



YENEPOYA

(DEEMED TO BE UNIVERSITY)

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Accredited by NAAC with 'A' Grade

YENEPOYA (DEEMED TO BE UNIVERSITY)

Deralakatte, Mangaluru -575018

REGULATIONS AND CURRICULUM GOVERNING

POSTGRADUATE PROGRAM IN

MASTER OF PUBLIC HEALTH (MPH)

(REVISED CURRICULUM – AMENDED UP TO 2018)

Structure of the program clearly indicating courses, credits/Electives

[Click Here](#)

ATTESTED

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NOTIFICATION – 23/32-ACM/2018 dtd. 03.09.2018

Sub: Implementation of Choice Based Credit System in PG Program

Ref: Resolution of the Academic Council at its meeting held on 11.08.2018
vide agenda – 23

The Academic Council at its meeting held on 11.08.2018, vide agenda – 23 approved the proposal to implement Choice Based Credit System in the following five PG programs which was subsequently ratified by the Board of Management.

1. M.S. W. (Master of Social Work)
2. M.H.A. (Master in Hospital Administration)
3. M.Sc. (Bioscience)
4. M.P.T. (Master of Physiotherapy)
5. M.P.H. (Master in Public Health)

The Regulations for the Choice Based Credit System in PG programs as recommended by the Faculty of Allied Health & Basic Sciences was also approved.

Copy to:

1. Dean, Faculty of Allied Health & Basic Sciences
2. Principal, Yenepoya Physiotherapy College
3. The Coordinator, Choice Based Credit System
4. Dy. Director, YRC
5. HoD, Department of Public Health
6. HoD, Department of MSW
7. HoD, Department of Hospital Administration
8. Academic Section

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PART- I
Regulations Governing the Choice Based Credit System
for Two Years Post Graduate Programme in Public Health (MPH)

1. Preamble:

The University Grants Commission, New Delhi, has directed all Universities in the country to implement the Choice based Credit system (CBCS, semester scheme) in both under and post graduate programme to enhance academic standards and quality in higher education through innovation and improvements in curriculum, teaching-learning process, examination and evaluation systems. Choice Based Credit System is a flexible system of learning. It enables the students to learn at their own pace, choose electives from a wide range of elective courses offered by the other University Departments, adopt an inter-disciplinary and intra-disciplinary approach in learning, make best use of the available expertise of the faculty across the departments or disciplines and has an inbuilt evaluation system to assess the analytical and creativity skills of students in addition to the conventional domain knowledge assessment pattern.

Given the present trend of globalization, it is highly essential for educational institutions to adopt appropriate teaching-learning methodologies with a view to increase knowledge base and to build the competencies of professional Public health trainees to manage the challenging opportunities and various roles in the job market. In this context Yenepoya (Deemed to be University) is desirous to adopt Choice Based Credit System (CBCS) so that the acceptability of the programmes offered by the University becomes comparable and readily acceptable. In view of this the PG Board of Studies in MPH has prepared the revised syllabus and scheme of examination based on CBCS regulations of Yenepoya (Deemed to be University) 2018.

2. Title and Commencement:

- These regulations shall be called –The Regulations Governing the Choice Based Credit System for the Two Years (four semesters) Post Graduate Degree Programme in Public Health.
- The course shall be called '**Master of Public Health**' leading to '**MPH**' Degree.
- These regulations shall come in to force from the academic year 2018-19.

3. Definitions of Key Words:

- i. **Academic Year:** Two consecutive (one odd + one even) semesters constitute one academic year.
- ii. **Choice Based Credit System:** The CBCS provides choice for students to select from the prescribed courses (core, elective or minor or soft skill courses).
- iii. **Course:** Usually referred to, as “papers” is a component of a programme. The courses shall define learning objectives and learning outcomes. A course shall comprise lectures / Tutorials/ field work/ outreach activities/ project work/ vocational training/viva/ seminars/ term papers/assignments/ presentations/ self-study etc. or a combination of some of these.
- iv. **Credits:** Credit defines the quantum of contents/syllabus prescribed for a course and determines the number of hours of instruction required per week. Thus, normally in each of the courses, credits will be assigned on the basis of the number of lectures/tutorial laboratory work and other forms of learning required, to complete the course contents in a 16-20 week schedule: One credit=1 hour of lecture per week/ two hours of practical/three hours of field work practice/posting. All courses need not carry the same credits.
- v. **Grade Point:** It is a numerical weight allotted to each letter grade on a 10 point scale.
- vi. **Credit Point:** It is the product of grade point and number of credits for a course.
- vii. **Cumulative Grade Point Average (CGPA):** It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.
- viii. **Letter Grade:** It is an index of the performance of students in a said course. Grades are denoted by letters: A+, A, B+, B, C, P,F.
- ix. **Semester Grade Point Average (SGPA):** It is a measure of performance of work done in a semester. It is ratio of total credit points secured by a student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed up to two decimal places.
- x. **Transcript or Grade Card or Certificate:** Based on the grades earned, a grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the course details (code, title, number of credits, grade secured) along with SGPA of that semester.

4. Semester System and Choice Based Credit System

The semester system accelerates the teaching-learning process. The credit based semester system provides flexibility in designing curriculum and assigning credits based on the course content and hours of teaching. The choice based credit system provides a cafeteria _type approach in which the students can take courses of their choice, undergo additional courses and acquire more than the required credits, and adopt an interdisciplinary approach to learning.

PART-II

MASTER OF PUBLIC HEALTH

1. Introduction:

Masters in Public Health (MPH) is a two year postgraduate degree in Public Health. MPH degree is offered by many prestigious universities across the world. Despite the successes of the past, current challenges for public health are plentiful. There is a great need for development of public health policies and programs for prolonging healthy life expectancy. Emerging health transition shows that while old threats of communicable diseases continue, new infectious diseases may appear, and increasing incidence of non-communicable disease will overburden the health system in future. A cadre of Public Health Specialists who have sound scientific knowledge and skills to practice public health are required to tackle these emerging problems.

Government of India has highlighted in the National Health Policy 2002 that a large number of specialists should be trained in Public Health. World Health Organization has also emphasized in Calcutta Declaration, the need for Public Health Training.

Public Health is the science and art of promoting health, preventing disease, and prolonging life through the organized efforts of the society. Scientific basis for public health practice is provided by study of epidemiology, bio-statistics, environment, demography, nutrition, economics, social and biological sciences. While epidemiology plays a central role, social sciences make essential contributions in the study of determinants of health, and in the development and evaluation of effective public health interventions. Public health actions are directed at whole populations so as to provide safe environment, healthier food and accessible healthcare.

It is a well-known fact that underlying causes of various diseases very often lie in socio-economic, environmental and behavioral domains rather than in the bio medicine. Thus, with training, both non-medical and medical persons can make contribution to develop Public Health. As physicians have to attend to the pressing needs of the ailing persons, there is acute shortage of public health physicians throughout the world including India. Therefore, in several countries postgraduate courses in public health are being offered for both medical and non-medical graduates. The emphasis is such educational programs as recommended by WHO is on

a thorough training in public health administration as well as in epidemiology along with the study of relevant aspects of environmental and social sciences, i.e. health economics, health psychology and sociology.

1. Relevance in current social context:

Public Health often receives little attention in basic medical curricula, specialty training is often inadequate and courses in Medical Schools may be too academic and not relevant to local problems and needs in India. Many countries are exploring and implementing multidisciplinary training programs that include management and communication techniques as well as the traditional public health sciences. An innovative example of public health training designed to produce future leaders is the Union School of Public health in Beijing, Peoples Republic of China, established in 1989 to stimulate public health training in the entire Country. The Beijing School offers a Masters Degree in Public Health (MPH) and draws students and teachers both from health disciplines and from economics management and the social, biological and environmental sciences. The training is also based on problem solving and more than half of the educational exposure and experience is in the form of community service. The Mahatma Gandhi University recognized the importance of starting the MPH Programme in India also and pioneering the programme as a self finance venture under the School of Medical Education. Planned improvement in Health system performance can be facilitated by training adequate numbers of policy making and management personnel, including public health specialties, policy analysis, hospital administrators and managers and drug management specialties. These skills are in short supply in most developing countries including India.

2. The mission of the MPH program:

To provide leadership and expertise in the fields of public health and epidemiology, health education, developing, health promotion, research and service and endorses the perspective on health promotion as defined by the World Health Organization (WHO) –Health promotion is the process of enabling individuals, groups and communities to Increase control over the determinants of their health and thereby improve their health.

3. Objectives of the course:

The program is designed to focus on the acquisition of knowledge and skills applicable to a career in Public Health, for catalyzing the -Health for all revolution. Upon completion of the programme, the postgraduate will be:

- Aware of the origin and evolution of the field of public health;
- Competent to apply concepts and principles associated with health and disease in the prevention & control of disease.
- skilful to apply the principles of health promotion in health and development strategies;
- Able to apply epidemiological principles and statistical techniques; in the measurement and assessment of health and development needs of a community;
- Able to plan, implement, manage and evaluate health and development programme /system;
- Able to conduct research independently & publish in the field of public health.
- Skilful to undertake middle level and senior level managerial, leadership and teaching responsibilities in a wide range of organizations and areas.

