Master of Public Health

M.P.H.

Under Regulations- (R-2025)

(w.e.f. 2025-26 admitted batch)

Course Structure and Syllabi

THE APOLLO UNIVERSITY

MURUKAMBATTU - CHITTOOR (Dt) 517127

ANDHRA PRADESH

PROGRAM OUTCOMES (PO):

- **PO1: Epidemiological Proficiency**- Graduates will demonstrate proficiency in analyzing Epidemiological data to identify health trends and patterns.

- **PO2: Health Policy and Management-** Graduates will be capable of developing, Implementing and evaluating health policies and management strategies.

- **PO3: Disease Prevention and Control-** Graduates will exhibit skills in designing and Implementing disease prevention and control programs.

- **PO4: Research Skills -** Graduates will possess research skills to conduct studies on public health issues and contribute to evidence-based practice.

- **PO5: Health Promotion-** Graduates will promote health through education and community engagement initiatives.

- **PO6: Interdisciplinary Collaboration**-Graduates will collaborate effectively with professionals from diverse disciplines to address public health challenges.

- **PO7: Public Health Ethics**-Graduates will adhere to ethical principles and values in the practice of public health.

- **PO8: Leadership in Public Health**-Graduates will demonstrate leadership qualities to influence public health policies and practices.

- **PO9: Environmental Health**-Graduates will assess and manage environmental factors affecting public health.

- **PO10: Global Health Perspective**-Graduates will understand global health issues and contribute to international public health efforts.

- **PO11: Health Equity-**Graduates will advocate for equitable access to healthcare services and resources.

- **PO12: Lifelong Learning**-Graduates will engage in continuous learning and professional development in the field of public health.

PROGRAM EDUCATIONAL OBJECTIVES (PEO):

- **PEO1:** To contribute effectively to public health initiatives at local, national and global levels.

- **PEO2:** To demonstrate leadership in public health management and policy development.

- **PEO3:** To engage in continuous learning and professional development to address evolving public health challenges.

PROGRAM SPECIFIC OUTCOMES (PSO):

- **PSO1:** Community Health Assessment-Students will be able to conduct community health assessments to identify health needs and priorities.

- **PSO2:** Program Evaluation-Students will demonstrate proficiency in evaluating public health programs for effectiveness and efficiency.

- **PSO3:** Policy Analysis and Development-Students will analyze public health policies and contribute to the development of evidence-based policies.

SCOPE:

This Academic regulation provide a framework for the regulatory guidelines of all programs offered by The Apollo University. It includes procedures and practices that are to be followed to ensure academic standards in the University. The regulations are approved by the Academic Council. These regulations may be amended from time to time with the approval of the Academic council for the benefit of students or some times to reflect the changes suggested by the statutory bodies.

Information regarding amendments (if any) to the regulations will be communicated to the students by publishing in the University website. Students must follow the amended regulations as they might impact the process for the award of degree. The decision of the Vice Chancellor shall be the final in case of any discrepancy. These regulations apply to all students, despite the program of study.

1. ADMISSION INTO THE PROGRAM

The University admits the students in two modes. One through the convener quota as per the Andhra Pradesh Private Universities Act, for which the admissions will be carried out through the convener quota by the Govt of Andhra Pradesh. The other is through University quota for which the following procedure will be followed:

A. The applicant shall satisfy the entrance requirements specified by The Apollo University and in accordance with guidelines of statutory councils for various Under-graduation /Post-graduation /Doctor of Philosophy programs.
B. The Applicant shall be qualified in the qualifying examination for a particular program.
C. The Applicant secures a rank in national level entrance exam or suitable such test conducted by The Apollo University / professional body.

D. The Applicant qualifies in the specified state or national level examinations prescribed by The Apollo University.

The Apollo University will widely notify the counselling schedule for admissions into the academic programs in the media. The provisional admission will be given to the eligible students during the counseling scheduled by The Apollo University. The selected candidates will be provisionally admitted into the program of his/her choice if the candidate meets the program specific requirements in addition to academic performance qualifying exam. Admission is purely based on merit and so merely meeting the requirements will not ensure admission. The University does not discriminate based on gender, race, region, religion, disability or nationality. The University reserves the right to make admissions based on various criteria which is specified in the admission brochure.

2. ELIGIBILITY CRITERIA

Postgraduate programs

The qualifying exam eligibility for each program is given Annexure 1. The student should have passed the qualifying exam either in the year the student is seeking admission or the previous year.

University Quota: For getting admission under University quota, percentage of marks obtained in the qualifying exam, the rank obtained in TAU entrance exam or any recognized national level examination in the year of admission will be considered.

Counselling

All the eligible students need to apply for admission and have to attend counselling conducted by TAU as per the schedule for the university quota.

3. PROGRAMS

The Apollo University offers a Postgraduate program in Public Health. The list of programs on offer for the academic year 2025-26 are annexed in Annexure 2.

Minimum duration of the program

Post Graduate programs, the minimum duration is outlined in Annexure 2. If a student is unable to earn the required credits within the stipulated time, the Vice-Chancellor may consider granting an extension under extenuating circumstances, subject to a formal request submitted by the student with valid justification for the delay.

4. CHOICE BASED CREDIT SYSTEM

The choice-based credit system (CBCS) facilitates the education student-centric. It provides the opportunity for the learner to choose the courses from a basket of core, elective and skill enhanced courses. All programs of study are designed to meet the specified number of credit requirements. The courses taken by the student in each semester as part of program are allotted some credit points based on the number of hours assigned. Upon successful completion of the course, the student secures the number of credits allotted for that course. Once the minimum number of credits of the program is achieved, the degree can be awarded, subject to fulfillment of all other relevant conditions.

5. STRUCTURE OF THE PROGRAM

The Program structure Consists of

i) Program Courses - Specialization

A. Program Core

B. Program electives

Each course* is assigned a certain number of credits depending upon the number of contact hours (lectures/tutorials/practical) per week. (*one course means one subject)

Core Courses = 4 Credits Elective =3 Credits

In general, credits are assigned to the courses as detailed below:

- A classroom lecture/ tutorial of 60 min (1 hr) duration per week, spread over the entire semester, shall be considered as one credit.
- A laboratory session of minimum of 120 min (2 hr) per week shall be considered as one credit.
- A project work/ Internship session of 60 minutes (1 hr) carried out per week shall be considered as one credit.

6. MEDIUM OF INSTRUCTION

The medium of instruction (including examinations and project reports) shall be English.

7. REGISTRATION

Any of the following student must register for the courses opted in a particular semester during the scheduled registration period.

i. a new student who enrolls into any program
ii. an existing student who is continuing on rolls from the preceding regular semester
iii. a former student, i.e., who has not enrolled in the preceding regular semester or who has availed academic break or detained and got readmission

Each newly admitted student shall attend an induction/ orientation program prior to commencement of the first semester. During this program academic advisors assist the students in choosing the courses. Existing student may register online by using their registration number and mail ID through the Apollo ERP portal. Class schedules are available approximately two weeks before the beginning of every semester for each program. The concerned head of the department must approve class schedule.

