



# **SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH**

(A Deemed to be University Declared under Section 3 of UGC Act, 1956)

Comprising Sri Devaraj Urs Medical College

[Constituent Unit of Sri Devaraj Urs Educational Trust for Backward Classes (Regd.)]

TAMAKA, KOLAR-563103, KARNATAKA, INDIA

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(With effect from 2014-15 batches)

## **Curriculum for Masters in Public Health**

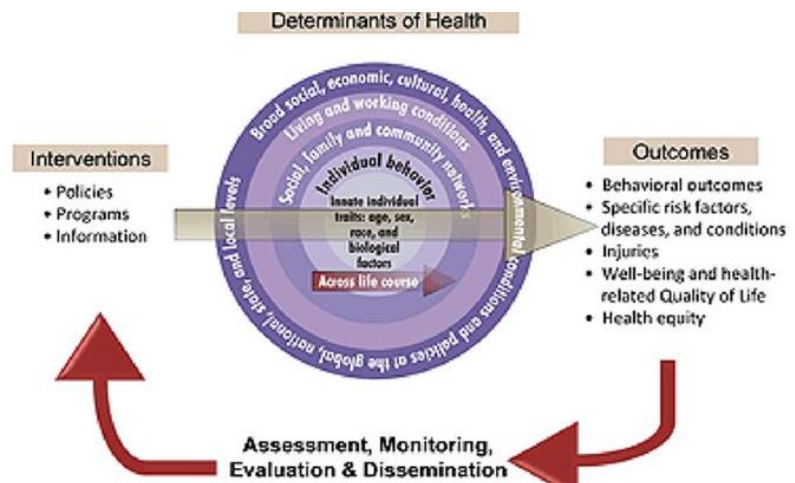
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Faculty of Allied Health Sciences  
Sri Devaraj Urs Academy of  
Higher Education & Research  
Tamaka, Kolar-563 101

Based on Approval BOM- 29-2014, (Resolution No-XXIX-05/14 (vi) Dated-17/06/2014



# MASTER OF PUBLIC HEALTH 2014-2015



## SCHEME OF STUDY AND SYLLABUS

Effective from the academic year 2014-15

Department of Public Health  
Faculty of Allied Health Science

**REGULATIONS GOVERNING**

# **MASTER OF PUBLIC HEALTH**

**UNDER ALLIED HEALTH SCIENCES**

**SYLLABUS/CURRICULUM**

**2014-15**



**SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION &  
RESEARCH  
A Deemed to be University**

**Declared under Section 3 of UGC Act, 1956, MHRD GOI No.F.9-36/2006-U.3 (!) Dt.25<sup>th</sup> May  
2007**

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# DEPARTMENT OF PUBLIC HEALTH

## 1. COURSE DESCRIPTION

### What is public health?

Unlike Medicine which is mainly concerned with treatment of disease in sick individuals, Public health is the art and science of preventing disease, promoting health and maintaining health of population. The health of people is not only determined on health care services but also on human behavior, nutrition, physical and biological environment, social and economic conditions, genes, etc. Hence the science of public health is interdisciplinary in nature and involves the study of various disciplines such as epidemiology, biostatistics, demography, medicine, microbiology, nutrition, biochemistry, genetics, social and behavioral sciences and management sciences.

Public Health personnel typically are involved in assessing the health status of population and in planning, implementation and monitoring of programmes to improve the people's health. They study disease epidemics and take measure to control them. They work at administrative and managerial levels in health organizations of Government, Private, NGO's and International agencies like WHO, UNICEF, etc. They are also employed in health research agencies and in academic institutions of public health.

## 2. GOALS OF THE COURSE

To prepare professionals in the field of Public Health who can plan, monitor, implement and evaluate need based health care services to the community which is based on sound scientific principles. The public health professional should be able to manage health systems and health programmes in public, private and voluntary sectors and in International agencies.

## 3. OBJECTIVES OF THE COURSE

To prepare public health professionals who

- Will be able to understand the multiple determinants of health including social and cultural determinants
- Will be able make a community diagnosis of health problems and plan and implement strategies to mitigate these problems
- Will be able to apply the knowledge and skills of management to health care programmes
- Can contribute to health policy development and to evaluate its impact on community health
- Will be able to develop leadership qualities necessary for public health administration
- Will be able to effectively educate communities on health problems and evaluate such activities
- Will be able to undertake health research and be able to use the health data in planning, monitoring and evaluating health care services
- Will be able to teach the principles and practice of public health discipline to health care personnel in the academic and service sector

## 4. ELIGIBILITY FOR ADMISSION

A Pass in Bachelor course of MBBS, BDS, BAMS, BHIMS, Social Science, Nursing, Pharmacy or other equivalent qualifications as approved by SDUAHER. With a minimum of second class securing at least 50% of the aggregative marks or in an examination recognized as equivalent there to for all the subjects and in case of SC/ST; the minimum marks would be 40% as eligibility criteria.