4. Course details:

Title of the course

- The course shall be called ‘_Master of Public Health’ leading to MPH Degree.

Course curriculum pattern:

- Semester-wise and Choice Based Credit System (CBCS) pattern to be implemented during 2018-19 academic year.

Duration of the course

- Two years.

Eligibility for admission

Medical graduates (MBBS), Dental graduates (BDS), AYUSH, Graduates in Veterinary sciences, Nursing sciences or students with a postgraduate degree in Social sciences, Nutrition or Allied specialties.

Age: Forty years as on 1st January of the year of the commencement of the course.

- Relaxable in exceptional cases.

Method of selection

- **Indian students**

Prospective candidates will be evaluated on the basis of educational qualifications, professional experience relevant to the field of public health, written test and interview.

- **Overseas students**

Selection will be based on educational qualifications, professional experience, assessments made by the sponsoring organizations and a telephonic interview. Students will have to provide certification for proficiency in English if required at the time of selection.

Applicants are required to submit two reference letters in sealed envelopes from experts working in the field of public health along with the application form.

Number of seats: 15 seats per year.

Admission: July-August.

Commencement of the course: August.

5. Course structure:

Semesters:

The course shall consist of 4 semesters covering 2 academic years. Each academic year shall be divided into 2 semesters and each semester is of 16 weeks duration.

Odd Semester 1 st & 3 rd	August to December
Even semester 2 nd & 4 th	February to June

Types of Courses:

MPH programme shall have the following courses:

- Core course:** a course that should compulsorily be studied by a candidate as a requirement is termed as a core course this can be hard core or soft core.
 - Open Elective:** Generally a course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/ subject of study or which provides an extended scope or which enables an exposure to some other discipline or subject or domain or nurtures the candidates proficiency skill.
- The open elective courses shall be offered in the second and third semesters only.

- The list of open elective courses offered shall be displayed in the website.
- A student shall not take the courses offered by the department in which she/he is enrolled.
- Registration for the open elective courses shall be at least one week prior to the commencement of the course with the CBCS coordinator.

iii. **Assigning Credit Hours per Course:** While there is flexibility for the departments in allocation of credits to various courses offered, the general formula shall be:

- All core courses shall have 4 credits each.
- All open electives shall have 3 credits each.
- Project work shall have 4credits.
- Public Health Practicum(Field work practice) shall carry 4credits
- Internship/ Block Public Health placement shall have 4 credits.

- Total credits for the programme shall be 95. Out of the total 95 credits of the programme, the **Hard Core** is 52 Credits(54.73%) of the total credits (including Field work practicum and Internship), **Soft Core** is 20 Credits (21.05%), the **Open Electives** have fixed 6 credits (3 credits*2 courses) and Project Work has 17 Credits (17.44%).

➤ **Semester-wise total courses**

Semester 1	Semester 2	Semester 3	Semester 4
Hard Core 4(including Public Health practicum)	Hard Core 4(including Public Health practicum)	Hard Core 5(including Public Health practicum)	Hard Core 5(including Public Health practicum, Project work, Grand viva & Internship etc)
Soft Core-2	Soft Core-2	Soft Core-1	Soft Core-2
-	Open Elective-One	Open Elective-One	

Public Health practicum will be compulsory in all the semesters. Internship is compulsory to complete the course and total duration is 2 weeks (including weekly holidays) to be undertaken in any designated settings related to specializations opted by students.

6. Distribution of papers, credits and scheme of examination:

I Semester MPH

Sl. No	Type	Course code	Title of Paper	Hrs/W	Credits	Max Marks		Total Marks
						IA	SEE	
1	Hard core	MP02PH-1C1	Introduction to Public Health Practice	4	4	40	60	100
2	Hard core	MP02PH-1C2	Epidemiology	4	4	40	60	100
3	Soft core	MP02PH-1C3	Bio statistics	4	4	40	60	100
4	Hard core	MP02PH-1C4	Health Education and Health Promotion	4	4	40	60	100
5	Soft core	MP02PH-1C5	Social and Behavioural Health, community oriented healthcare	4	4	40	60	100
6	Hard core	MP02PH-1C6	Practical/field visits	12	4	40	60	100
Total				32	24	240	360	600

IA-Internal Assessment, **SEE**- Semester End Examination Hrs/W-Number of hours per week

*Viva Voce to be conducted by External Examiner

II Semester MPH

Sl. No	Type	Course code	Title of Paper	Hrs/W	Credits	Max Marks		Total Marks
						IA	SEE	
1	Hard core	MP02 PH-2C1	Demography	4	4	40	60	100
2	Hard core	MP02 PH-2C2	Public Health Nutrition	4	4	40	60	100
3	Soft core	MP02PH-2C3	Environmental and Occupational Health	4	4	40	60	100
4	Hard core	MP02PH-2C4	Infectious and Chronic diseases	4	4	40	60	100
5	Soft core	MP02PH-2C5	Health policy, health economics and healthcare finance	4	4	40	60	100
6	Open Elective	MP02PH-2O1	Applied bio-statistics	3	3	40	60	100
7	Hard core	MP02PH-2C6	Field visits	12	4	40	60	100
Total				35	27	280	420	700

IA-Internal Assessment, SEE – Semester End Examination Hrs/W-Number of hours per week

*Viva Voce to be conducted by External Examiner

III Semester MPH

Sl. No	Type	Course code	Title of Paper	Hrs/W	Credits	Max Marks		Total Marks
						IA	SEE	
1	Hard core	MP02 PH-3C1	Health Systems Management & Health Planning	4	4	40	60	100
2	Soft core	MP02 PH-3C2	Public Health Informatics	4	4	40	60	100
3	Hard core	MP02PH-3C3	Women's health ,Child health & Family welfare	4	4	40	60	100
4	Hard core	MP02PH-3C4	Public Health Leadership and Management	4	4	40	60	100
5	Hard core	MP02PH-3C5	Research Methodology	4	4	40	60	100
6	Open electives	MP02PH-3O1	Project management	3	3	40	60	100
7	Hard core	MP02PH-3O6	Practical/field visits	12	4	-	-	
Total				35	27	240	360	600

IA-Internal Assessment, **SEE** – Semester End Examination Hrs/W-Number of hours per week

*Viva Voce to be conducted by External Examiner

IV Semester MPH

Sl. No	Type	Title of Paper	Max Marks		Total Marks	Hrs/W	Credits
			IA	SEE			
1	Hard core	MPH thesis evaluation	-	100	100	-	4
2	Hard core	Grand viva		100	100	-	4
3		Internal assessment					
3.1	Hard core	Progress presentation	40	-	40	-	3
3.2	Hard core	2 weeks internship	20	-	20	-	2
3.3	Soft core	Journal club, seminar etc	20	-	10	-	2
3.4	Soft core	Conference presentation	10	-	10	-	1
3.5	Hard core	Publication in indexed journal (accepted/submitted)	10	-	10	-	1
Total			100	200	300	34	17

IA-Internal Assessment, SEE – Semester End Examination Hrs/W-Number of hours per week

*Viva Voce to be conducted by External Examiner

Proposed New CBCS Scheme of papers – Public Health (MPH)

Sem	Hard core			Soft core			Open electives			Total
	Papers	Credits	Total	Papers	Credits	Total	Papers	Credits	Total	
I	4	4	16	2	4	8	-	-	-	24
II	4	4	16	2	4	8	1	3	3	27
III	5	4	20	1	4	04	1	3	3	27
IV	5	-	14	2	-	03	-	-	-	17
Total			66			23			6	95
			69.47%			24.21%			6.31%	100%

7. Attendance

Each semester shall be taken as a unit for the purpose of calculating attendance. A student shall be considered to have satisfied the requirement of attendance for the semester if he/she attends 80% of the number of classes actually held in each subject including seminars and social work practicum. Only such students are eligible to appear for the semester end examination in their first attempt.

A candidate who does not satisfy the requirement of attendance even in one subject either in Theory or social work practicum shall not be eligible to take the examination in that particular subject of the concerned semester.

A candidate who fails to satisfy the attendance requirements in a particular subject of a semester shall repeat that subject in the next semester. However, he/she need not repeat Public health practicum if he has the required attendance in it.

8. Educational process:

The educational process uses Credit Based System. Total credits for the course shall be 95 which will be equivalent to 2300 marks. Number of credits for each paper will be equal to number of hours taught for that paper, based on its importance and weight age.

When a student earns the specified number of credits in every semester as given in the respective course structure, he/she is deemed to have completed the requirements of post graduate degree.