8. ATTENDANCE REQUIREMENTS

- Students should earn a minimum of 80% attendance in the current semester to become eligible to write the Semester End examinations.
- The monthly statement of attendance will be displayed on the Department Notice Board/ Apollo ERP by the respective departments within the first five working days of the following month.
- Candidates who are falling short of 80% attendance will be detained on the recommendation of the HoD and are not eligible to appear for the current semester examinations. The students who are detained in the current semester will not be allowed to register for the next semester and they have to repeat the same semester by paying the tuition fee prescribed. However, they can write arrear subjects, if any.

9. EVALUATION

The assessment of the student's performance in a Theory course shall be based on two components: Continuous Evaluation (40 marks) and Semester-end examination (60

marks). A student has to secure an aggregate of 50% in the course in the two components put together to be declared to have passed the course, subject to the condition that the candidate must have secured a minimum of 30 marks (i.e. 50%) in the theory component at the semester-end examination. Practical/ Project Work/ Industrial Training/ Viva voce/ Seminar etc. are completely assessed under Continuous Evaluation for a maximum of 100 marks and a student has to obtain a minimum of 50% to secure Pass Grade. For courses having both theory and practical components, 60% of the weightage will be given for theory component and 40% weightage for practical component. The student must secure 50% (Theory + Practical) with 30 marks minimum in theory to attain pass grade.

Details of Assessment Procedure are furnished below in Table 1.

Table 1: Assessment Procedure

S. No.	Component of Assessment	Marks Allotted	Type of Assessment	Scheme of Evaluation
1	Theory	40	Continuous Evaluation	i) Twenty (20) marks for mid examinations. Three mid examinations shall be conducted for 20 marks each; average of the best two performances shall be taken into consideration. ii) Ten (10) marks for Quizzes, Assignments and Presentations. iii) Ten (10) marks for periodic evaluation ,case studies and projects
		60	Semester-end Examination	iv) Sixty (60) marks for Semester-end examinations
	Total	100		
2	Practical	100	Continuous Evaluation	1)80 marks with equal weightage to all experiments subject to conduct of minimum of 10 experiments 2)20marks for the end exam (with one of our university teacher as external other than course teacher)

3	Project work	50 50	Continuous Evaluation Semester-end Examination	i) Twenty (20) marks for Periodic evaluation on originality innovation, sincerity and progress of the work, assessed by the Project Supervisor. ii) Fifteen (15) marks for mid-term evaluation for defending the Project, before a panel of examiners*. iii) Fifteen (15) marks for interim Report presentation and Viva-voce. iv) Fifty (50) marks for final Report presentation and Viva- voce assessed by external Examiners.
4	Comprehensive Viva-voce	100	Continuous Evaluation	Through five periodic Viva- voce exams for 20 marks each, conducted by a panel of examiners. The course content for Viva exams shall be announced at the beginning of the Semester.

GRADING SYSTEM

Based on the student performance during a given semester, a final letter grade will be awarded at the end of the semester in each course. The letter grades and the corresponding grade points are as given inTable2.

Table 2: Grades & Grade Points

Sl. No.	Grade	Grade Points	Absolute Marks
1	O (Outstanding)	10	90 and above
2	A+ (Excellent)	9	80 to 89
3	A (Very Good)	8	70 to 79
4	B+ (Good)	7	65 to 69
5	B(Above average)	6	60 to 64
6	C (Average)	5	55 to 59
7	P (Pass)	4	50 to 54
8	F (Fail)	0	Less than 50
9	Ab. (Absent)	0	-

SEMESTER GRADEPOINTAVERAGE (SGPA)

A Semester Grade Point Average (SGPA) for the semester will be calculated according to the formula:

$$SGPA = \frac{\sum[\ C \times G\ ]}{\sum C}$$

Where

C=number of credits for the course,

G=grade points obtained by the student in the course.

A student who earns a minimum of 4 grade points (P grade) in a course is declared to have successfully completed the course and is deemed to have earned the credits assigned to that course.

CUMULATIVE GRADE POINT AVEARGE (CGPA)

A similar formula is used to arrive at Cumulative Grade Point Average (CGPA), considering the student's performance in all the courses taken in all the semesters up to the particular point of time.

Table 3 shows the CGPA required for the award of class after the successful completion of the program.

Table3: CGPA required for award of Class

Class	CGPA Required
First Class with Distinction	≥8.0*
First Class	≥6.5
Second Class	≥5.5
Pass Class	≥5.0

*In addition to the required CGPA of 8.0 or more, the student must have necessarily passed all the courses of every semester in first attempt.

11. REAPPEARANCE

a) A student who has secured 'F' grade in a Theory course shall have to reappear at the subsequent Semester end examination held for that course.

b) A student who has secured 'F' grade in a Practical course shall have to attend Special Instruction Classes scheduled by the Department for securing pass.

c) A student who has secured 'F' Grade in Project work / Industrial Training etc shall have to reappear for Viva – voce scheduled by the department.

d) A student who is declared fail (F) in a course/s can apply for revaluation within one week from the date of publication of results with a fee prescribed by the university. The marks /grade awarded in the revaluation is final.

11.1 Procedure for revaluation

- The students who have not satisfied with the marks awarded by the examiner can apply for revaluation of his/her answer script/s
- The students have to apply through proper channel for revaluation and to pay the revaluation fee per paper to the university towards revaluation fee.
- Students have to apply for revaluation within 7 days from the date publication of result. The scripts will get valued by second examiner and if the difference is more than 15 marks, they will get valued by the third examiner. The average of the nearest two marks will be declared as the final marks.

11.2 ASSESSMENT MECHANISM

The Apollo University offers a student the benefits of Choice Based Credit System. Every paper is allotted a certain number of credits as per the UGC norms. A student is awarded the specified credits on obtaining a pass in the respective paper.

The Choice Based Credit System (CBCS) has been adopted for all UG and PG Courses from the year 2023-244 onwards as per the recommendations of the A.P. State Council for Higher Education (APSCHE). The structure of undergraduate programmes provides a wide range of choice for students to opt for courses based on their eligibility, aptitude and career goals.

11.3 Semester End Examination

The End semester examination will be a comprehensive examination of 3 hours duration. Two End Semester examinations are conducted in a year-

- Odd semester examinations in November/ December and
- Even semester examination in May/June
- Project viva will be held 2 weeks prior to the theory semester end examinations.