## **5. METHOD OF SELECTION**

Candidates are expected to appear for an entrance test to be conducted by the university department and thereafter an interview. Admission to the course will be based purely on merit obtained in the entrance examination. (Application forms and other details will be available) from the office of the Registrar on payment of an application fee of Rs. 1000/- (one thousand only) or can be downloaded from the website of the Academy [www.sduu.ac.in](http://www.sduu.ac.in). In case of such downloaded applications, the application should accompany a Demand Draft for Rs. 1000/- drawn in favor of The Registrar, SDUAHER, payable at Kolar. The applications should be completed in all respects and should accompany copies of relevant marks cards, degree certificates, caste certificate and date of birth certificate. The date, venue and time of entrance examination will be notified in the website to the applicant as soon as it is fixed.

## **6. DURATION OF THE COURSE**

The Master of Public Health (MPH) programme in is two years course. The course is conducted in four semesters each of 6 months duration. The first semester will begin in the month of August 2014 as per the Academic year, second semester will begin in March 2015, third semester will begin in October 2015, and fourth semester will begin in March 2016 and contains theory, practical, field visit and project work. The course would end by July 2016.

## **7. ATTENDANCE**

1. Every candidate should have attendance not less than 75% of the total classes conducted in theory and practical in each calendar year calculated from the date of commencement of the term to the last working day as notified by the Academy in each of the subject prescribed to be eligible to appear for the University Examination.
2. Attendance shall be calculated from the total number of hours prescribed by SDUAHER.
3. The Principal should notify at the college the attendance details at the end of each term without fail under intimation to SDUAHER.
4. A candidate lacking in the prescribed attendance and progress in any subjects (s) in theory or practical in the first appearance should not be permitted to appear for the examination in that subject (s).

## **8. ELIGIBILITY FOR EXAMINATION:**

To be eligible to appear for University examination a candidate:-

- a) Shall have undergone satisfactorily the approved course of study in the subject/subjects for the prescribed duration.
- b) Shall have attended at least 75% of the total number of classes in theory and practical/clinical jointly to become eligible to appear for examination in those subject/subjects.
- c) Shall secure at least 35% of total marks fixed for internal assessment in a particular subject in order to be eligible to appear in the University Examination of that subject.
- d) Shall fulfill any other requirement that may be prescribed by the University from time to time.

## 9. TEACHING HOURS

### Phase I [Ist Semester]

**Table-I: Distribution of teaching hours in theory and practical of first semester MPH**

Sl no	Main subjects	Teaching hours			
		Theory		practical	
01	Public Health Concept & General Epidemiology		Total		Total
	A= Public Health Concept	40	80	35	70
	B= General Epidemiology	40		35	
02	Basic Human Biology & Social Science				30
	A= Basic Human Biology	45	120	30	
	B= Social Science	75		0	
03	Basic Biostatistics I & Demography				
	A= Basic Biostatistics I	40	80	35	70
	B= Demography	40		35	
	<b>Total</b>		<b>280 hours</b>		<b>170 hours</b>

### Phase II [2<sup>nd</sup> semester]

**Table-I: Distribution of teaching hours in theory and practical of 2<sup>nd</sup> semester MPH**

SL NO	Main subjects	Teaching hours			
		Theory		practical	
01	Communicable Diseases & Non Communicable		Total		Total
	A= Communicable Diseases	50	100	20	40
	B= Non-Communicable Diseases	50		20	
02	Research Methodology, Ethics & Advanced Biostatistics.				40
	A= Research Methodology & Ethics	50	95	20	
	B= Advanced Biostatistics	45		25	
03	Environmental Health, Public Health Nutrition & Basic Public Health Microbiology				40
	A= Public Health Nutrition & Basic Public Health Microbiology	50	100	20	
	B= Environmental Health	50		20	
04					
	Internship				15 days
	<b>Total</b>		<b>295 hours</b>		<b>125 hours</b>

**Phase III [3<sup>rd</sup> semester]**

**Table-III: Distribution of teaching hours in theory and practical of 3<sup>rd</sup> semester MPH**

Sl no	Main subjects	Teaching hours			
		Theory		practical	
01	Health Promotion and Education & Women and Gender, Health and Human Right		Total		Total
	A= Health Promotion and Education	55	110	20	40
	B= Women and Gender, Health and Human Right	55		20	
02	Health care of women and children & National Health System and Programmes				40
	A= Health care of women and children	55	110	20	
	B= National Health System and Programmes	55		20	
03	Public Health Laws and Regulations, Ethics in Public Health & Occupational Health				
	A= Public Health Laws and Regulations, Ethics in Public Health	55	110	20	40
	B= Occupational Health	55		20	
	<b>Total</b>	<b>330</b>		<b>120</b>	

**Phase IV [4<sup>th</sup> semester]**

**Table-III: Distribution of teaching hours in theory and practical of 4<sup>th</sup> semester MPH**

Sl no	Main subjects	Teaching hours			
		Theory		practical	
01	Advanced Epidemiology & Health Planning and Management		Total		Total
	A= Advanced Epidemiology	50	100	20	40
	B= Health Planning and Management	50		20	
02	Public Health policy and Governance in Health, Entrepreneurship in Health & Health economics and Financing				
	A= Public Health policy and Governance in Health Entrepreneurship in Health	50	100	20	40
	B= Health economics and Financing	50		20	
03	Health care of Elderly and Marginalised Community & International Health				
	A= Health care of Elderly and Marginalised Community	50	100	20	40
	B= International Health	50		20	

04	Research, submission and defence of dissertation	80	80		
	Internship				15day
	<b>Total</b>		<b>380</b>		<b>120</b>

Note: Carry out of the thesis research work for Preparation of the thesis project on approved topic and Submission of the completed project to university for evaluation.