9. Scheme of examination and Assessment of a Course:

- Evaluation of a course shall be done on a continuous basis followed by one semester end university examination (SEE) for each course. The components of CIA (Internal Assessment) may include Sessional tests, Seminar/ Journal Club/other related activities, Review/Assignment/Social involvement and other activities relevant to the course. Internal assessment will be assessed based on the performance of each student in written tests, written assignments, seminar presentation and overall participation (including Attendance). The teaching faculty will notify in the first week of semester an adequate scheme of internal assessment spelling out details of the number and kinds of assignments and any other performance with the Weightage for each and a tentative schedule.
 - i. The CIA shall be 40% and SEE shall be 60%.
 - ii. There shall be no minimum marks for CIA, but the minimum marks for SEE shall be 40% and in aggregate it shall be 50% for pass per course.
 - iii. There shall be examinations at the end of each semester ordinarily during December/January for odd semesters and during June/July for even semesters
 - iv. The SEE duration shall be three hours.
 - v. The question paper pattern shall be decided by the Board of Studies (BOS) respective Departments.
 - vi. There shall be a supplementary examination for failed candidates at a specified time of the academic year.

Distribution of Weightage for CIA (Continuous Internal Assessment Weightage=40)

SI. No	Activities	Numbers	Weightage
1.	Internal tests	2	10
2.	Assignments: written	2	10
3.	Seminar/ JC/ Field visits relevant to the Core	2	10
4.	Overall Participation (including attendance)	-	10

Assessment of Public Health Practicum:

It will be a part of internal assessment.

Assessment of Compulsory Research Project:

- The Public Health project offers students an opportunity to plan a study, prepare research tools, collect data in the field, analyze the data, and write up the project under the guidance of the faculty.
- Students shall use any methods of research (quantitative & qualitative). A student selects the research topic in the second semester itself in consultation with the faculty in charge and reports the same to the head of the institution in writing. The tools of data collection should be finalized and data collection shall be completed after getting University Ethics Committee Approval. Data collection, analysis, interpretation and report writing can be spread in fourth semesters.
- Four bound copies of the research project duly signed by the Research Guide and certified by the Head of the Institution/ Chairman of the Department should be submitted to the Controller of examination at least one month before the last working day of the IV semester.

The maximum credits for the project work shall be 17 (equal to 100 marks). Of the total average of the marks by both internal and external examiner will be considered for final calculation. Ordinarily the viva voce will be conducted by a panel constituted by the Controller of Examination with an External and an internal examiner.

Assessment of Internship/ Block placement:

Internship/ Block placement in the fourth semester shall carry 2 Credits which will be awarded based on successful completion by the student in any designated setting. Assessment of Internship/ Block placement will be conducted based on the attendance certificate, daily log book, evaluation report and completion certificate issued by the authorized persons of the respective institution/organization/industry. The student is required to produce consolidated report of internship outlining internship objectives. Upon receipt of these testimonials the HOD of the department in consultation with respective Faculty Supervisors award credits and marks to students. The statement of credits and marks awarded shall be submitted by the HOD to the Controller of Examination which is one of the pre-condition for announcement of results by the University.

10. Pattern of Semester End Examination:

Question paper for the University Semester End Examination is of three hours duration. It will consist of three parts i.e., Long essays, Short essays and Short answers. The questions from all three parts should be answered by selecting questions as shown in the table given below:

Pattern and Choices	Marks/ Question	Total marks
Part I –Long essays: Total two questions of which two are compulsory	10	20
Part II- Short essays: Total six questions of which all are compulsory	05	30
Part III- Short answers: Total five questions of which all are compulsory	02	10
Total Marks	-	60

11.1 Valuation of answer scripts

- Each theory examination shall be evaluated by one internal and one external examiner. There shall be a third evaluation if the difference is more than 15%.
- Viva voce conducted for Public health practicum shall be conducted at the end of every semester immediately after SEE jointly conducted and evaluated by one internal examiner from the Department recommended by the HOD and one external examiner.

11.2. Furthermore, any matter related to conduct of examination, valuation, announcement of results shall be as per the rules of Yenepoya (Deemed to be University).

11. Letter Grades and Grade Points:

The results of successful candidates at the end of each semester shall be declared in terms of Grade Point Average (GPA) and letter grades as given below shall be followed:

Letter Grade	Grade Point	Range of marks
A+(Outstanding)	10	95-100
A (Excellent)	9	85-94
B+ (Very Good)	8	75-84
B (Good)	7	65-74
C (Average)	6	55-64
P (pass)	5	50-54
F (Fail)	<5	Less than 50

12. Letter grade for Cumulative Grade point average(CGPA):

The results at the end of the fourth semester shall be classified on the basis of the Cumulative Grade Point Average (CGPA) obtained in all the four semesters and the corresponding overall letter grade. The letter grade as described below shall be adopted.

CGPA Range	Letter Grade
9.0-10.0	A+(Outstanding)
8.0 – 8.99	A (Excellent)
7.0 - 7.99	B+ (Very Good)
6.0 - 6.99	B (Good)
5.5 - 5.99	C (Average)
5.0 – 5.49	P (pass)
<5.0	F (Fail)

13. Carryover

- i. A candidate who passes the semester examinations in parts is eligible for only CGPA and letter Grade but not for ranking.
- ii. Carry over shall be allowed for candidate who failed in not more than two courses in a semester.
- iii. The results of the candidates who have passed the fourth semester examination but not passed the lower semester examinations shall be declared as NCL (Not

Completed Lower semester examinations). Such candidates shall be eligible for the degree only after completion of all the lower semester examinations.

- iv. A Candidate who fails in any of the project work/Project Report/ dissertation shall reappear for the same within the nearest semester end examination schedule.
- v. Re-Entry after Break of the study
 - a. Students admitted to a program abstaining for more than 3 months must seek readmission into the appropriate semester.
 - b. The student shall follow the syllabus in vogue (currently approved/is being followed) for the program
 - c. All re admissions of students are subject to the approval of the Vice-chancellor.

14. Maximum period for completion of the Programme:

- A candidate shall complete the four semesters (two years) programme within five years from the date of admission.

15. Course of study

- Should be pursued on a full term basis.
- No candidate shall be permitted to work in any other organisation during the course duration.

16. Subjects:

Year	Sl. No	Subject
1 Semester	1	Introduction to Public Health Practice
	2	Epidemiology
	3	Bio statistics
	4	Health Education and Health Promotion
	5	Social and Behavioural Health, community oriented healthcare
2 Semester	6	Demography
	7	Public Health Nutrition
	8	Environmental and Occupational Health
	9	Infectious and Chronic diseases
	10	Health policy, health economics and healthcare finance
	11.	Applied Bio – Statistics – Open Elective
3 Semester	12	Health Systems Management and Health Planning
	13	Public Health Informatics
	14	Women's health , Child health and Family welfare
	15	Public Health Leadership and Management
	16	Research Methodology
	17	Project Management – Open Electives
4 Semester	18	Public health project/field experience

17. Subjects

The subjects to be perused during the four semesters are shown in Table

Table – v. Subjects prescribed for the four semesters

Year	Sl. No	Subjects	Number of hours		Total
			Theory	Practical	
1 Semester	01	Introduction to Public Health	60	40	100
	02	Epidemiology	60	40	100
	03	Bio statistics	60	40	100
	04	Health education & Health Promotion	60	40	100
	05	Social & Behavioural science	60	40	100
	06	Practical	60	40	100
2 Semester	07	Demography	60	40	100
	08	Public Health Nutrition	60	40	100
	09	Environmental & Occupational Health	60	40	100
	10	Infectious & Chronic diseases	60	40	100
	11	Health policy, health economics & healthcare finance	60	40	100
3 Semester	12	Health Systems Management and Health Planning	60	40	100
	13	Public Health Informatics	60	40	100
	14	Women's health , Child health and Family welfare	60	40	100
	15	Public Health Leadership and Management	60	40	100
	16	Research Methodology	60	40	100
	17	Practical	60	40	100
4 Semester	17	Public health project	-	300	300
		Total	1080	1020	2100
		2 nd & 3 rd Semester Open Elective	2 sub X 100	Total	200
				Total	2300

PART-III

ANNEXURE- A

FIRST YEAR- I SEMESTER

PAPER-I INTRODUCTION TO PUBLIC HEALTH

➤ **COURSE DESCRIPTION:**

This course provides the students with broad overview of public health and its various activities.

➤ **OBJECTIVES:**

- **At the conclusion of the course, the student will be able to:**

- List and describe the vision, mission, functions and essential services of public health
- Discuss the development in the field of public health
- Understand health disparities
- Identify factors that influence health and determine ways in which health status is measured
- Identify public health's core functions and discuss how these are translated into practice

➤ **CONTENTS:**

1. Basics of public health

- What is public health
- History of public health
- Evolution of public health
- Public health as a system
- Features of public health
- Importance of public health

2. Concept of health, illness and diseases (health from ecological perspective)

- Dimensions of health and disease
- Determinants of health and disease
- Ecology of health
- Measure health- Indicators of health

3. Measuring health and disease

- Morbidity
- Mortality
- Various measures
- Comparisons of health indicators of selected developed and developing countries
- Economic dimension of health outcomes

4. Core function of public health practices

- Relationship between public health and medical care system
- Role of public health in global society
- Impact of health disparities on public health

5. Resources of public health

- Infrastructure of public health
- Human resources in public health
- Organizations-resources
- Challenges in public health

6. Indian public health system

- Public health hospital system
- Primary care system
- Integration issues
- Health programs

7. International health

- History of International health
- International health agencies- WHO, UNICEF, World Bank, UN, UNDP, ILO & other agencies

8. Disaster management

- Disaster definitions and concepts
- Disaster epidemiology
- Incident command and incident management
- Communication (tactical and risk communication)

- Vulnerable populations in disasters
- Evaluation of disaster response and its implications for planning
- Law and regulation
- Disaster risk assessment

➤ **PRACTICUM:**

- Visit to various NGOs,
- Working of disaster planning
- Public health centre visit
- Epidemiological & Statistics problems.