Programs

Program	Continuous Assessment	End semester	Aggregate in End semester Examinations
PG Courses	No passing minimum	50%	50%

11.4 Post Evaluation Programme:

Under the Post Evaluation Programme there are three menus :

- Provision for improvement
- Re-totaling and Revaluation of answer scripts
- Restrictions to appear for the examinations

11.5 Provision for improvement

A student who passes a paper in the first attempt can reappear for the same paper in the succeeding End-of-Semester examination only, for improving his/her marks. Re-appearance for improvement is allowed for theory and practical subjects of all semesters, except for the final semester subjects. Revised mark statement will be issued after withdrawing the previous one, if the marks obtained in improvement are higher than the marks awarded earlier. When there is no improvement, there shall not be any change in the original marks already awarded. The improved marks shall be considered for classification but not for ranking.

Provision for Retotalling and Revaluation of valued answer scripts

- Candidates/Scholars may apply for retotalling / revaluation of valued answer scripts, to the Controller of Examinations through the Heads of Departments and Principal / Dean, in the prescribed forms, remitting the prescribed fee within 7 days from the date of publication of results. Revaluation of answer scripts is permissible only for the current semester papers and not for any arrear paper.
- Those wish to apply for revaluation of final semester papers can do so within five days from the date of publication of results. In re-valuation, the answer papers will be valued by an external examiner and if there is a difference of 15 marks between the two evaluations then the script will be sent for third valuation which is final and the mark awarded by the third examiner will be taken into the account.

- Revised mark statement will be issued after withdrawing the previous one, if the marks obtained in revaluation / retotaling are higher than the marks obtained earlier. In other cases,

the original marks obtained earlier will be retained and the matter will be intimated to the student concerned as 'No change'.

- A candidate/Scholars who applies for revaluation should not apply for retotaling.

Restrictions to appear for the examinations

Candidates who fail in any of the papers in the UG and PG End semester examinations shall complete the paper concerned within N+2 years from the date of admission to the particular course. If they fail to do so, they shall re-register their names and take the examination in the texts/revised regulations/syllabus of the paper prescribed for the subsequent batch of candidates, in force at the time of their reappearance. In the event of removal of that paper consequent to change of regulation and/or curriculum after N+2 years period, the candidate shall have to take up an equivalent paper in the revised syllabus as suggested by the Chairman, Board of Studies concerned.

12. BETTERMENT OF GRADES

A student who has secured only a Pass or Second class and desires to improve his/her Class can appear for Betterment Examinations only in Theory courses of any Semester of his/her choice, conducted in Summer Vacation along with the Special Examinations. Betterment of Grades is permitted 'only once' immediately after completion of the program of study.

13. DETENTION AND RE-ADMISSION

If a student fails to meet the minimum attendance requirement or minimum standards for academic progression, the concerned academic head will recommend for detention and it will be notified by the concerned Dean of the School. The students who are detained in the current semester will not be allowed to register for the next semester and they have to repeat the same semester.

The candidates who are detained or availed academic break or suspended in the previous semester/academic year and want to continue their study shall apply for re-admission to the university. The candidates shall request for re-admission to the respective Head of the Department, with details viz., Full Name, Registration Number, Department, School, Fee payment particulars with proofs and reasons for discontinuations. The concerned academic head will forward it to the Registrar with specific comments. The Registrar will notify the decision of

re-admission which shall include the prescribed fee particulars, semester/ year into which readmission is granted and additional courses to be completed by the student (if any). The candidates should apply for re-admission in advance, which is before the commencement of the semester.

14. GROOMING AND ATTIRE FOR STUDENTS

Grooming and Etiquette is of great significance in the dynamic of shaping one's Personality. The Apollo University stands by a *Code of Grooming, Attire and Etiquette* that promotes a professional standard: Academic Day; Campus Placements and Non-Academic Hours on Campus.

The Dress Code to be in compliance on academic premises while attending: Formal Functions of the Institution / Lectures / Practical / Dining Area / Library / Labs / Office Areas. Students shall follow appropriate attire during Academic and Non-Academic hours on the campus. Students shall wear clean, neat, pressed and presentable clothing and command respect by dressing in accordance with responsible personal norms. Students shall always wear The Apollo University ID Card with the Lanyard.

Grooming and Formal Wear - Boys:

Formal Shirts / T-Shirts with a Collar should preferably be tucked in with a Formal pair of Pants Shoes and Socks to complete the Formal Attire. Personal Hygiene should be followed and Hair should be well groomed.

Smart Casuals for Boys:

Long Kurtas / Formals / Semi-Formal Shirts with Jeans.

Grooming and Formal Wear - Girls: Sarees / Salwar Suits / Leggings or Jeggings with Long Kurtis / Long Frocks / Long Skirts / Palazzos. Complement the outfit with proper footwear.

Personal Hygiene should be followed and Hair should be well groomed.

Smart Casuals for Girls:

Jeans with long Kurtis / Long Skirts / Long Frocks.

Attire for Non-Academic Hours On Campus:

The Students should be neatly attired during Non-Academic Hours on Campus.

Dress Code for Boys:

Jeans / Track Suits / T-Shirts / Trousers / Shirts.

Dress Code for Girls:

Jeans / T-Shirts or Blouses / Salwar Suits / Palazzos / Leggings or Jeggings with Long Tops / Sarees / Long Skirts / Track Suits.

DO'S AND DON'TS FOR BOYS AND GIRL STUDENTS OF THE UNIVERSITY:

- To wear modest clothing that reflects the essence of good personal grooming standards.
- To refrain from wearing Sleeveless Clothing; Shorts; Short Tops, etc.,

PLEASE NOTE: The decision as to what constitutes Appropriate Attire vests with the Authorities of The Apollo University.

15. ELIGIBILITY FOR AWARD OF THE DEGREE

The Post-Graduation Diploma is a 1-year program. The Post-Graduation program may be 2 years in duration for students who have completed either a 3-year or a 4-year Bachelor's program, whereas the doctoral program may span 4 years for full-time scholars and 5 years for part-time scholars who have completed their post-graduation..

A student shall be declared as eligible for the award of the degree if the candidate has successfully secured the minimum number of required credits as specified in the curriculum corresponding to the branch of his/her study within the stipulated time.

After successful completion of the program, a provisional certificate cum memorandum of grades (PCMG) will be issued to the students. The PCMG includes the secured grades and class achieved in chosen program and specialization if any, along with grades and CGPA secured by the student. The original degree will be presented in the subsequent convocation.

16. DISCRETION POWER

Not with-standing anything contained in the above sections, the Vice Chancellor may review all exceptional cases and give his decision, which will be final and binding.

ANNEXURE 1

ELIGIBILTY FOR QUALIFYING EXAM FOR POST GRADUATE AND DOCTORAL PROGRAMS

Program Type	PG Programs 2025-26	ELIGIBILITY
Master's	Master of Public Health (M.P.H.)	Bachelor degree in health sciences/ life sciences/ social sciences from a recognized university with at least 50% aggregate marks.