## 10. SCHEME OF EXAMINATION

In first, and second semester has 80 Marks theory, 20 Marks theory internal assessment (IA), expect in second semester Biostatistics – II will have 40 Marks Practical and 10 Marks Practical IA respectively. In the third & fourth semester candidate has to prepare dissertation based on his/her research work carried out on the university approved topic dually cleared by Institutional ethical committee (IEC). The topic has to be given to the student once he/ she enters into third semester on successful completion of first year. In third semester, candidate in Third, and Fourth semester has 80 Marks theory, 20 Marks theory internal assessment (IA). Before appearing fourth semester examination candidate should submit his thesis work for approval. Once thesis get acceptance candidate will be allowed to appear for fourth semester university examination

## 11. DISSERTATION AND EVALUATION:

Dissertation evaluation will be done by two examiners one external and internal examiner. On receipt of the evaluation report from the external examiner regarding the acceptance of dissertation an open viva- voce examination will be conducted by the head of the department and the guide. The Dean/Head of the Department will be the Chairman of the MPH Programme.

## 12. CRITERIA FOR PASS

For declaration of pass in any subject in the University examination the candidates shall pass both in theory and practical/clinical examinations components separately as stipulated below;

The theory components consist of marks obtained in University written paper (s), and theory internal assessment. For a pass in theory, a candidate shall secure 50% marks obtained in theory written examination and in theory internal assessment.

Deviation of marks: paper should be evaluated by two examiners. Deviation of marks by more than 15% should be intended for third evaluation. I.e. deviation of marks more than 6 marks for 40 marks question paper.

In the practical component, for a pass in practical/clinical examination, a candidate shall secure 50% marks obtained in the university practical/clinical examination and in practical assessment.

A candidate not securing 50% marks in theory (written paper & internal assessment) and 50% marks in practical ( Experiment & internal assessment) /clinical examination in a subject shall be declared to have failed in that subject and is required to appear for both theory and practical/clinical again in the subsequent examination in that subject.

### **13. CARRYOVER / ELIGIBILITY FOR PROMOTION TO THE NEXT SEMESTERS**

A Candidate who has admitted to postgraduate programs under the faculty of Allied health and basic sciences shall be permitted to carry over the backlog subject till the completion of duration of the programme.

However she/ he shall be declared passed in the programme only after successfully passing all the subject/ courses of all semesters of the post graduate programme

### **14. Maximum Duration For Completion of Course**

The maximum duration of the programme shall be four years from the date of admission

The candidate failing to complete the course within four years from the date of admission will be declared unfit to continue and will be discharged from the programme.

### **14. DECLARATION OF CLASS**

- a) A candidate having appeared in all the subjects in the same examination and passes that examination in the first attempt and secures 75% of marks or more of grand total marks prescribed will be declared to have passed in the examination with Distinction.
- b)
- c) A candidate having appeared in all the subjects in the same examination and passes that examination in the first attempt and secures 60% of marks or more but less than 65% of grand total marks prescribed will be declared to have passed in the examination in Second class.
- d) A candidate having appeared in all the subjects in the same examination and passes that examination in the first attempt and secures 50% of marks or more but less than 75% of grand total marks prescribed will be declared to have passed in the examination in First class.
- e) A candidate passing the university examination in more than one attempt shall be placed in pass class irrespective of the percentage of marks secured by him/her in the examination.

**Note:** Fraction of marks should not be rounded off for clauses (a), (b) and (c)

### **15. INTERNAL ASSESSMENT**

- 1. Regular periodic examinations should be conducted throughout the course. The number of examinations can be decided by the department of Public Health.
- 2. There should be minimum of at least three internal assessment examinations during each semester of the course and average of best two examination marks should be taken into consideration while calculating the marks for internal assessment.

3. Day to day records should be given importance in the internal assessment. The weight age given to the internal assessment is 20% out of the total marks assigned for a subject.
4. Student must secure at least 35% of total marks fixed for internal assessment in a particular subject in order to be eligible to appear in the university examination of that subject.

### **Theory**

Minimum of three internal assessments is recommended during each semester, each student must secure at least 35% in theory as internal assessment from total 20 marks. At the end of each semester, there will be one university examination on each paper for 100 marks.

### **Practicals**

Minimum of three internal assessments are recommended. From the total 15 marks of internal assessment 5 marks would be for Practical Records and marks for internal assessment examinations and 5 marks for field visits. Average marks of the best two examinations shall be reduced to 65 marks and added to the marks obtained for records and sum of the two shall be sent to the University.

The internal assessment marks both theory and practical obtained by the candidates should be sent to the university at least 15 days prior to the commencement of theory examinations.

## 16. UNIVERSITY EXAMINATION

### 16.1 THEORY

Duration: There shall be three theory papers of 100 marks each and duration of each paper would be of 3 hours in paper – 1 Public Health Concept & General Epidemiology. Paper-II Human Biology & Social Science and paper III Biostatistics I & Demography. All Papers consists of section A and section B.

