-Case control study, Cohort study • Experimental Studies- Quasi-experimental Studies & Clinical trials- Introduction to various types and its application
3	<ul style="list-style-type: none"> • Statistical Methods in Public Health Research-Application and Interpretation • Research Data Collection Tools & Methods-Sampling and survey methods, Sample size, Survey design & Planning, Interview schedule, questionnaire construction, validation etc
4	<ul style="list-style-type: none"> • Participatory Research and Analysis (PRA) Methods
5	<ul style="list-style-type: none"> • Research paper/Proposal-Formulation, writing & critical review

MPH 303: Health Care Policy and Legislation	
UNIT	TOPIC
1	<ul style="list-style-type: none"> • Health Care Policy Understanding, need and goals for various policies related to public health - Health policy, population policy, nutritional policy-food security, research policy, women policy, child policy, Environment policy Methods to assess the needs of for the policy development / assessment process
2	<ul style="list-style-type: none"> • Healthcare Legislation in India: Legal aspects of healthcare, the Medical Termination of Pregnancy Act, The maternity benefit act, The transplantation of human organs act, PNMT Act, The registration of birth and Death act, The child labour (prohibition and regulation) act, Biomedical waste Rules, Indian factories act, ESI

MPH 304: Health Care Financing	
UNIT	TOPIC
1	<ul style="list-style-type: none"> • Financing of Health Care – Introduction to Finance, Sources of Health / Revenue collection for health care, Health Insurance Schemes, Health Plans and Outlays in India, Role of State and Central Govt., Factors influencing State's ability to finance Health Care, Voluntary Health Agencies in India, Health related spending in India, Health Insurance Schemes.

Fourth Semester

MPH 401: Health Care Economics	
UNIT	TOPIC
1	Demand and Supply in Health Care- Concept of demand, Law of Demand, Factors affecting demand, Demand of Services,
2	Structure of Health care, Characteristics of health care system, The price system,
3	Demand for health, Demand and supply in Medical care, Determination of demand for medical care
4	Supply- introduction, law of supply, Determinants of Supply,
5	Theory of demand and supply, demand and supply schedule, Elasticity of demand for health care, Price Elasticity of demand for health care

MPH 402: Public Health Nutrition	
UNIT	TOPIC
1	<ul style="list-style-type: none"> • Appreciate the basic concepts and principles of foods and nutrition relevant to human health, Summarize population based dietary and nutritional recommendations • Define the concept, purpose and scope of Public Health Nutrition , Understand the definition, utility and applications of epidemiology in nutritional sciences • Recognize the role of community nutrition in improving human health • Utilize suitable data and assessment methodologies to conduct community needs assessment • Recognize the pillars of a healthy community
2	<ul style="list-style-type: none"> • Identify the most relevant nutrition concerns in the community at present and enlist strategies for their prevention and management (Adolescent, Women, Maternal and child under-nutrition, nutrition transition, over-nutrition and chronic diseases) • Demonstrate an understanding of principles of nutrition education and enlist the steps of developing nutrition education programs • Demonstrate an understanding of project planning and management in nutrition programmes • Demonstrating an understanding of principles of nutrition education and enlist the steps of developing nutrition education program • Appreciate inter-sectoral nature of nutrition and food policy • Enlist the features of various ongoing nutrition program • Under /over nutrition

MPH 403: Women and Child Health	
UNIT	TOPIC
1	<ul style="list-style-type: none"> • Burden of reproductive ill-health: unintended pregnancies, unsafe abortions, MTP act, non sexually transmitted infections, infertility, violence against women • Evolution of the concept of reproductive health and its implications • Early human development and public health implications, Gametogenesis, fertilization, implantation, Fetal development, Preconception period , maternal and paternal risk factors for maternal and fetal outcomes , Developmental origins of adult diseases • Antepartum – antenatal care and significance, physiological changes during pregnancy, complications of pregnancy, high risk pregnancy • Intrapartum- stages of labour and delivery, components of labour, danger sign and management of labour complications of labour and delivery • Postpartum – care, complications of postpartum • Maternal morbidity and mortality; levels and causes of maternal mortality • Contraception, sterilization, population control

2	<ul style="list-style-type: none"> • Levels and trends in child mortality , major causes of neonatal, infant and child mortality and public health interventions • Major causes of neonatal mortality; Preterm births, low birth weight and public health interventions ; birth defects • Common morbidities among young children; lower respiratory tract infections, diarrhoea, • Immunization; coverage, factors • Infancy and child hood : Growth and development; physical, motor, cognitive, psycho-social and language development • Child nutrition • Policy and programmes: the main national and international interventions for prevention of reproductive and childhood/adolescent morbidity and mortality, including RMNCHA+, JSSK, RBSK, IYCF, IMNCI, maternity benefit schemes
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MPH 404: Research Project	
	Dissertation - any topic related to Public Health
	Students are required to make Internship Report of 6 months.
	One Research paper has to be published in any Journal.
	Internship Report and Research Paper has to be attached in Dissertation Report.

Assessment:

Assessment of the student shall be made in terms of an internal assessment and an external assessment. The internal and external assessment will constitute separate heads of passing and they will be shown separately in the marks sheet. For each paper meant for University evaluation, the ratio of marks for internal assessment in relation to external assessment shall be 40:60. The internal assessment will be continuous throughout the year; however the external assessment shall be based upon the external written examination to be held at the end of year.

Scheme of Examination

There will be 60 marks assessment of all subjects by the university at the end of each year.

Question Paper Format

Time: 2.00 Hours (Max Marks: 60)

- **Instruction to the candidates:-**

1. Attempt any three from Section I and three from Section II
2. Neat diagrams must be drawn wherever necessary

- The pattern of question paper of all other papers will cover the entire syllabus. The paper will consist of Short Answer Questions and Long answer Questions

- **Section – I (30 Marks)**

Short Answer Questions 5X6=30 marks or 3X10=30 marks

- **Section – II (30 Marks)**

Long answer Questions 10X 3=30marks

- Subject MPH-205(Research Project) will be evaluated by the external examiner appointed by the university for the purpose.
- Sessional tests may employ one or more assessment tools such as objective tests, assignments, paper presentation, laboratory work, etc suitable to the course. This requires an element of openness. Students shall compulsorily attend two sessional tests. The sessional test as a part of the continuous internal assessment shall be conducted and evaluated by the teacher offering the course.