➤ **REFERENCE:**

- Public health: What it is and how it works, - Burnord J, Turnock, Jones and Bartlet Publishers
- Oxford Textbook of Public Health 5th edition , 2009, Author(s): Detels, Roger; Beaglehole, Robert; Lansang, Mary Ann; Gulliford, Martin Oxford University Press(OUP)
- Oxford Handbook of Public Health Practice (Oxford Handbooks Series) by David Pencheon, David Melzer, Muir Gray and Charles Guest (2006)
- Park's Textbook of Preventive and social Medicine, - K.Park, Banarsidas Bhanot(publishers)

PAPER- II- EPIDEMIOLOGY

➤ **COURSE DESCRIPTION:**

- This course is designed to introduce the students to epidemiological concepts and methods used to evaluate the distribution and determinants of health and disease in population.

➤ **OBJECTIVES:**

- **At the conclusion of the course, the student will be able to:**

- Understand the basic epidemiological methods and study designs
- Understand and discuss population based perspective to examine disease and health-related events
- Discuss the ethical issues in epidemiological research.
- Learn the basic concepts of screening and outbreak investigations.
- Able to critically review published epidemiological studies.
- Applied epidemiology

➤ **CONTENTS:**

1. Introduction to epidemiology

- Descriptive and analytical epidemiology
- History and Evolution of epidemiology
- Principles of epidemiology
- Uses of epidemiology

2. Measurements of morbidity and mortality

- Fundamental measurements of disease frequencies
- Prevalence
- Cumulative incidence
- Incidence density

3. Risk factors

- Relative risk,

- Attributable risk
- Odds ratio etc

4. Association and causation

5. Estimation of disease burden

6. Chance, Bias, confounding factors

7. Effect modification

8. Epidemiological study designs

- Ecological design
- Cross-sectional
- Case control design
- Cohort studies
- Experimental designs

9. Sources of epidemiological data:

- Surveillance
- Types of surveillance
- Screening of diseases
- Validity, reliability
- Investigation of an outbreak

10. Introduction to epidemiology of communicable and non-communicable diseases

➤ **PRACTICUM:**

- Investigation of epidemic
- Designing epidemiologic study
- Survey and field visits

➤ **REFERENCE:**

- K.Parks's Textbook of Preventive and social medicine M/S Banarasidas Bhanot publishers
- Oleckno, William, Essential Epidemiology: Principles and Applications , Waveland Press, Inc.,2002
- Leon Gordis ,Epidemiology,
- Ann Aschengrau, Essentials of Epidemiology in Public Health, Jones & Bartlett Publishers

PAPER- III -BIOSTATISTICS

➤ **COURSE DESCRIPTION:**

- This course provides students with basic statistical concepts and techniques that are used in public health. Focus here is towards applied bio statistics.

➤ **OBJECTIVES:**

- **At the conclusion of the course, the student will be able to:**

- Understand the basic concepts in bio statistics
- Apply statistical knowledge to designing research studies.
- Determine the appropriate method to be used in analyzing datasets

➤ **CONTENTS :**

1. Introduction to Bio statistics

- Meaning of Statistics
- Statistical methodology
- Branches of Statistics- Bio-Statistics, Vital Statistics, Health Statistics
- Application of Statistical Methodologies in Public Health Management

2. Introduction to Data

- Meaning and Types of data,
- Different scales of data measurement
- Different methods of data collection,
- Merits and demerits of data collection methods under different situations
- Tabulation of data
- Classification of morbidity, mortality and socio-economic data
- Graphical presentation of data

3. Measures of central tendency

- Calculation of Measures of Central tendency- ungrouped and grouped data
- Mean, Median and Mode

4. Measures of Dispersion :

- Understanding variability of data through measures of Variability
- Calculation and interpretation of Range, Percentiles, Quartiles, Standard deviation and Co-efficient of variation- both ungrouped and grouped data

5. Sample survey techniques-

- Types of surveys
- Their role in Public health management,
- Planning of surveys,

6. Sampling design & Sample Estimation

- Different Sampling designs,
- Calculation of sample size for field surveys

7. Probability

- Concept of probability,
- Probability distributions and their applications in Public health management
- Normal distribution,
- Binomial distribution,
- Poisson distribution

8. Testing of hypothesis

- Concept of Sampling variation
- Tests of significance-
- Z-test,
- t-tests,
- Chi square test and
- Important Non-parametric tests

9. Correlation & Regression

- Pearson Correlation and Regression as prediction techniques
- Introduction to Multivariate Correlation and Regression, Logistic Regression, Odds ratio and their applications in Public Health
- Life table technique and Survival analysis
- Introduction to Planning of Research studies

➤ **PRACTICUM:**

- Hands on experience on statistical software.

➤ **REFERENCE:**

- Rao NSN: Applied statistics in health sciences, JP publishers
- Mahajan B.K: Methods of biostatistics, Kothari book depot, A.D Marg, Bombay
- Potti L.R : A text book of statistics, Yamuna publications, Sreekanteshwaram, Trivandrum.
- Lancaster H.O: Introduction to medical statistics, Johnwiley & sons, New York.
- Leius A.E: Biostatistics, Reinhold publishing Co, New York.
- Cotton T : Statistics in medicine, Little Brown & Co, Boston.
- Hill A.B : Principles of medical statistics, Oxford University press, New York.

PAPER IV - HEALTH EDUCATION AND HEALTH PROMOTION

➤ **COURSE DESCRIPTION:**

- This course health education and health promotion introduces students to basics of health education and health promotion pertaining to public health practice.

➤ **OBJECTIVES:**

- **At the conclusion of the course, the student will be able to:**
- Develop managerial skills in facilitative change in ways and conditions of health and promote health of people

➤ **CONTENTS:**

1. Health education

- Definition, objectives, principles, contents
- Application, methods, approaches, Tools.
- Health education Vs propaganda,
- Adoption process – Roger's model – application.

2. Health communication

- Introduction
- Principles
- Process
- Application in health
- Models of communication
- Elements of communication
- Factors influencing communication
- Barriers of communication

3. Channels of health communication

- Traditional
- Modern
- Individual

- Group
- Mass
- Target groups

4. Communication techniques and strategies.

5. Health Promotion

- Overview of concepts of health promotion
- The Ottawa Charter –1986
- Models of health promotion (Biomedical model, behavioral model, socio-environmental model.
- Major theories in health promotion (Behavioral change theories: Health Belief Model, Stages of change theory, social learning theories. Community change theory: diffusion of innovations
- Developing health promotion strategies in community & hospitals
- Role of professional health educator in health promotion

6. Propagation of healthy lifestyle

- Emerging lifestyle diseases
- Women's health in the context of changing socio-economic pattern in India
- Current health related messages

7. Role of media in health promotion

- Mass 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 viz. email, web portals etc. in health promotion
- Role of government and private sector in health promotion

➤ **PRACTICUM:**

- Writing Health Messages
- Handling Communication Aids
- Developing Communication Campaigns – PLA, FGD, Counseling
- Health education activities in schools, and community
- Health promotion activities

➤ **REFERENCE:**

- Ramachandran & Dharmalingam: Health education – a new approach, Vikas publishing
- Park K, Park's Textbook of preventive and social medicine, M/s Banarasidas, Jabalpur
- Banerji D, Poverty, class and health promotion and protection WHO, Copenhagen
- Health education: creating strategies for school and community health By Glen Gordon Gilbert, Robin G.Sawyer
- Kari S,Lankinen et al: Health and diseases in developing countries, Mac Milan, Press, London
- David Morelyi : Practicing Health for all, Oxford university press, London
- Banerji D: Health and family planning services in India, Lok Prakash, New Delhi
- WHO: Intersectoral Linkages and health development
- World Bank: World Bank Development report, Washington
- Green A: An Introduction to health planning in developing countries, Oxford University Press
- Anita N I I: People health in people hands, the foundation for research in community health
- Ebrahim G M: Primary health care – re-orientation organizational support, Mac Millan, London.

PAPER-V - SOCIAL BEHAVIOURAL SCIENCE & COMMUNITY ORIENTED HEALTH

➤ **COURSE DESCRIPTION:**

- This course provides students with a foundation in behavioral and social science theory, research, and interventions pertaining to public health. Course will provide exposure to a broad range of theories, including the theoretical foundations of social science applications. These theories will be discussed using examples of their applications to numerous public health problems such as HIV/AIDS, violence, cancer, cardiovascular diseases etc.