**Table-IV Distribution of Teaching hours, marks, for first year first semester Master of Public Health [semester1]**

SL NO	code	Main subjects	Teaching hours				Marks		IA marks		Total marks
			(T)	Total	(P)	Total	Marks	Total	Marks	Total	
1	A010	Public Health Concept & General Epidemiology									
		A= Public Health Concept	40	80	35	70	40	80	10	20	100
		B=General Epidemiology	40		35		40		10		
2	A020	Human Biology & Social Science		120		30	40	80	10	20	
		A= Human Biology	45		30		40		10		
		B= Social Science	75		0						
3	A030	Basic Biostatistics I & Demography									
		A= Basic Biostatistics I	40	80	35	70	40	80	10	20	100
		B= Demography	40		35		40		10		
<b>Total</b>			<b>280 hours</b>		<b>170 hours</b>			<b>60</b>		<b>300</b>	

**Table-V Distribution of Teaching hours, marks for first year second semester Master of Public Health [semester2]**

S L N O	code	Main subjects	Teaching hours				Marks		IA marks		Tot al ma rks
			(T)	Total	(P)	Tot al	Marks	Total	Marks	Total	
1	B010	Communicable Diseases & Non Communicable									
		A=Communicable Diseases	50	100	20	40	40	80	10	20	100
		B= Non-Communicable	50		20		40		10		
2	B020	Research Methodology, Ethics & Biostatistics- II									
		A=Research Methodology & Ethics	50	95	20	45	40	80	10	20	100
		B= Biostatistics-II	45		25		40		10		
3	B030	Environmental Health, Nutrition & Microbiology									
		A= Nutrition & Microbiology	50	100	20	40	40	80	10	20	100
		B= Environmental Health	50		20		40		10		
4	B040										
		practical					40		10		50
		<b>Total</b>	<b>295</b>		<b>125</b>		<b>280</b>		<b>70</b>		<b>350</b>

**Table-VI Distribution of Teaching hours, marks for second year third semester Master of Public Health [semester 3]**

SL NO	Code	Main subjects	Teaching hours				Marks		IA marks		Total marks
			(T )	Total	(P)	Total	Mark s	Total	Mark s	Total	
1	C010	Health Promotion and Education & Women and Gender, Health and Human Right									
		A= Health Promotion and Education	55	110	20	40	40	80	10	20	100
		B= Women and Gender, Health and Human Right	55		20		40		10		
2	C020	Health care of women and children & National Health System and Programmes				40					
		A= Health care of women and children	55	110	20	40	40	80	10	20	100
		B= National Health System and Programmes	55		20		40		10		
3	C030	Public Health Laws and Regulations, Ethics in Public Health & Occupational Health									
		A= Public Health Laws and Regulations, Ethics in Public Health	55	110	20	40	40	80	10	20	100
		B= Occupational Health	55		20		40		10		
<b>Total</b>			<b>330</b>		<b>120</b>					<b>350</b>	

**Table-VI Distribution of Teaching hours, marks' for second year fourth semester Master of Public Health [semester 4]**

SL NO	Code	Main subjects	Teaching hours				Marks		IA marks		Total marks
			(T)	Total	(P)	Total	Marks	Total	Marks	Total	
1		Advanced Epidemiology & Health Planning and Management									
		A=Advanced Epidemiology	50	100	20	40	40	80	10	20	100
		B= Health Planning and Management	50		20		40		10		
2		Public Health policy and Governance in Health, Entrepreneurship in Health & Health economics and Financing									
		A= Public Health policy and Governance in Health Entrepreneurship in Health	50	100	20	40	40	80	10	20	100
		B= Health economics and Financing	50		20		40		10		
3		Health care of Elderly and Marginalised Community & Internship Health									
		A= Health care of Elderly and Marginalised Community	50	100	20	40	40	80	10	20	100
		B= Internship Health	50		20		40		10		
4		Research, submission and defence of dissertation	80		80						
		Internship							15day		50
		<b>Total</b>			<b>380</b>				<b>120</b>		<b>350</b>

## 17. SUBMISSION OF PRACTICAL RECORD NOTE BOOK

At the time of examination, each candidate shall submit to the Examiners his/her practical notebook duly certified by the Head of the Department as a bonafide record of the work done by the candidate.

## 18. ELIGIBILITY FOR EXAMINATION

To be eligible to appear for University examination a candidate:-

- Shall have undergone satisfactorily the approved course of study in the subject/subjects for the prescribed duration.
- Shall have attended at least 75% of the total number of classes in theory and practical/clinical jointly to become eligible to appear for examination in those subject/subjects.
- Shall secure at least 50% of total marks fixed for internal assessment in a particular subject in order to be eligible to appear in the University Examination of that subject.
- Shall fulfill any other requirement that may be prescribed by the University from time to time.