ANNEXURE 2

PROGRAMS OFFERED FROM SCHOOL OF HEALTH SCINECNE FROM ACADEMIC YEAR 2025-26

Sl. No.	Program	Expanded	Level	Minimum Duration in Years (N)
1	M.P.H.	Master of Public Health	Master's	2

Master of Public Health

First Semester						
Course Code	**Course Name**	**Periods per week**			**Credits**	**Hours per week**
		L	**T**	**P**		
	Bridge Course (Human Biology)					
MPHT65 01	Fundamentals of Public Health	3	1	0	4	4
MPHT65 02	Epidemiology	3	1	0	4	4
MPHJ65 03	Biostatistics	3	1	0	4	4
MPHT65 04	Public Health Implications of Communicable and Non-Communicable Diseases	3	1	0	4	4
MPHT65 05	One Health: An Interdisciplinary Approach to Health	3	1	0	4	4
MPHL65 01	Epidemiology Practical	0	0	2	2	4
MPHL65 02	Biostatistics Practical	0	0	2	2	4
--	Seminar	0	0	0	0	1
--	Library	0	0	0	0	1
--	Extra-curricular activities	0	0	0	0	2
--	Self-Learning/ Out Reach activities	0	0	0	0	4
TOTAL		**15**	**5**	**4**	**24**	**36**

Second Semester						
Course Code	**Course Name**	**Periods per week**			**Credits**	**Hours per week**
		L	**T**	**P**		
MPHT65 06	Social Health and Behavior Change Communication	3	1	0	4	4
MPHT65 07	Total Quality Management	3	1	0	4	4
MPHT65 08	Public Health Ethics	3	1	0	4	4
MPHT65 09	Public Health Surveillance	3	1	0	4	4
MPHT65 10	Global Health	3	1	0	4	4
MPHL65 03	Total Quality Management Practical	0	0	2	2	4
MPHL65 04	Public Health Surveillance Practical	0	0	2	2	4
--	Seminar	0	0	0	0	1
--	Library	0	0	0	0	1
--	Extra-curricular activities	0	0	0	0	2
--	Self-Learning / Out Reach activities	0	0	0	0	4
TOTAL		**15**	**5**	**4**	**24**	**36**

Third Semester						
Course Code	**Course Name**	**Periods per week**			**Credits**	**Hours per week**
		L	**T**	**P**		
MPHT75 11	Research Methodology	3	1	0	4	4
	Elective - 1	2	1	0	3	3
	Elective - 2	2	1	0	3	3
	Elective - 3	2	1	0	3	3
	Elective - 4	2	1	0	3	3
MPHP75 01	Research Methodology Project	0	0	2	2	4
MPHL75 05	Application of Public Health Software Practical	0	0	2	2	4
--	Seminar	0	0	0	0	1
--	Library	0	0	0	0	1
--	Extra-curricular activities	0	0	0	0	2
--	Self-Learning/ Out Reach activities	0	0	0	0	8
TOTAL		**11**	**5**	**4**	**20**	**36**

Fourth Semester						
Course Code	**Course Name**	**Periods per week**			**Credits**	**Hours per week**
		L	**T**	**P**		
MPHT76 26	Public Health Management	3	1	0	4	4
MPHI76 01	Dissertation - Comprehensive Viva-voce			16	16	32
TOTAL		**3**	**1**	**16**	**20**	**36**

Program Elective -I	
Course Code	**Course Name**
MPHT76 12	Occupational health
MPHT76 13	Application of Quantitative and Qualitative research methods in Public Health
MPHT76 14	Public Health Nutrition
MPHT76 15	Reproductive and Child Health
MPHT76 16	Public Health Environment
MPHT76 17	Systematic Reviews and Meta-analysis
MPHT76 18	Population Dynamics and Health

Program Elective -II	
Course Code	**Course Name**
MPHT76 19	Fundamentals of Health Planning & National Health Policies
MPHT76 20	Public Health Economics
MPHT76 21	Health Insurance & Managed Care
MPHT76 22	Logistics and Supply Chain Management
MPHT76 23	Managing Human Resources for Health
MPHT76 24	Disaster Risk Reduction And Management
MPHT76 25	Gender issue in Public Health

First Year

First Semester

MPHT65 01: Fundamentals of Public Health

L	T	P	C
3	1	0	4

Course Description:

The module aims at introducing students to the organizational structure and the functions of the public health system and an understanding of community demographics, socio-economic status, types and distribution of diseases and disorders in a community and a community perspective of the factors determining utilization of health service

Course Objectives: -

- To introduce students to the discipline of public health
- To give an overview of the methods of prevention and health promotion
- To understand the determinants and measures of disease and health related states
- To understand the status of health and disease at global and national levels

Unit 1 **14 hours**

Introduction- Definition, Significance, Evolution & Development of Public & Community Health, Determinants of Health – Biological, Behavioral, Socio-economic, Cultural, Environmental, Geographical etc, Defining the burden: Local to global for chronic diseases, HIV/AIDS, Cardiovascular Diseases (CVD), Obesity, Injury Prevention and Control, Infant Mortality and Poverty

Unit 2 **14 hours**

Globalization and Health, Role of Public Healthcare Institutions in Global Health System, Emergency, Disaster Preparedness and Response activities, Strengthening Healthcare Systems to Improve Health Outcomes: Reference to High-, Low- and Middle-Income Countries

Unit 3 **12 hours**

Introduction to National Health Policy 1983 & 2002, National Population Policy –2005, National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM), National Public Health Programs.

Unit 4 **10 hours**

Organization & Management of Public Healthcare Delivery system in India: National, State, District and Block Level

Unit 5 **10 hours**

Health Sector Reforms in India: Development Partners in Public health, Public- Private partnership, M-Health/ E-Health, The Future of the Public Health in the 21st Century: Challenges and Opportunities

Course Outcomes / Competencies:

Student would be familiar with the following concepts at the end of the course

- Able to provide an overview of the Public Health delivery system, policies and partners in implementing
- Able to explain the importance of food and nutrition in public health.
- Will understand the role of Public Health facilities, Professional

Text Books:

- Oxford textbook of Public Health Ed. Roger Detels, James Mcewen, Robert Beaglehole and Heizo Tanaka Oxford University Press (OUP) 4th Edition: 2002
- Schneider. Introduction to Public Health, 3rd Edition. Jones and Bartlett. 2011

Reference Books:

- Beaglehole, B. R. (2006). Basic Epidemiology, World Health Organisation: Geneva.
- Brachman, S.P. (1989). Epidemiology of Infectious Diseases, Principles and Practice of Infectious Diseases: 3rd Edition; pp.147-159.
- Friedman, G.D. (1993) Primer of Epidemiology, McGraw-Hill Book Col International Editions, Singapore.