➤ **COURSE OBJECTIVES:**

- **At the conclusion of the course, the student will be able to:**
 - Identify and analyze the behavioral, social, and cultural factors associated with health and illness.
 - Understand and apply theories associated with healthy and unhealthy behavior that draw broadly from the social and behavioral sciences, including psychology, sociology, anthropology.
 - Apply social science-based theories to understand and improve health behavior and health communication, public health research and development as well as promote public health preparedness.

➤ **CONTENTS:**

1. Introduction to social and behavioral health

- Importance of social and behavioral factors in public health
- Historical perspectives on population and diseases
- Social epidemiology
- Social ecological web

2. Conceptual framework and social science behavioral theories

- Health belief model
- Theory of planned behavior
- Models of behavior changes
- Trans-theoretical and adoption process model.

3. Health and illness behaviour

- Health behaviours in developing countries

4. Social and cultural context of health

- Social cognitive theory
- Social network theory
- Diffusion of innovation and social marketing • Social reaction to diseases
- Comparative health cultures • Health disparities,
- Diversity and cultural competencies
- Deviance and social control

5. Society

- Society- types of society
- Family- types,
- Social institutions- marriage, family trends, political, religious, economic.
- Social mobility
- Social change, - planned and unplanned
- Industrialization, urbanization and modernization

6. Social pathology in relation to public health

- Social problem
- Crime
- Slums
- Delinquency
- Alcoholism
- Prostitution
- Beggary
- Mental disorders

7. Introduction to applied medical anthropology

➤ **PRACTICUM:**

- Visit to NGOs working in specific areas to learn the applied aspects of social theories.
- Designing programmes based on behavioural change etc.
-

➤ **REFERENCE:**

- Social and Behavioural – Foundations of public health- by Jeannie Coreil
- Essentials of health behavior: Social and behavioural theory in public health by Mark Edberg (Jones and Bartlett publishers)
- Foster and Anderson: Medical Anthropology, Wiley, NewYork
- Related web resources.

FIRST YEAR- SECOND SEMESTER

PAPER I- DEMOGRAPHY

➤ **COURSE DESCRIPTION:**

- The course enables the students to get acquainted with the population and basic issues in human culture and economic behaviour, which are essentially the grounds on which the health issues develop and sustain. The focus of the course is on population growth and dynamics of population growth.

➤ **OBJECTIVES:**

- **At the conclusion of the course, the student will be able to:**
 - Understand the basics of demography.
 - Use demographic tools in understanding public health issues Knowledge attitude and practices.
 - Discuss global demographic regimes and impact on public health.

➤ **CONTENTS:**

1. Introduction to Demography:

- Definition,
- nature,
- Scope and importance of demography

2. Demography and population Studies

3. Source of Data-

- Indian Censuses: Historical view, salient features of Indian censuses
- Vital Statistics: Registration of births , deaths Marriages-Act1966
- National sample services organization (NSSO),
- Demographic sample surveys in India, National Family health Surveys (NFHS-I,II,III)
- U.N Demographic year book.(Annual)

4. Development of Demographic Research in India and its relevance for Public Health interventions, Demography & Social Science inter relations, Technical & substantive demography.

- Rates & Ratios, Mid Year Population, measures of fertility and Mortality and

morbidity- determinants and differentials across states and some selected countries, Life table concepts, migration and its relation to Public Health.

5. Population Theories-

- Malthusian Theory,
- Optimum population Theory,
- Demographic Transition theory

6. Critical review:

- World Population Growth- Regional distribution & impact.
- Population Growth & distribution in India & states
- Population Structure & Characteristics:
- Age, Sex distribution- India & Selected countries
- Marital Status: age at marriage & Public Health Concerns
- Sex ratio in India – Declining trends observed in states causes & consequences.
- Caste & Religious distribution of Population.
- Mortality- Expectation of life at birth Infant mortality – determinants of trends , differentials- India, States & Selected Countries,
- Age & Sex differentials in mortality – trends causes of death, Patterns- India, States, and selected countries.
- Causes of mortality decline- developed & developing countries focusing on Indian experience, AIDS- future prospects.
- Concepts of Fertility- Fecundity & fertility, Sterility- Primary, Secondary, abortion, natural fertility- biological limits and social determinants, Physiological factors, role of Social and cultural factors of fertility, still births, levels trends and differentials infertility.

7. Family Planning Programme-

- Global View,
- Critical Review of Indian F.P.P Programme, achievements, management,
- Methods of Birth Control -male ,female methods, Mechanical, Chemical, Natural and other methods,

- Medical Termination of Pregnancies Act,
- Post legalisation Scenario in India.

8. Population policy-

- India and China- One Child Policy, 2 child policy-consequences,
- Role of immigration in contemporary world.

➤ **PRACTICUM:**

- Practical exercise such as survey, Family planning, KAP studies based on primary and secondary data etc.

➤ **REFERENCE:**

- Bouge Donald: Principles of Demography, John wiley & Sons, NewYork.
- Srivastava S.C: Studies in Demography, Jai Prakashnath & Co, Subash Bazar, Meerut,India.
- Asha A Bhende & Thara Kanitkar : Principles of population studies, Himalaya Publishing Hse.
- Neelakantan N: A modern treatise in preventive medicine & Community health, Neela publishers, Venu Vilas, Poojapura,Thiruvanathapuram.
- Park K: Text book of preventive and social medicine, M/s Banarasidas, Jabalpur.
- Barclay G.W.: Techniques of population analysis, Wiley, NewYork
- Cox P.R: Demography, England.

PAPER- II - PUBLIC HEALTH NUTRITION

➤ **COURSE DESCRIPTION:**

- The public health nutrition course introduces students to the scientific knowledge about food and public health nutrition. The course provides basic understanding of the factors and dynamics involved in public health nutrition and its role in health of community. The focus is on applied nutrition

➤ **OBJECTIVES:**

- **At the conclusion of the course, the student will be able to:**
 - Understand the concepts of public health nutrition.
 - Explain the importance of food and nutrition in public health.
 - Assess nutritional status of community and develop necessary intervention.

➤ **CONTENTS:**

1. Introduction to public health nutrition

- Basics of nutrition
- Importance of food and nutrition
- Food habits / meal pattern
- Food groups
- Nutritive value of common food items (Cereals, pulses, vegetables, milk, egg, meat, nuts, oils, fruits)

➤ **Balanced diet-**

- Principles of formulating balanced diet
- Recommended values of nutrients for children, adolescents, men, women, pregnant and lactating mothers, old age, sports persons etc.
- Diet modification
- Cooking- principles of cooking, methods of cooking, effects of cooking on nutrients on common foods.

➤ **Major nutritional problems of public health importance.**

- PEM, Anaemia, IDD, and their prevention.
- Vitamin deficiency disorder.
- Role of nutrition on health and life style diseases.

➤ **Nutrition education** – principles and methods of imparting nutrition knowledge.

- **Assessment of nutritional status** (direct and indirect methods)
 - Anthropometric measurement,
 - biochemical, biophysical,
 - Clinical measurements.
- **Policy and programmes for nutrition.**
 - Food safety- food borne illness,
 - Food additives,
 - Fortification,
 - Food adulterants
 - Prevention of contaminations, food toxicants
- **Role of Government: policies and programmes; agriculture development, public distribution system.**
- **International cooperation for food.**
- **Practicum:**
 - Assess nutritional status of schoolchildren,
 - Mid day meal etc
 - Visit to Anganwadi,
 - ICDS etc
 - Visit to food processing unit
 - Diet survey and other studies
- **Reference:**
 - Park K: Park's textbook of preventive and social medicine, M/s Banarasidas Bhanot, Jabalpur
 - Shah P.M.: Early detection and prevention of protein caloric malnutrition, PopularPrakash, Bombay.
 - Thankom Jacob: Food adulteration, Mac Millan, NewDelhi
 - Waterlow J.C.: protein energy malnutrition London TALK1992.
 - Jellifee DB: The assessment of nutrition status of the community WHO monograph series53
 - ICMR (1981): Recommended dietary intake for Indians, NewDelhi
 - ICMR (1908) Nutritive value of Indian foods NIN, Hyderabad
 - Savage king F: Burgess A: Nutrition for developing countries, Oxford University press1992
 - NNMB (1981): Dietary and nutrition status of population in different states NIN, ICMR.
 - Public Health Nutrition (From Principles To Practice) by Mark Lawrence, Tony Worsley Publisher: Allen And Unwin Special Priced Titles(2008)

PAPER- III - ENVIRONMENTAL & OCCUPATIONAL HEALTH

➤ **COURSE DESCRIPTION:**

- This course will provide students a broad introduction to the scientific basis of environmental and occupational health from a public health perspective. The course intends to address the issues in environmental & occupational health, using tools, concepts & methods used in environmental health. Students on completion will be able develop skills on critical analysis of current environmental and occupational health problems.

➤ **OBJECTIVES:**

- **At the conclusion of the course, the student will be able to:**
 - Learn the basic concepts of environmental health sciences and key environmental health issues.
 - Understand the risk assessment concepts, uses, to describe, asses, control and make decision about the environmental health issues.
 - Develop skills in analyzing, managing and community about environmental health issues.
 - Identify some of the major environmental health hazard.