## 19. Question types

### First to Fourth Semester

Type of questions	Marks for each questions	Number of questions	total
<b>Paper 1 Public Health Concept &amp; General Epidemiology 80 marks</b>			
<b>Section A Public Health Concept [40 marks]</b>			
Long essays	10	1	10
Short essays	5	6	30
Total		7	40
<b>Section B General Epidemiology [40 marks]</b>			
Long essays	10	1	10
Short essays	5	6	30
Total		7	40

## **19 IMPORTANT NOTE**

- A Candidate will not be permitted to appear for written examination on more than two attempts, will not be permitted to submit a dissertation for the degree more than two times.
- There is a provision for revision and resubmission of thesis if an external examiner recommends change/ suggest for further work. Such dissertation will be referred to the same examiner after compliance for his report.
- In case of rejection by external (foreign/Indian examiner) a dissertation will be send to another university nominated external examiner. His/her recommendation will be final.
- A candidate who is not successful in voice examination will be permitted to undergo via voice examination again within three months.
- Student who did not submit the dissertation within the stipulated time should apply for extension of time before the completion of course period.
- Any publication made out of the prepared dissertation of his/her research work done during the tenure of MPH course is registered to the university. The same reprint copy has to be attached at the end of the dissertation before submitting to the university.
- Change of guide and topic will be permitted under the student/guide should give valid reason for change, the vice- chancellor will constitute the committee to go into his/her request. When change of guide and topic is approved candidate has to work in the prescribed duration and also he/she should fulfill the attendance requirement.
- Candidate does not submit the dissertation within the stipulated period should apply for extension of time three months before completion of course period. Extension of time and fees to be paid will be decided by the committee.

## SYLLABUS

<b>PHASE I [Ist SEMESTER] COURSE CONTENT</b>
<b>PAPER 1: PUBLIC HEALTH CONCEPTS &amp; GENERAL EPIDEMIOLOGY</b>
<b>Topics/Chapters</b>
<b>Section A : Public Health Concepts</b>
<b><u>Introduction and Concepts of Health:</u></b> <ul style="list-style-type: none"><li>○ Definition and Dimensions of Health</li><li>○ Concepts of Well-being</li><li>○ Determinants of Health and Indicators for measuring health</li></ul>
<b><u>Concept of illness and diseases:</u></b> <ul style="list-style-type: none"><li>○ Natural history and Causation of disease</li><li>○ Spectrum of Disease and Classification of Disease</li><li>○ Risk factor concept</li><li>○ Principles in Prevention and Control of Disease</li></ul>
<b><u>Introduction to Public Health</u></b> <ul style="list-style-type: none"><li>○ Definition and Evaluation of Public Health and concepts</li><li>○ Relationship between public health and medical care system</li><li>○ Core functions of public health practices</li><li>○ Comparisons of health indicators of selected developed and developing countries</li><li>○ Millennium Development Goals</li></ul>
<b><u>Health Care Organization: Public Health Systems</u></b>
<b><u>Introduction to Indian Public Health System</u></b> <ul style="list-style-type: none"><li>○ Organization of Public Health System in India</li><li>○ Elements and principles of primary health care</li><li>○ National Rural Health Mission</li><li>○ National Urban Health Mission</li><li>○ Indian Public Health Standards</li><li>○ Factors influencing delivery of health care and utilizations of health care service including cost factors</li></ul>

## **Introduction to Private health sector in India**

- Mapping of Multiple Systems of Medicine in India
- Challenges of the private sector in the provision of health care
- Types of Regulations to ensure quality of care in private health sectors Karnataka Private Medical Establishment Act and Medical Council of India and Public Health Act

## **Section B : General Epidemiology**

### **FUNDAMENTALS OF EPIDEMIOLOGY**

#### **Basics of Epidemiology**

- History and Evaluation of Epidemiology
- Definition of Descriptive and analytical epidemiology
- Principles and use of epidemiology

#### **Measurements of morbidity and mortality**

- Fundamental measurements of disease frequencies
- Estimations of disease burden
- Measurement of Incidence and prevalence
- Age –adjustment and Survival Analysis
- Use of Morbidity and Mortality Indices in Epidemiological studies
- Risk measurement: Relative risk, Attributable risk and Odds ratio

#### **Epidemiological Methods**

- Epidemiological study designs: Ecological design, Cross sectional, Case control design, cohort studies and Experimental designs
- Chance, bias and confounding factors in epidemiological studies

## **PAPER 2 : BASIC BIOSTATISTICS & DEMOGRAPHY**

### **Topics/Chapters**

#### **Section A : Biostatistics I**

### **Introduction to Biostatistics**

- Definition and scope of Biostatistics
- Branches of Statistics: Bio-Statistics, Vital Statistics and Health Statistics
- Source of health data

### **Introduction to statistical Data**

- Data and Types of data, Variables and Interpretation
- Different methods of data collection
- Presentation of statistical data

### **Numerical Description of Data**

- Measures of central tendency

- Measures of dispersion: Range, Quartiles, Deviation, Standard Deviation, Quartile deviation, Co-efficient of variation
- Probability, Normal Distribution and Skewed Distribution

**Sampling:**

- Sampling methods
- Sampling: errors
- Non Sampling errors
- Standard error

**Section B: Demography**

**Basics of Demography**

- Definition and uses of Demography
- Demographic cycle
- Source and Methods of demographic data collection:

**Population growth, Trend, Problems and Projections**

- Age and Sex Composition and Pyramid
- Population density
- Life expectancy, Mortality and Migration,
- Death Rate: crude death rate, Age specific death rate and Disease specific death rate

**Vital Statistics:**

- Registration of births, Deaths, Marriages- Act 1966
- Fertility Indicators: Fertility rate, Age specific fertility rate
- Factors Influencing the fertility
- Family planning: Definition and methods of family planning Definition of Eligible and Target couple, Barriers in family planning
- Population policy