MPHT65 02: **Epidemiology** **L T P C**

3 1 0 4

Course Description:

Emphasis is placed on the principles and methods of epidemiologic investigation, appropriate summaries and displays of data and the use of classical statistical approaches to describe the health of populations. Various epidemiologic study designs, surveillances for investigating associations between risk factors and disease outcomes are also introduced, culminating with criteria for causal inferences.

Course Objectives: -

- Understand and apply basic measures of disease incidence (risk, rate and odds) and prevalence and measures of effect (e.g. relative and absolute risk)
- Demonstrate understanding of the basic principles underlying different study designs, including cross sectional, cohort, case control and intervention studies.
- Identify problems caused by random errors, bias and confounding in interpreting epidemiological data.
- Distinguish between statistical association and causality
- Appreciate the practical benefits and limitations of different forms of epidemiological evidence in formulating and influencing public health policy decisions.

Unit 1 **12 hours**

Introduction & Principles of Epidemiology History and Evolution of Epidemiology, Landmark epidemiological achievements, Historical contribution of Epidemiology in making public health Evidence based practice, Association and Causations, Bradford hill criteria for causal evaluation, Time, place and person, Application of epidemiological logic. Bias and Chance

Unit 2 **14 hours**

Epidemiological Measures and Public health impact Incidence measures, prevalence measure, Relationship between Prevalence and Incidence measures Relative Risk, Odds Ratio, Attributable Risk, Excess Risk, Attributable Fraction, Population Attributable risk, Confounding, Types and measurement of Bias, Effects of Bias, confounding and Chance, strategies control of bias.

Unit 3 **10 hours**

Epidemiological Study Designs Cross sectional studies, Observational Studies, Experimental studies, Case control design, Cohort design, Prospective and Retrospective cohort studies, Randomized control Trial, Ecological studies, Advantages and Limitations of various study designs, Rationale of each study designs and its practical application.

Unit 4 **12 hours**

Principles of Clinical Epidemiology Concepts in Clinical Epidemiology, Precision, Accuracy and Validity of tests, Types of validity, Sensitivity, Specificity, Positive and Negative Predictive, Type one and Type two errors, strategies to reduce false results, serial testing and parallel testing, Concepts of screening, difference between screening and diagnosis. Natural course of disease

Unit 5 **12 hours**

Disease Surveillance and Field Epidemiology Steps in Epidemic investigation, Case study on outbreak investigation, Principles of Disease surveillance, Types of surveillance, Epidemic and Pandemic Preparedness and Response, Zoonotic diseases, Emerging and Remerging diseases, Field assessment of Health, morbidity and Risk factors.

Course Outcomes / Competencies:

Upon successful completion of this Course, students should:

- Construct clinical life table in epidemiologic studies.
- Recognize the assumptions associated with construction of a life table.
- Recognize and describe the elements in the design and conduct of a randomized clinical trial, a cohort study, a case-control study and a cross-sectional study.
- Identify biases and their consequences in published literature.

Text Books:

- Epidemiology Leon Godris, 5th Ed. Saunders Philadelphia 2014
- Basics of Epidemiology, Bonita &Beaglehole. 2nd Edition -WHO, 2007

Reference Books:

- Clinical epidemiology the essentials. -Fletcher, Robert H., Suzanne W. Fletcher, Edward H. Wagner.LWW; Fifth edition-Lippincott Williams & Wilkins, 2014
- An Introduction to Public Health and Epidemiology -Susan Carr, Nigel Unwin, TanjaPless-Mulloli, Second Edition. -Open University Press, 2007
- Epidemiology, Bio statistics & Preventive medicine -James F. Jekal, David L Katz, Joann G Elmore, sDorothea Wild, 4th edition. -W.B. Saunders company publishers, 2013

MPHT65 03: Biostatistics **L T P C**

3 1 0 4

Course Description:

This course provides students with fundamentals statistical concepts and techniques that are used in public health. To improve student skills in the area of basics statistics, use of software in analysis and evaluation of public health information. By understanding the concept of analytical statistics by using appropriate statistical techniques. Using the computer to solve health problems in the community. Skill involves to execute any information or data gathered during research activity

Course Objectives: -

- To understand the basic concepts in biostatistics
- To apply statistical knowledge to designing research studies.
- To determine the proper method to be used in analyzing data sets
- To identify appropriate sources of data

Unit 1 **12 hours**

FUNDAMENTALS OF BIOSTATISTICS, Overview of the role of biostatistics in public health, Introduction- Concepts, types, significance and scope of bio-statistics, Collection and Classification of Data - Scales of Measurement- Tabular, Diagrammatic and Graphical Representation of data – Types of Variables ,Applications of biostatistics in epidemiology and public health research

Unit 2 **12 hours**

MEASURES OF CENTRAL TENDENCY AND DISPERSION & PROBABILITY THEORY, Mean, mode and median- Measures of variability; Range, Percentiles, average deviation, quartile deviation, standard deviation & co-efficient of variation, Spread of distribution. Probability: Concept and probability distribution. and distributions – Poisson, Binomial Normal distribution— density curves, applications and statistical tables.- Sampling Techniques

Unit 3 **12 hours**

PRINCIPLES OF MEASUREMENTS, Types of measures- Reliability- Validity- Accuracy- Questionnaire construction- Index construction and scaling- Observe variation- Diagnostic tests- Measurement issues Evaluating sources of data- Direct and indirect standardization

Unit 4 **10 hours**

MEASURES OF RELATIONSHIP, Correlation and Regression – need and meaning Rank order correlation; Scatter diagram method Product moment correlation Simple linear regression analysis and prediction

Unit 5 **14 hours**

Testing of Hypothesis and Inference, H Parameter estimation and confidence intervals Hypothesis testing: one-sample and two-sample tests, Analysis of variance (ANOVA), Non-parametric tests, Power and sample size calculations for statistical tests. Longitudinal data analysis, Meta-analysis and systematic reviews, Bayesian statistics, Machine learning techniques for public health research

Course Outcomes / Competencies:

After completion of the course the student would be

- Would able to understand the basic concepts in biostatistics
- Would apply statistical knowledge to designing research studies.
- Able to Determine the proper method to be used in analyzing data sets
- Able to Identify appropriate sources of data

Text Books:

- An Introduction to Biostatistics: A manual for students in Health Sciences: P.S.S. Sundar Rao, J. Richard Prentice Hall, New Delhi, 1996.
- Bio-Statistics: A Manual of statistical methods for use in the Health, Nutrition and Anthropology: K. Vishwas Rao, Jaypee Brothers Medical Pub., New Delhi, 1996.