➤ **CONTENTS:**

1. Fundamentals of environmental health-

- Ecosystem,
- Climate,
- biomass
- Links between environment and human health.

2. Water:

- Introduction
- Properties of water
- Hydrological cycles
- Uses of water
- Water resources- Sources of water supply
- Water and health

- Water shortage and scarcity
- Water consumption and management
- Sources of drinking water
- Water pollution
- Types of pollution, sources of pollution
- Water treatment, Purification of water
- Water quality – critical and standards
- Surveillance of drinking water quality.

3. Waste water disposal and treatment

- Sewage system
- Sewage disposal
- Biological oxygen Demand
- Public health aspects of sewage o Types of disposal
- Pits privies, septic systems etc
- Municipal sewage treatment- modern sewage treatment, Sulabh souchalay etc

4. Solid and hazardous waste

- Definition and characterization of municipal solid waste
- Sources of waste/refuse
- Collection and disposal of solid waster
- Types of latrines
- Management of solid waste
- Dumping, landfills, incinerator, composting manure pits, burial etc
- Hazardous waste, - sources of hazardous waste
- Management and disposal of hazardous waste
- Sanitation and excreta disposal : fairs, festivals and public gathering
- Excreta disposal- public health importance

5. Air, Noise and Radiation

- Air-Composition
- Atmosphere and methods of dispersion

- Chemical and physical characteristics Health implications of air pollution
- Air pollution- air pollutants
- Outdoor and indoor air pollution
- Prevention of air pollution
- Ventilation
- Noise- properties, health effects of noise, control, and regulations
- Light
- Radiation- sources, types, and health effects of radiations.
- Public health importance of air, noise, light, ventilation and radiation

6. Risk assessment

- Environmental risk-characteristics
- Development of risk analysis
- Tools of risk analysis
- Process of risk analysis
- Hazard identification
- Risk management and communication
- Risk perception.
- Environmental laws and compliance

7. Occupational health

- Occupational environment/setting
- Occupational hazards and diseases
- Workplace injuries
- Occupational standard
- Prevention of occupation diseases

8. Rodents, arthropod vector and zoonosis

9. Environmental degradation and food security

10. Green revolution

- Impacts of environmental degradation on health
- Deforestation, soil degradation
- Loss of bio-diversity
- Food security-

- Role of chemicals and fertilizers on health
- Food products
- Food borne illness
- Global climate change

➤ **PRACTICUM:**

- Visit to sewage treatment Plant, water purification Plant
- Visit to Biomedical waste treatment Plant
- Visit to Fair /Mela/festivals , Industry

➤ **REFERENCE:**

- Essential Environmental Health by Fries, Jones & Bartlett Publishers –2007
- Living with the Earth- Concepts of Environmental Health Science-Gary S Morare-Lavis Publications
- Environmental Science- Toward a Sustainable future - Richard T Wright, Dorothy F Boors PHI learning Private ltd- New Delhi, Pearson Education
- Environmental Health by Moeller D.W, Harvard University press.
- Park's Textbook of Preventive and Social Medicine, K. Park. Banarsidas Bhanot publishers.

PAPER- IV - INFECTIOUS AND CHRONIC DISEASES

➤ **COURSE DESCRIPTION:**

- The course is designed to provide students with competencies in addressing critical problems in control and prevention of infectious and chronic diseases.

➤ **OBJECTIVES:**

- **At the conclusion of the course, the student will be able to:**
 - Understand the disease burden and impact of infectious and chronic disease in the society.
 - Understand the modes of transmission and pathogenesis of infectious disease and the host, environment relationship.
 - Understand and discuss the strategies for diagnosis, prevention and control of diseases.
 - Application of epidemiological methods to study diseases.
 - Familiarize with certain infectious and chronic diseases.

➤ **CONTENTS:**

1. Introduction to health and disease

- Classification of diseases
- Disease burden
- Diseases transmission
- Disease cycle

2. Introduction to Microbiology

- Introduction to bacteriology
- Introduction to virology
- Introduction to Mycology
- Introduction to parasitology
- Genetic diseases/genetics
- Pediatric diseases/problems

3. Immunology

- Immune system
- Types of immunity

4. Epidemiology of infectious diseases

- Respiratory infections (Small pox, chicken pox, measles, rubella, mumps, influenza, diphtheria, whooping cough, meningococcal meningitis, acute respiratory infections, SARS, Tuberculosis)
- Intestinal infections (Poliomyelitis, viral hepatitis, acute diarrheal diseases, Cholera, typhoid fever, food poisoning, amoebiasis, ascariasis, hookworm infection)
- Arthropod-borne infections (Dengue, malaria, filariasis,)
- Zoonoses (Rabies, yellow fever, Japanese encephalitis, chickungunya fever, leptospirosis, plague, salmonellosis)
- Rickettsial diseases
- Parasitic zoonosis- (hydatid diseases, leishmaniasis)
- Other infection (Tetanus, leprosy, STD, AIDS)

5. Epidemiology of Chronic and non communicable diseases

- Cardiovascular diseases
- Coronary heart diseases
- Hypertension
- Stroke
- Rheumatic heart diseases
- Cancer
- Diabetes
- Obesity
- Blindness
- Accidents and Injuries
- Mental health

6. National health programmes

➤ **PRACTICUM:**

- Visit to infectious disease hospitals
- Outbreak investigation
- Survey of Non Communicable Diseases

➤ **REFERENCE:**

- K. Parks's Textbook of Preventive and social medicine M/S Banarasidas Bhanot publishers
- Preventive and community medicine by Mathur
- Davidson's Medicine textbook.
- J Kishore-National Health Programs of India

PAPER- V- HEALTH POLICY, HEALTH ECONOMICS AND HEALTH CARE FINANCING

➤ **COURSE DESCRIPTION:**

- This course introduces students to the basic health policy planning, processes, and health financing

➤ **OBJECTIVES:**

- **At the conclusion of the course, the student will be able to:**
 - Understand health policy issues pertaining to public health
 - Formulating health policy
 - Basic introduction to health economics, Budget and finance in health care

➤ **CONTENTS:**

1. Introduction to Health policy:

- Evolution of public health and medical care
- Concept of health policy
- Normative and value base of health policy
- Population policy, drug policy, medical education policy, policy for children , women and weaker section
- National health policy
- State health policy
- Comparison of various international health policy, (USA, UK, Canada, China, France, Thailand)
- Health policy in the context of market economy
- Implementation of health policy – centre and state governments
- Formulation of health policy
- Health policy planning process, need assessment, prioritization, people's participation, decentralization
- Health policy analysis
- Evidence based policy
- Policy communication (Writing).

2. **Health Economics:**

- Introduction- micro and macro approach health economics
- Issues in public health in relation to economics, budgetary issues in public health.
- Fundamentals- demand, supply, consumption, saving, investment
- National income- GNP, NNP, GDP
- Measures economic development

3. **Health care finance:**

- Introduction-equity
- Health sector reforms, decentralization
- Role of NGO sector (national and global) in health finance
- Budget and financial management- Cost effective analysis, cost benefit analysis and cost utility analysis.
- Economic analysis
- Health insurance: community based health insurance, individual health insurance, and all types of health insurance.

➤ **Practicum:**

- Budget planning for various activities

➤ **Reference:**

- Health Economics in India, Himanshu Sekhar Rout, Prasant Panda,2007
- Health Economics in Development: by World Bank
- Understanding Health Economics by John Rapoport
- Health Economics and Financing by Thomas EGetzen
- Health Economics for Developing Countries: A Practical Guide: by S.Witter, T.Ensor, M.Jowett and R.Thompson
- Health Policy Research in South Asia: Building Capacity for Reform (Health, Nutrition, and Population Series) Abdo S.Yazbeck , David H. Peters.

SECOND YEAR - SEMESTER 3

Paper- I- Public Health Informatics

➤ **COURSE DESCRIPTION:**

- The public health informatics course provides students with a basic understanding of Informatics and its application in a Public Health setting. The course provides basic understand the basic technological tools and building blocks needed to develop and manage Public Health data collection systems to meet analytical needs.

➤ **OBJECTIVES:**

- **At the conclusion of the course, the student will be able to:**
 - Understand the fundamentals of computers organization
 - To gain knowledge of various components of database applications and management
 - Develop and adopt public health information system as needed to support public health policies, programmes and inventions
 - Assist in the development and adoption of appropriate information technology in public health.