**PAPER 3: HUMAN BIOLOGY & SOCIOLOGY**

**Topic/Chapters**

**Section A : Human biology**

**Human Life Cycle:**

- Growth and Development
- Sexuality and Conception

**Structure and Function of Organs and Systems**

- Reproductive systems
- Cardiovascular systems
- Respiratory systems
- Digestive systems
- Musculo-skeletal
- Nervous systems
- Renal systems

- Endocrine systems
- Skin and temperature regulation

## **Section B : Sociology**

### **Introduction to Sociology**

- Definition and aims of sociology

### **Basic sociology terms:**

- Society: Characteristics.
- Community: Characteristics, Type (Rural, Urban and Tribal)
- Institution: Characteristics, marriage, family (Nuclear family, Joint family and extended family), function of family,
- Social system and Structure

### **Social institute**

- Individual: Cultural and Social group , Formal and informal organisation
- Family and Economic system (political, religious and educational)
- Social controls: Customs and Norms

### **Social problems**

- Social inequality
- Class
- Under privileged group and Disease
- Youth and Aged,
- Poverty
- Population

## **PHASE I I[2<sup>nd</sup> SEMESTER] COURSE CONTENT**

### **PAPER 1: INFECTIOUS AND NON INFECTIOUS DISEASES [TOTAL 140 HOURS]**

#### **Section A : Infectious Diseases- Epidemiology, Prevention and Control**

### **Introduction to infectious diseases**

- Respiratory Infection: Chicken pox, Measles, Tuberculosis, ARI and SARS.
- Intestinal Infections: hepatitis, Poliomyelitis, Cholera, Typhoid, Food Poisoning, Diarrheal diseases.
- Arthropod-borne infection: Malaria, Dengue, JE.
- Zoonosis: Rabies, Plague.
- Surface Infections: Tetanus, Leprosy,
- STD, HIV-AIDS risk factors, global profile and predictions prevention and control and national health programme
- Prevention and Control of Infectious disease
- Concept of Diseases: infection, incubation period, ice berg phenomenon, measurements, quarentile, prevention and control, isolation, natural history of disease, spectrum of disease, classification of disease, measurement of disease.

### **Introduction to Immunization**

- Disease
- Type of immunization

- Immunization schedule
- Cold chain
- Immunization hazards
- Disease prevented and controlled through immunization.

**Section B : Non Infectious Diseases- Epidemiology,  
Prevention and Control**

- Introduction to Non-infectious diseases
- Cancer
- Cardiovascular diseases and chronic rheumatic diseases.
- Diabetes, Obesity.
- Tobacco/alcohol/substance-abuse related illnesses,
- Accidents
- National Health Programme for NCD

**PAPER 2: Environmental Health & Public Health Nutrition,  
Basic Public Health Microbiology**

**Section A Environmental Health**

**Introduction**

- Environmental Health

**Pollution**

- Definition, Type of pollution
- Air: cause, effect, composition, monitoring, prevention and control
- Water: cause, effect, composition, monitoring, prevention and control
- Soil : cause, effect, composition, monitoring, prevention and control
- Sound: cause, effect, composition, monitoring, prevention and control
- Thermal : cause, effect, composition, monitoring, prevention and control
- Nuclear: cause, effect, composition, monitoring, prevention and control

**Deforestation**

- Deforestation
- Cause
- Effect
- Prevention & control
- Law to prevent deforestation

**Waste land & Global warming**

- Deforestation
- Cause
- Effect
- Prevention & control
- Law to prevent deforestation

**Waste management**

- Definition
- Cause &Effect

- Hospital waste management
- Disposal of waste and health
- Excreta disposal and safety

### **Housing**

- Housing Standards
- Housing and health
- Food, sanitation and safety

### **Disaster management**

- Definition, Cause
- Effect
- Disaster management
- Epidemiologic surveillance
- Disease control
- Disaster mitigation in health sector

### **Man-made disaster**

- Definition, Type, Cause, Effect

## **Section B: Public Health Nutrition & Basic Public Health Microbiology**

### **Microbiology**

#### **Introduction: Microbiology**

- Structure, culture of microorganisms

#### **Microorganisms:**

- Overview of microbiology and application to public health
- Bacteria of medical importance
- Viruses of medical importance
- Fungi and parasites of medical importance
- Zoonotic diseases: Bacteria, viruses, Fungi
- Parasitic zoonotic diseases
- Sterilization, disinfectants
- Immunization, antimicrobials
- Infections
- Immunity

#### **Arthropods:**

- Definition
- Type of arthropods
- Diseases transmitted arthropods and prevention and control of arthropods and national programmes.