Reference Books:

- Fundamentals of Biostatistics- J.V. Dixit, Methods in Biostatistics- B K Mahajan
- Essentials of Biostatistics in Public Health, -Lisa M. Sullivan, Second Edition-Jones and Barlett Learning, LLC, 2012
- Biostatistical Analysis, -Jerrald H. Zar, Fifth Edition-Pearson Education, 2009

L	T	P	C
3	1	0	4

MPHT65 04: Public Health Implications of Communicable and Non-Communicable Diseases

Course Description:
This course is designed to provide students with an understanding of the public health implications of communicable and non-communicable diseases. Students will learn about the epidemiology of these diseases, their risk factors, determinants and prevention and control strategies. They will also examine the impact of these diseases on the health of populations, health systems and society as a whole.

Course Objectives: -

- To describe the epidemiology of communicable and non-communicable diseases
- To identify risk factors and determinants of these diseases
- To explain strategies for prevention and control of communicable and non-communicable diseases
- To analyze the impact of these diseases on population health and health systems
- To apply principles of public health to the prevention and control of communicable and non-communicable diseases

Unit 1 **10 hours**

Introduction to Communicable and Non-Communicable Diseases, Overview of major communicable and non-communicable diseases, Global and regional burden of disease,
Risk factors and determinants of disease, Strategies for prevention and control.

Unit 2 **14 hours**

Epidemiological Aspects Of Diseases Concept of Infection, Virulence, Pathogenicity, Routes and modes of transmission, Interrupting Chain of Infection Epidemiological triad, Concepts of Principles of Disease control and Prevention, levels of prevention, Disease Elimination and Eradication, Public Health approach to control of infectious diseases, Attack rate and Secondary attack Rate, One Health concept, Epidemiology of communicable diseases, Smallpox, chickenpox, Measles, Rubella, Mumps, Influenza, Diphtheria, Whooping cough, Meningococcal meningitis, Acute respiratory infections, SARS, Tuberculosis, Poliomyelitis, Viral hepatitis, Acute diarrheal diseases, Cholera, Typhoid fever, Food poisoning, Amoebiasis, Ascariasis, Hookworm infection, Dengue, Malaria, Rabies, Yellow fever, Japanese encephalitis, KFD, Chikungunya fever, Leptospirosis, Plague, Human salmonellosis, Rickettsia zoonosis, Scrub typhus, Murine typhus, Q Fever, Taeniasis, Leishmaniasis, Trachome, Tetanus, Leprosy, STD, Yaws, HIV/AIDS.

Unit 3 **14 hours**

Epidemiology of NCDs, risk factors, global status, prevention and control, global Initiatives Epidemiology of Non-communicable diseases, CVD, Coronary heart disease, Hypertension, Stroke, Rheumatic heart disease, Cancer, Diabetes, Obesity, Blindness, Accidents and Injuries). Clinical epidemiology, normality, abnormality, Diagnostic tests, natural history and prognosis,

Evidence based practice, prevention in clinical practice, Genetic epidemiology- Basic Genetics, Monogenic disorders, multifactorial disorders, methods in genetic epidemiology, human genome, Oral Health-dental caries, periodontal disease, Oral cancer

Unit 4 **14 hours**

Public Health Interventions for Communicable Diseases- Prevention and control of major communicable diseases (e.g., tuberculosis, HIV/AIDS, malaria, Zika), Primary, secondary and tertiary prevention strategies, Outbreak response and management, Use of data and evidence to inform public health interventions. Public Health Interventions for Non-Communicable Diseases-Prevention and control of major non-communicable diseases (e.g., cardiovascular disease, cancer, diabetes, mental health), Lifestyle and behavioral interventions, Population-level interventions (e.g., tobacco control, healthy food environments), Use of data and evidence to inform public health interventions, WHO action plan on communicable disease.

Unit 5 **8 hours**

Risk Factor Epidemiology of important CDs and NCDs- Modifiable and Non modifiable Risk factors, Outline of study designs (including cross sectional study design, case control study design, cohort study design and randomised control trials), Disease surveillance and Outbreak investigation.

Course Outcomes / Competencies:

At the end of the course student would be familiar on the following concepts

- To describe the epidemiology of communicable and non-communicable diseases
- To identify risk factors and determinants of these diseases
- To explain strategies for prevention and control of communicable and non-communicable diseases
- To analyze the impact of these diseases on population health and health systems
- To apply principles of public health to the prevention and control of communicable and non-communicable diseases

Text Books:

- Epidemiology and Prevention of Communicable Diseases by N. Nathanson and R. Hinman
- Non-communicable Diseases by P. Beaglehole and R. Bonita

Reference Books:

- Control of Communicable Diseases Manual by D. L. Heymann
- Non-communicable Diseases in Low- and Middle-Income Countries edited by D. Prabhakaran and D. Anand
- Public Health and Preventive Medicine by R. Wallace and M. G. Maxcy.

MPHT65 05: One Health: An Interdisciplinary Approach to Health **L T P C**

3 1 0 4

Course Description:

This course introduces students to the One Health approach, an interdisciplinary approach that recognizes the interconnectedness of human, animal and environmental health. Students will learn about the history of One Health, its relevance to global health and its role in addressing a range of health challenges, including zoonotic diseases, environmental health hazards and antimicrobial resistance. The course will also explore current and emerging One Health challenges and innovations and the ethical considerations of One Health research and practice.

Course Objectives: -

- Define the One Health approach and its history
- Explain the relevance of One Health to global health
- Understand the interdisciplinary nature of One Health research and practice
- Analyze the impact of environmental health hazards on human and animal health
- Evaluate the role of One Health in addressing zoonotic diseases and controlling antimicrobial resistance
- Identify emerging One Health challenges and innovations
- Discuss ethical considerations in One Health research and practice

Unit 1 **12 hours**

Overview of One Health and its relevance to global health, Definition of One Health and its history, Examples of One Health challenges, such as zoonotic diseases and antimicrobial resistance, The role of inter-disciplinarity in One Health research and practice, Global One Health initiatives and their impact

Unit 2 **10 hours**

Environmental health and its relationship to One Health, Overview of environmental health and its impact on human and animal health, Environmental risks to health, such as pollution and climate change, Case studies highlighting the impact of environmental hazards on human and animal health, The role of One Health in addressing environmental health challenges

Unit 3 **14 hours**

Zoonotic diseases and One Health, Overview of zoonotic diseases and their impact on human and animal health, The ecology of zoonotic diseases and how they emerge and spread, Case studies of major zoonotic disease outbreaks, such as Ebola and COVID-19, The One Health approach to preventing and controlling zoonotic diseases,

Unit 4 **12 hours**

Antimicrobial resistance and One Health, Overview of antimicrobial resistance and its impact on human and animal health, The relationship between antimicrobial use in animal agriculture and human health, The role of One Health in addressing the global challenge of antimicrobial resistance, Case studies of One Health approaches to controlling antimicrobial resistance, such as the WHO Global Action Plan.