➤ **CONTENTS:**

1. Introduction to Health Informatics:

- Introduction and the context for public health informatics
- What is public health informatics
- Principles of Public health informatics
- Components

2. Fundamentals of computers:

- Basic elements of computer system- CPU, Input devices, Output devices, hardware, software etc
- Storage devices
- Introduction to computer networks
- Internet and world wide web

3. History and significance of information systems and public health

- Information Architecture

- Core competencies in public health informatics
- Assessing the value of information systems
- Managing IT personnel and projects
- Public health informatics and organizational change
- Privacy, confidentiality and security of public health information
- Data standards in public health informatics
- Risk factors in information systems
- Knowledge based information and systems
- Means of data collection- Surveillances
- Fundamentals of database systems
 - MS Access, database design, database table design o Variable data types
 - Relational designs
 - Retrieving data from table
 - SQL

4. Decision support and expert systems in public health.

5. Health information system

- Principles
- Structure of HIS, HMIS
- Data tools and techniques of measurements o Computer based patient record
- Electron health record
- Electronic population register
- Evaluation , pit fall and system audit

6. Informatics project planning and programmes

7. Emerging public health informatics systems

- Geographic information systems(GIS)
- Telemedicine: Role in delivering healthcare.
- Biometrics

➤ **PRACTICALS:**

- Window and GUI.
- Ms Word- full working &practice

- MS Excel- how to operate, developing a work sheet, simple calculations
- MS power Point- how to make presentation
- Use of internet- access, e-mail, search engine and health related websites, how to search for literature.

➤ **Reference:**

- Public health informatics and Information systems, Patric. W.O'Carroll et al, Springer's publishers
- Health care information system- A practical approach for healthcare management-, Fances Wickham Lee, Karen AWager
- E-health care information systems
- Introduction to computers, Peter Norton, Tata McGraw Hill

PAPER- II- Women's Health, child Health and Family Welfare

➤ **COURSE DESCRIPTION:**

- This course introduces students to the basic concepts of women health, child health and family welfare.

➤ **OBJECTIVES:**

- **At the conclusion of the course, the student will be able to:**
 - Learn about factors affecting the health of mother and child, the existing services for mother and child
 - Identify the family welfare concepts, principles and the role of health administration in the implementation of the programs.

➤ **CONTENTS:**

1. Introduction for Reproductive Health,

- Evolution of MCH services in India,
- Development of MCH activities in India.

2. The effect of Reproductive pattern on Maternal & Child Health.

- Measures of Reproductive Pattern.
 - Age at Marriage & Maternal Age
 - No of children born (Parity, Gravidity, birth order) complete family size.
 - Birth Intervals: Pregnancy Spacing preceding and succeeding intervals.
- Measures of Health-Mortality
 - Maternal Morality Rate/Ratios
 - Infant & Child Morality
 - Foetal Loss
- Measures of Morbidity
 - Maternal complication or illness of pregnancy/delivery
 - Maternal Nutrition and health
 - Infant birth weight/Prematurity
 - Birth defects
 - Infants/Child Nutrition/Infections

- Growth & Development
 - Height/Weight, Body mass index
 - Intelligent Quotient(IQ)
- 3. Women's Health:**
 - Menarche, menopause and associated problems and management
 - 4. Programme interventions to improve Maternal and Child Health like:**
 - MCH,
 - Safe Motherhood & Child Survival programme,
 - Reproductive & Child Health (RCH) programme–
 - Components, implementation & Outcomes- Critical Assessment
 - National rural Health Mission- Salient feature, critical review - implementation
 - 5. Maternal Mortality**
 - Major Causes for high MMR—India trends, states and selected countries
 - Role of gender and domestic violence in women's health
 - 6. Infant Mortality-**
 - Major causes trends and, differentials by states, especially on Kerala & Tamil Nadu state
 - 7. Integrated child development Services (ICDS)-**
 - Organizational structures,
 - Outreach,
 - Critical assessment,
 - Impact
 - 8. School Health Programme- Critical Review, objectives & Components.**
 - Child labour,
 - Child schooling and impact on health
 - Childhood Disabilities- Problems, types, Causes, Preventive measures, Sources of data, community Rehabilitation.
 - 9. Family Welfare Programme:**
 - Historical View from birth control to family welfare, clinical Approach, Cafeteria Approach, Target based Approach, Target free approach, Organizational Structure, Eligible couple Survey. Key Personnel Involved ANM, National , state level Evaluations, Source of Data for the Programme, demographic goals, All India Hospital Post Partum Programme, Administration of Programme.

10. National health policy-

- Salient features,
- Critical review Millennium Development goals-achievements.

➤ **PRACTICUM:**

- Visit to maternity homes, PHCs
- Visit to NGOs working on women's issues.

➤ **REFERENCE:**

- Park K: Park's textbook of preventive and social medicine, M/s Banarasidas Bhanot, Jabalpur.
- Morlev David: Pediatric priorities in the developing world London.
- Venkatachalam P.S. Nutrition for mother and child, ICMR, NewDelhi.
- Gaopalan C and Chatterjee : Use of growth chart for promoting child nutrition.
- Nutrition Foundation of India.
- Clive Wood: contraception explained Geneva WHO
- Peel John and Potts Malcolm: Text book of contraception practices, Cambridge Uty. Press.
- Asha A. Bhendre & Thara Kanitkar : Principles of population studies, Himalaya publishing house, Bombay.
- Population reports: John Hopkins University, Baltimore, USA

Paper- III- Public Health Leadership and Management

➤ **COURSE DESCRIPTION:**

- The Public health leadership course provides students with knowledge and skill to manage and lead Public Health Programmes and Organizations.

➤ **OBJECTIVES:**

- **At the conclusion of the course, the student will be able to:**
 - Introduce basic concepts of leadership
 - Learn the application of leadership skills in public health management

➤ **CONTENTS:**

1. Basics of Leadership:

- Definition of Leadership
- Public Health Leadership Principles
- Leadership Style & Practices:
 - Leadership Styles
 - Leadership traits
 - Leadership Practices
 - Talents
- Interface between Management & Leadership
 - Managers & Management
 - Case Studies
 - Transactional & transformational Leadership
 - Meta Leadership
 - Public Health Management.
- System & System Thinking

2. Leadership application in Public Health:

- Leadership Wheel & organizational Change
- Levels of Leadership
- Leadership and Assessment
- Leadership and assurance

3. Leadership skills

4. Leadership and communication

- Communication process
- Interpersonal communication
- Active listening
- Public speaking
- Communication and cultural sensitivity
- Feedback
- Delegation of authority
- Framing
- Meeting skills
- Health communication

5. Leadership and people development

- Organizational staff relationship
- Community relationship

6. Leadership and planning

- Community health planning
- Strategic planning
- Reinventing government
- Public private partnership

7. Decision-making

- Conflict resolution
- Negotiation

8. Measuring of Leaders:

- Leadership competencies frame work
- Credentialing & accreditation
- Quantitative Leadership Assessment Technique.

9. Evaluation

- Evaluation of transforms

10. Reference

- Public Health Leadership: Putting Principles Into Practice (Aspen Series In Public Health) by Ph. D. Rowitz Louis
- Public Health Leadership And Management: Cases And Context by Stuart A. Capper, Peter M. Ginter, Linda E.Swayne
- Essentials Of Management And Leadership In Public Health by Robert E.Burke, Leonard H.Friedman
- Transforming Public Health Practice: Leadership And Management Essentials by Bernard J. Healey, Cheryll D.Lesneski

PAPER-IV- RESEARCH METHODOLOGY

➤ **COURSE DESCRIPTION:**

- The course enables the student to understand the various health issues and problem from the angle of an intuitive approach and develop an originality in their thinking and a deep insight into the issues with a critical mind in areas like planning, policy analysis and program evaluation.

➤ **OBJECTIVES:**

- **At the conclusion of the course, the student will be able to:**
 - Equip students with quantitative and qualitative research techniques.
 - Will be able to design a methodology for the problem chosen.
 - Helps in preparing their dissertation topic.

➤ **CONTENTS:**

1. Concept of health System

- Meaning
- Characteristics and
- Guidelines for conducting Health systems research

2. Types of Research in Public health management-

- Descriptive,
- Ecological,
- Epidemiological, action and
- Experimental research

3. Role and methods of Review of literature as a tool for planning research.

4. Role of theory, Cause and effect phenomenon in research and formulation of hypothesis in research.

5. Quantitative and Qualitative research methods and their application in Public health.

6. Steps in Planning of Research studies in general

7. Different types of surveys and their planning.
8. Planning and conducting participatory action research in public health management.
9. Research designs in clinical research and intervention studies
10. Assessment of Performance indicators in Public health management
11. Scope of Operation Research in Public health management
12. Introduction to Important Operation Research methods-

- Systems analysis
- Linear programming technique
- Network analysis
- Queuing theory

13. **Ethics:**

- Ethics in research
- Conflict of interest and integrity in research
- Ethical review process- committees , roles and responsibilities
- Evaluation of risk and benefits of research
- Ethical reasoning
- Ethical issues in public health programmes.

14. **Practicum:**

- Planning and developing research projects
- Data collection
- Analysis of data
- Designing research programmes

➤ **Reference:**

- Sarantakos : Social research, Mac Millan press, Harupshire, Australia
- Festinger & Katz : Social research, Longman, London
- Jahoda Maric et al: Research methods in social relations, free press, NewYork
- Kothari, C.R : Research methodology, Viswaprakasan, Bombay
- Park K: Park's text book of preventive and social medicine, M/s Banarasidas Bhanot, Jabalpur

Paper- IV- Health Systems Management and Programme Planning

➤ **Course Description:**

- This course introduces students to different health systems and its management.