#### **Nutrition**

- Classification of foods
- Nutritive value of common food items

- Nutritional requirements
- Balanced diet
- Nutrition public health problems
- Nutritional education
- Nutritional status assessment
- Nutritional surveillance
- Food hygiene
- Foodborne diseases
- Nutritional policy
- Mal nutrition: Definition, causes, diagnosis, treatment and diseases
- Nutritional programme India

### **PAPER 3: Research Methodology, Ethics & Advance Biostatistics**

#### **Section A: Research Methodology, Ethics**

##### **Quantitative**

- Introduction
- Quantitative research
- Review of literature: need for Review of Literature, performing electronic literature search
- Sampling methods
- Type of research,
- Selection of study design
- Research hypothesis/Research question
- Uses of Research in public health
- Data collection- field work
- Data management- editing, entry
- Data analysis and Report Writing

##### **Qualitative Research**

- Introduction to Qualitative research'
- Development of conceptual framework
- Research ethics.
- Qualitative methods: FGDs, In-depth interviews, participatory methods, participant observation, sampling methods etc
- Data collection, recording
- Data management-Editing, entry
- Data analysis and Report Writing

#### **Section B: Advance Biostatistics**

##### **Advance Biostatistics**

- Introduction to advance statistical methods, Excel, SPSS, Epi data and Epi info
- Testing of Hypothesis:
- Defining Hypothesis,
- Estimation of sample size,
- Types of error,
- Level significance,
- T-test,
- Chi2 test,

- Z-test and F-test
- Non Parametric tests

### **Regression**

- Defining regression,
- Type of regression
- Linear regression modal, Multiple regression,
- Estimation of Coefficient in simple & multiple regression,
- Test for linearity of regression
- Application of analysis of variance in multiple Regression
- Logistic Regression

### **Vital Statistics methods:**

- Measures of morbidity
- Measurement of population
- Gross reproduction rate
- Net reproduction rate

## **PHASE III [3<sup>RD</sup> SEMESTER] COURSE CONTENT** **[TOTAL 140 HOURS]**

### **PAPER 1: Health care of women and children & National Health System and Programmes**

#### **Section A: Health care of women and children**

### **Maternal and Child Health**

- Introduction to MCH problem
- History and development of MCH activities in India
- MCH complication, maternal nutritional
- Maternal deaths: causes and prevention.
- Menopause and associated problems

### **Components of MCH services**

- Antenatal care
- Prenatal care
- Intra natal care
- Post-natal care

### **Delivering MCH service under NRHM**

- Organization of MCH services: Centre, State, District, Peripheral level, Staff concerned with MCH and their respective roles.
- RCH Phase II- components, implementation, outcome, critical assignment.
- Indicators of MCH service: Indian trends, selected countries
- Targets for MCH services
- Role of voluntary sectors: approach for safe motherhood

### **Child health**

- Principles of growth and development
- Influence of home and surroundings
- Neonatal care
- Measuring the baby

- Low birth weight
- Late Neonatal care
- Feeding of infants
- Growth development
- The growth chart
- Role of health and Child health problem
- National policy for children's
- Baby friendly hospital
- Importance and objectives of pre-school education for child development.
- Immunization schedule – concepts of total immunization – universal immunization
- Indictors
- Welfare programmes for children – special nutrition & health programmes, ICDS, various feeding programmes, child survival and safe mother hood programmes, national policy for children, prevention of child labour.
- School health services
- Children schooling and its impact on health
- Adolescent health: menarche associated problems and management.

### **Section B: National Health System and Programmes**

#### **Introduction to Indian public health system**

- History of Public health system in India
- Organization of public health system in India
- Elements and principles of primary health care

#### **Health Service delivery in Public health system**

- National Rural Health Mission
- National Urban Health Mission
- Indian Public Health Standards
- Factors influencing delivery of health care and utilization of health care services including cost factors

#### **Introduction to Private health sector in India**

- Mapping of Indian health system in India
- Challenges of the private sector in the provision of health care
- Regulations to ensure quality of care in private health sectors; Karnataka Private Medical Establishment Act; Clinical establishment Act; Medical Council of India and Public Health Act

**Assignment:** Comparison of Health system from other countries.

### **PAPER 2: Health Promotion and Education & women and Gender, Health and Human Right**

#### **SECTION a: Health Promotion and Education**

#### **HEALTH EDUCATION**

- Introduction to health education
- Health education – definition , objectives, principles, contents, application, methods, approaches, tools
- Role of health education in health
- Effectiveness of health education
- Health education Vs. propagandas

### **Health communication:**

- Introduction, definition, process, purpose, application in health.
- Principle, elements, models, factors influencing and barriers of communication
- Channel of health communication.
- Different type of communication
- Communication techniques
- Role of mass media in health promotion
- Educational participation,
- Role of professional in health education

### **Health promotion.**

- Overview of concept of health promotion
- The Ottawa charter 1986
- Models of health promotion (Biomedical modal, Behavioral modal, Socio-  
`11Environmental model)
- Major theories in health promotion (Behavioral change theories, Health belief model stages of change theory social learning theories. Community change theory : diffusion of innovation
- Developing health promotion strategies in community and hospitals
- Role of professional in health promotion

### **Role Media in health Promotion**

- Mess media
- Inter personal communication
- Role of communication in promoting healthy lifestyle

### **Cost-effective health promotion strategies:**

- Role of corporate in health promotion.
- Role of internet i.e email, web portals etc., in health promotion.
- Role of government and private sector in health promotion.

### **Health Advocacy:**

- Policy briefs.