Unit 5 **12 hours**

Future directions in One Health research and practice, Emerging One Health challenges-food security and emerging infectious diseases, Innovations in One Health research and practice, such as digital technologies and genomics, Opportunities for One Health collaboration across sectors and disciplines, Ethical considerations in One Health research and practice.

Course Outcomes:

By the end of the course, students will be able to:

- Describe the One Health approach and its relevance to global health
- Analyze the impact of environmental health hazards on human and animal health
- Evaluate the role of One Health in addressing zoonotic diseases and controlling antimicrobial resistance
- Identify emerging One Health challenges and innovations
- Discuss ethical considerations in One Health research and practice

Textbooks:

1. One Health: People, Animals and the Environment by Ronald M. Atlas and Stanley Maloy
2. One Health: The Human-Animal-Environment Interfaces in Emerging Infectious Diseases by John S. Mackenzie and Martyn Jeggo

Reference Books:

1. One Health: The Theory and Practice of Integrated Health Approaches edited by Jakob Zinsstag, Esther Schelling, David Waltner-Toews and Maxine Whittaker
2. One Health and the Politics of Antimicrobial Resistance edited by Laura H. Kahn, Bruce Kaplan and Thomas P. Monath
3. The One Health Initiative: A Global Movement to Achieve Sustainable Health and Well-being edited by Bruce Kaplan and Thomas P. Monath.

MPHL65 01:	Epidemiology Practical	L	T	P	C
		0	0	2	2

Course Description:

Epidemiology Practical focuses on applying epidemiological principles and methods in real-world settings to conduct field research and data collection. Students will engage in various practical exercises and field visits to develop skills in disease surveillance, outbreak investigation and epidemiological study design.

Course Objectives:

- To apply epidemiological principles and methods in conducting field research.
- To measure disease frequency and study disease patterns in communities.
- To identify underlying causes or risk factors associated with diseases.
- To conduct outbreak investigations and draw epidemic curves.
- To understand the validity of epidemiological studies and identify confounders.

List of experiments - EPIDEMIOLOGY

- Exercise on measuring disease Frequency, Study pattern of disease in the Community & Identify underlining causes or risk factors of the disease
- Asking Questions & Making Comparisons
- Rate Ratio & Proportion and measurement of Mortality, Morbidity & Disability
- Draw Epidemic Curve & Spot Mapping
- Outbreak Investigation Exercises
- How to check Validity of Epidemiological Studies
- Identification of Confounders in research studies
- Design Indirect & Causal Association Models
- How to Proceed for disease Surveillance & Design IEC Material on Disease Surveillance
- Exercises on Mass Screening, High Risk Screening & Multiphasic Screening

Field Visit and Data Collection

- Students will be divided into groups and assigned to different public health settings such as clinics, hospitals, or community health centers.
- Students will conduct a cross-sectional survey on a specific health issue, such as diabetes or hypertension, in the assigned setting.
- Data collection tools will include questionnaires, medical records and anthropometric measurements.
- Students will be supervised by a faculty member or a local public health professional.
- The field visit will also include site visits to public health laboratories and meetings with local health officials.

Data Analysis and Presentation:

- After completing the field visit, students will analyze the data they collected using basic epidemiological methods and statistical software such as Jamovi or SPSS.
- Students will present their findings in a group presentation to the class, which will include a discussion of the strengths and limitations of their study.
- Faculty members and peers will provide feedback and constructive criticism on the presentations.

Evaluation:

- Students will be evaluated based on their participation in the field visit, data collection, analysis and presentation.
- Students will also be required to submit a written report summarizing their findings, analysis and interpretation.

Course Outcomes:

By the end of this course, students will be able to:

- Measure disease frequency and analyze disease patterns in a community.
- Identify and analyze risk factors associated with specific diseases.
- Conduct outbreak investigations and draw epidemiological curves to visualize disease trends.
- Evaluate the validity of epidemiological studies and recognize confounding variables.
- Design and implement disease surveillance activities and develop informational, educational and communication (IEC) materials.

Textbooks:

- Epidemiology: Beyond the Basics by Moyses Szklo and F. Javier Nieto, Jones & Bartlett Learning.
- Principles of Epidemiology in Public Health Practice by Richard Dicker and MD, CDC.

Reference Books:

- Modern Epidemiology by Kenneth J. Rothman, Timothy L. Lash and Sander Greenland, Lippincott Williams & Wilkins.
- Epidemiology 101 by Robert H. Friis, Jones & Bartlett Learning.
- Basic Epidemiology by R. Bonita, R. Beaglehole and T. Kjellstrom, World Health Organization.

MPHL65 02:	Biostatistics Practical	L	T	P	C
		0	0	2	2

Course Description:

Biostatistics Practical is designed to provide students with hands-on experience in applying biostatistical methods to public health data. The course emphasizes data analysis and interpretation using statistical software like SPSS and Epi Info. Through practical exercises and field visits, students will gain proficiency in data handling, descriptive statistics, hypothesis testing and visualization techniques essential for public health research.

Course Objectives:

- To apply biostatistical principles and methods in the analysis of public health data.
- To gain proficiency in using statistical software such as SPSS and Epi Info for data management and analysis.
- To perform descriptive statistics including measures of central tendency and dispersion.
- To conduct hypothesis testing using appropriate statistical tests such as Chi-Square, T-Tests, ANOVA and MANCOVA.
- To interpret and visualize data effectively to support public health research and decision-making.

List of experiments - Biostatistics

- Data feeding and uploading with SPSS, Epi Info
- Data extraction and analysis of NFHS, DLHS and any State HMIS Data for following
    - Mode
    - Mean
    - Median
    - Central Tendency
    - Distribution
- Visualization of data
    - Use correct graphical method based on the data
    - Performing the follow tests
    - Chi-Square
    - T-Tests
    - ANOVA
    - MANCOVA
    - Factor Analysis
    - Cross tabulation multivariate Analysis
- Data output and interpretation

Field visit

- Students will be given a data set on a specific health issue, such as obesity or smoking, from a local public health agency or organization.
- Students will analyze the data using basic biostatistics methods such as descriptive statistics, hypothesis testing and regression analysis.

- Students will be supervised by a faculty member or a local biostatistics professional.
- The field visit will also include site visits to public health agencies and meetings with local biostatisticians.

Activities:

- Introduction to the dataset provided by the instructor, which could cover a range of health-related topics such as disease prevalence, risk factors, or treatment outcomes.
- Review of the basic concepts and tools of biostatistics, including data types, measures of central tendency and dispersion and hypothesis testing.
- Hands-on experience with statistical software such as Jamovi or SPSS to clean, manipulate and analyze the dataset.
- Group discussions on the importance of biostatistics in public health research and the potential impact of data analysis on policy and decision-making.
- One-on-one meetings with the instructor or teaching assistant to review and refine data analysis and interpretation.