➤ **Objectives:**

- **At the conclusion of the course, the student will be able to:**
 - Understand various health systems
 - To discuss and learn public health care system in India
 - To develop, implement and monitor various public health programmes.

➤ **Contents:**

1. Introduction to health systems

- Challenges in public health system
- Evolution of public health system

2. Public health care system –India

- Primary health institutions (Primary health centre, sub centres, district hospitals)
- Secondary health institutions
- Tertiary health institutions
- State and central government hospitals
- Employee State Insurance
- AYUSH

3. Private health care system

- Private hospitals, polyclinics
- Nursing homes, dispensaries
- Private practitioners
- Multispecialty hospital and medical college hospitals

4. Voluntary Health agencies

- Central and state health agencies and organizational structures
- Planning at Central, State, District, Block and Village

- Union Ministry of Health and Family Welfare,
- Directorate General of Health Services,
- Central Council of Health,
- State Ministry of Health, State Health Directorate,
- District Health Organization etc

5. Comparison of health systems of various other countries

6. Introduction to health care and programme planning

- Principles of Management
- Concept of Planning,
- Planning process, structure, and functions of planning
- Planning cycle, project management cycle
- Management analysis
- Political aspect, economic aspects,
- Epidemiological base for health planning
- Planning tools- log frame, PERT,CPM
- Health Planning Models
- Health promotional planning
- Planning health facilities
- Community involvement
- Organization structure and process
- Monitoring and evaluation
- Quality assurance in project management
- Health planning in India, five years plans

7. Healthcare Legislation in India:

- Legal aspects of healthcare,
- Medical Termination of Pregnancy Act,
- The maternity benefit act,
- The immoral traffic(prevention)act,
- The transplantation of human organs act,
- PNDDT Act,

- The registration of birth and Death act,
- The child labour (prohibition and regulation)act,
- Biomedical waste Rules,
- COTPA Act,
- Indian factories act,
- ESI act

➤ **PRACTICUM:**

- Visit to village for family health study
- Visit to understand Health system functioning
- Rural – i) Government ii) Private iii)Others
- Urban- i) Government ii) Private iii)Others
- Visit to understand other systems of Health eg. Railway, Military

8. REFERENCE:

- Public Health Policy And Administration by Brij Mohan Mathur
Publisher: Commonwealth Publishers (1998).

Second Year – Fourth semester

Paper- I- Project Work/Field Experience or Internship

➤ **DESCRIPTION:**

- The field experience provides the students with a practical experience in a public health setting, where students can apply and integrate the skills and knowledge gained in theory.

➤ **OBJECTIVES:**

- **At the conclusion of the course, the student will be able to:**
 - Apply and integrate the skills and knowledge gained in theory.
 - Gain hand on experience on public health practice: such as planning, Organizational structure, community interaction, etc.
 - Demonstrate the competency in public health practice.
 - Demonstrate leadership, teamwork, creativity, communication skills in public health domain.

➤ **CONTENTS:**

Each candidate pursuing MPH Course is required to carry out Project Work/field experience or internship on a selected topic under the guidance of a recognized post graduate teacher after the submission of project proposal.

The topic for the Project Work should be chosen based on an area of interest and should be done in a reputed organization as described in the University guidelines. The student should choose the organization for the project work in any place where they could work under the constant guidance of the academic advisor and project supervisor/field supervisor allotted. The aim of the project work is to enable the student to gain an in-depth insight into a particular department or topic chosen for study.

➤ **Project work guidelines:**

Every candidate who is interested in project work shall submit to the Registrar (Academic) of the University in the prescribed proforma, two hard copies of project proposal containing particulars of proposed project work within 6 months from the date of commencement of the course or on or before the date notified by the University. The project proposal shall be sent through proper channel.

The University shall arrange for review of project proposal and if found suitable shall register the Project topic. No change in the Project topic shall or guide shall be made without prior approval of the University.

The Project shall be written under the following headings:

- Introduction
- Aims or objectives of study
- Review of literature
- Materials and methods
- Results
- Discussion
- Conclusion
- Summary
- References
- Tables
- Annexure

The written text of Project shall not be less than 50 pages. It should be neatly typed in double line spacing on one side of paper (A4 size, 8.27" x 11.69") and bound properly. Spiral binding should not be done. A declaration by the candidate that the work was done by him/her shall be included. The project supervisor, Head of the department and head of the institution shall certify the bonafide of the Project.

Four copies of Project shall be submitted to the university through proper channel along with a

soft copy (CD), three months before the final examinations. It shall be assessed by two examiners appointed by the university, one internal and one external. Total 300 marks shall be awarded for the Project and the marks distribution as follows:

- 100marks-MPH thesis evaluation by external examiner
- 100marks-grand viva by (Internal and external examiners)
- 100marks-internal Assessment. Marks distribution as follows:
 - ✓ 40marks-progress presentation
 - ✓ 20marks-02week internship (elective)
 - ✓ 20marks-other tasks/Journal club/Seminar
 - ✓ 10marks-conference presentation
 - ✓ 10marks-publication in indexed journal(accepted/submitted)/ A copy of manuscript submitted

Acceptance of the Project is a pre-requisite for a candidate to be eligible to appear in the final examination.

➤ **Field Experience/Internship:**

Alternatively student can do a field experience/ practicum/ capstone project in any organization under the guidance of academic advisor and field supervisor.

Field experience/ internship is considered an important part of the academic curriculum, serving as a structured and significant educational experience that takes place in an agency, institution, or community in any developing or developed country, and under the supervision of Field Supervisors and the guidance of the student's Academic Advisor. The overall purpose of the field experience is to provide an opportunity for students to integrate theory and practice in a public health work environment. The student contributes to a community's resources and to the solution of public health problems while developing personal confidence and leadership skills as a public health professional. While in work students could synthesize, hone skills and competencies in program design, implementation, management, and evaluation; research data collection, analysis, and reporting; and policy analyses and advocacy.

The field experience may include work in administrative, research, or clinical settings, or participation in ongoing health education, research, or program activities. The topics are individually selected and tailored to meet student needs. Decisions on the nature, location, objectives, and activities of the field experience are made through discussion and agreement among the student, academic advisor, and site/field supervisor.

➤ **The Site/Field Supervisor**

The site/ field supervisor oversees the field experience at the chosen site. The site supervisor should have expertise in assigned project areas, experience and status within the organization, and an interest and competence in supervising and mentoring. The site supervisor also helps the student develop the MPH field experience activities (along with the Academic Advisor), and reviews and signs the Learning Contract prior to the field placement. Finally, the site supervisor writes a final evaluation of the field experience.

➤ **Academic Advisor (AA)**

The Academic Advisor would be one of the internal faculties from the institute who is eligible to be the project guide. The Academic Adviser advises and assists the student with the field experience site selection. Identifies and focuses coursework to prepare for the field experience, Academic advisor would review and approve the student's Field Experience Plan, Communicates with Field Experience Supervisor, Reviews the required student reports, student log and evaluations.

➤ **Student Field Experience Plan**

Students pursuing a Field Experience (FE) are required to complete an FE Plan in collaboration with their Academic Advisor and Field Supervisor. Planning for the FE should begin at least 4 months before its projected starting date. The plan begins with the students developing their objectives. The plan includes a goal, learning objectives, specific strategies and activities for accomplishing those goals, timeline for completing goals, and any other considerations that may impact their field experience, and methods of evaluating goal accomplishment (the deliverables). It is important that the student's objectives, strategies, and evaluation methods are realistic,

appropriate, meaningful, and measurable. Details of the student's plan are developed and agreed to jointly by the student, field supervisor, and Academic Advisor. It represents the three-way agreement that is integral to the field experience.

➤ **Revisions of Plan While in the Field**

Revisions to the initial FE Plan should be agreed to and submitted to the Academic Advisor and FE supervisor no later than the end of the second week of the placement. The students who fail to register their FE plan will have to work on the initial plan that was agreed. The FE Plan can be revisited and revised. If the FE moves in a different direction, the FE Plan can still be valid but the student must document any revisions, the reasons for the revisions and the results. If the student is unsure about progress, he/she needs to talk with the Field Supervisor, Academic Advisor. Everyone on the team shares a common goal—to help the student have a successful learning experience.

➤ **Field Experience Site**

The field experience site/organization or any place where the students intends to do their activity must be an approved site, and the field supervisor must be pee-approved and have at least a master degree and one to two years of public health or relevant experience.

➤ **Report**

During the placement/field experience/ project work Students are expected to keep a journal/ log book recording of their activities submit a report based on their experience (format mentioned in project report above). The report should include:

- Description of activities performed during their field experience, along with any change or deviations from the FE Plans.
- What the students gained from the experience, identifying problems if they occurred.
- How much of their objectives were achieved.

➤ **Evaluation**

The field supervisor evaluates the student's on-site performance. During the FE it is expected

that there will be formal interaction between the academic advisor, field supervisor and student, more so between the academic advisor and field supervisor to discuss the student's progress.

The academic advisor along with the external evaluator will determine the final marks for the field experience /project work. This is based on the field supervisor's evaluation, the written journal/report and presentation defending the activity as well as any other relevant information.