### **Stigma and discrimination:**

- Definitions, context and role of stigma and discrimination in health and disease'

## **Section B: Women and Gender, Health and Human Right**

### **Women and Gender**

- Status of women in society
- Equity and Equality
- Role of women in family decision making
- Life cycle approach
- Gender analysis framework,
- Gender issues in different disease conditions
- Stigma and discrimination
- Gender based discrimination
- Religion based discrimination
- Economical based discrimination
- Child marriage

- Role of gender and domestic violence : Laws to protect women

### **Health and Human Right**

- Introduction to Human Rights
- Human right :definition, laws,
- Principles and Theories of Human Rights
- Organizations Related to Human Rights
- Human Rights in Global and Regional Perspectives
- Promotion and protection of Human Rights and prevention of Its Violations
- Child and Human Rights
- Women and Human Rights
- Religion and Human Rights
- Population and Human Rights
- Indian Constitution and Human Rights

## **PAPER 3 Occupational Health & Public Health Laws and Regulations, ethics in Public Health**

### **Section A: Occupational Health**

#### **Occupational Health**

- Definition
- Fundamental of occupational health
- Principles and relevance of Industrial and occupational health
- Occupational Health Prevention promotions
- Occupational safety and health
- Occupational health disorder and diseases. (silicosis, Anthracnosis, Byssinosis, Bagassosis, Asbestosis, Farmer's lung, lead poisoning, Occupational cancer, Accidents, Radiation hazards)
- Industrial hygiene
- Ergonomics
- Problems of urbanization and industrialization
- ESI act and factory act

### **Section B: Public Health Laws and Regulations, Ethics in Public Health**

- Ethics and Medical experimentation,
- General ethical principles,
- Nuremberg code, Helsinki declaration
- Legal aspects of healthcare
- The Medical Termination of Pregnancy Act (MTP act)
- The Maternity benefit act
- The Immoral traffic (prevention) act
- The transplantation of human organs act
- Pre-Conception and Prenatal Diagnostic Techniques Act (PCPNDT)
- Consumer Protection Act (CPA)
- Cigarettes and Other Tobacco Production, Supply and Distribution) Act, 2003 or COTPA
- The registration of birth and Death act
- The child labour (prohibition and regulation)
- Biomedical waste Rules
- Indian factories act, ESI act

- The Karnataka Private Medical establishments act, 2007 (KPMEA)
- Clinical Establishment act (CEA)
- Medical Council of Indian act (MCI) /Dental Council of India (DCI) /Indian Nursing Council Act 1947/
- Karnataka Medical council, (KMC)
- Indian Public Health Standards (IPHS)
- Public health Act
- Nursing home act
- Drug and cosmetic act
- National Blood Policy-NACO

## **PHASE IV [4<sup>TH</sup> SEMESTER] COURSE CONTENT**

### **Paper I: Advance Epidemiology & Health of Elderly and Marginalized Community**

#### **Section A: Advanced epidemiology**

##### **Advanced Epidemiology**

- Introduction to Action research
- Introduction to Implement research
- Clinical trials: History of the development of the clinical trials research process
- Introduction to the relevant legal and ethical guidelines governing clinical trials design
- Introduction to the phases of clinical trials research
- Designing trials
- Single and multicenter trials
- Data collection management and endpoints
- Recruitment and retention of trial participants
- Interim monitoring
- Publications and data dissemination

#### **Section B: Health of Elderly and Marginalized Community & International Health**

##### **Health of Elderly**

- Introduction to gerontology
- Biology of ageing
- Demographic and social profile of the elderly
- Health problems and status of the elderly
- Policy planning and legislation for aged.

##### **Marginalized Community**

- Livelihood Approach: Indigenous community development approach
- Bottom-up approach and grassroots approach
- Community participation and Stakeholder analysis
- Gender and Vulnerable groups
- Power analysis
- Participation Matrix.
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##### **International Health**

- Disease patterns around the world,
- Regions of the world according to WHO and their overall health status,
- Effect of climate, politics on health
- International bodies in health promotion and protection

### **Paper II: Health Planning and Management & Health**

## **Economics and Financing**

### **Section A: Health Planning and Management**

#### **Programme Planning and Evaluation**

- Organizational concept : administration and management, Function of manager, Decision making, Organizational structure, Authority, power, responsibility centralization
- Organizational Behavior :motivation, group dynamics leadership, supervision, morale, grievance redress conflict, innovation, public relations
- Management information system performance appraisal
- Time management and material management
- Modern management Techniques: Time trends and Forecasting, cost Benefit analysis, cost effectiveness analysis, input and Output analysis, inventory control, Gantt chart, network analysis decision theory and decision tree, system analysis
- Health planning, monitoring and evaluation
- Indicators for programme or project
- Audit

### **Section B: Public Health Policy and Governance in Health, Entrepreneurship in Health Economics and Financing**

#### **Public Health policy and Governance in Health, Entrepreneurship in Health**

- Evolution of Public Health and medical care
- Concept of health policy
- National health policy
- State health policy
- Comparison of various international health policy ( USA, UK, China, Germany, Canada, France, Thailand)
- Implementation of health policy-central and state government

#### **Health Economic and Financing**

- Geographic variation in health , Cross country comparisons health financing,
- Health care cost growth
- Demand, Supply and Market equilibrium
- Rick A version and insurance
- Moral Hazard
- Adverse selection
- Quality of care
- Health Financing in India