Evaluation:

- Students will be evaluated based on their participation in the practical, data analysis and interpretation.
- Students will also be required to submit a written report summarizing their findings, analysis and interpretation.

Course Outcomes:

By the end of this course, students will be able to:

- Utilize SPSS and Epi Info for data entry, management and analysis in a public health context.
- Apply descriptive statistics to summarize and interpret data from sources such as NFHS, DLHS and State HMIS.
- Perform hypothesis tests and interpret their results to draw meaningful conclusions about health-related datasets.
- Visualize data using appropriate graphical methods to effectively communicate findings.
- Prepare and present a comprehensive report summarizing data analysis and interpretation in a public health context.

Textbooks:

- Biostatistics: A Foundation for Analysis in the Health Sciences" by Wayne W. Daniel and Chad L. Cross, Wiley.
- SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS" by Julie Pallant, Open University Press.
-

Reference Books:

- Principles of Biostatistics" by Marcello Pagano and Kimberlee Gauvreau, Chapman and Hall/CRC.
- Introduction to Epidemiology" by Ray M. Merrill, Jones & Bartlett Learning.
- Statistical Methods for Environmental and Agricultural Sciences" by B.N. Mandal, New Age International Publishers.

Second Semester

MPHT65 06: Social Health and Behavior Change Communication **L T P C**

3 1 0 4

Course Description:

The purpose of this model is to introduce different models of communication for use in health promotion activities and also in community-based health activities.

Course Objectives: -

- Understand the behavioral, social and cultural factors associated with health and illness.
- Apply relevant social and behavioral theories to diagnose and understand individual, social network, organizational, community and policy-maker behaviors associated with the planning, implementation, evaluation and maintenance of community-based primary health care programs
- Identify the role of health education and communication in public health.
- Describe the tools used in health education
- Design effective health education program for community, school and work place

Unit 1 **10 hours**

Health Education

Principles & Objectives, Levels of Health Education, Educational Methods, Evaluation & Practice of Health Education in India. Health Counseling: Introduction, Theories, Process & Techniques. Health Care Reporting, Role of NIC & Other Bodies, Research in Health Education

Unit 2 **14 hours**

Heath Communication

Basic Concept & Principles of Communication, Definition, Purpose, Types of Communication, Communication Process, Directions of Communication: Upward, Downward, Lateral, Factors influencing Communication, Barriers of Effective Communication, How to overcome the Barriers, Models of communication: Aristotle Model, Shannon and Weaver model, Schramm Model, Laegans Model, Fano Model, Literer's Model, Westly Maclean's Model.

Unit 3 **12 hours**

Mass communication

Role of Media in health education. Information Communication Technologies (ICT) in health care and awareness. (Telemedicine & e-health, community radio)

Future trends in information and communications systems

Unit 4 **12 hours**

Strategic Communication Development

P Process – C Process , Situational Analysis : Target group identification , Root cause Analysis , SWOT analysis , Audience Segmentation , Audience Prioritization , Audience Profile , Creative Brief , Channel Mix ,Channel Identification , Message Creation , Pretesting , Field Testing , Characteristics of Effective Health Communication. , Communications Research, Content Analysis, BEHAVE framework

Unit 5 **12 hours**

Health Literacy and Numeracy

Definition of Health Literacy and Numeracy , Facilitators and Barriers of Health Literacy , impact on Public Health , Grade Level: Flesch Kincaid Reading Levels , TOHFLA , SMOG scores , Suitability Assessment of Materials , Cultural and Linguistic Competency

Course Outcomes / Competencies:

End of the course student would

- Student would be able to perform following task with adequate information and knowledge
- Understand the behavioral, social and cultural factors associated with health and illness.
- Apply relevant social and behavioral theories to diagnose and understand individual, social network, organizational, community and policy-maker behaviors associated with the planning, implementation, evaluation and maintenance of community-based primary health care programs
- Identify the role of health education and communication in public health.
- Describe the tools used in health education
- Design effective health education program for community, school and work place.

Text Books:

- Health Education – A new approach – L. Ramachandran & T. Dharmalingan
- Health Communication in the 21st Century, By Kevin B. Wright, Lisa Sparks, H. Dan O'Hair, Blackwell publishing limited, 2013, first edition

Reference Books:

- Corcoran, N(ed) (2007), Communicating Health : Strategies for health promotion sage, London
- Baggot,R, (2000) Public Health: Policyand politics Basingstoke : Palgrave Macmillan

MPHT65 07: Total Quality Management **L T P C**

3 1 0 4

Course Description:

This course provides an advance framework, guidelines, in quality assurance and Total quality management in public health practice. The course examines the major ethical and legal concepts and their impact in public health practice

Course Objectives: -

- To introduce quality assurance in health care management with overview of quality assurance and total quality management
- To improve skills on Designing Quality Improvement models and Quality in Health Care and Relationship between patient satisfaction and utilization of services
- To emphasis the concept of accreditation through quality monitoring cycle
- To introduce six sigma concept in health care management setting

Unit 1 **12 hours**

Fundamentals of Quality Management - Definition, Objectives, Principle & Constraints, Theories- Deming, Crosby, Juran, Determinants of Quality: Structure, Process ,Outcome. Approaches of Quality Improvement- QC, QA, CQI, TQM, Continuous Process Improvement, Statistical Process Control (SPC), Quality Systems, Benchmarking, Quality Function Deployment (QFD), Application of Six Sigma in Health Care

Unit 2 **12 hours**

Organization for Quality Improvement in Public Health - Quality Teams (QT) and Quality, Control Circles (QCC), Quality Assurance (QA) and Quality Improvement. Organization wide Quality Improvement fundamentals: Designing Quality Improvement models of daily Patient Care. Assessing Quality Health Care, Attributes of Quality in Health Care and Relationship between patient satisfaction and utilization of services.

Unit 3 **12 hours**

Quality Monitoring Cycle, Building Quality Assurance Program, Quality Assurance Projects-PRICOR and CCCD. Approaches: Plan-Do-Check-Act Model, Quality Control, Benchmarking, Best Practice, Importance of Medical Audit & Accreditation in ensuring Quality Health care: NABH, NABL, BIS, ISO- Documentation and Certification, ISO 14000, ISO 9000 and benefits of ISO certification.

Unit 4 **12 hours**

Total Quality Management Introduction, Evolution of Quality Management, Principles, Key Elements, Core Concepts, Benefits, Prerequisites and Steps in implementing Total Quality Management. Case Studies.

Unit 5 **12 hours**

Six Sigma, Introduction, Main Concepts, Basic Assumptions, Special Features and Benefits. Six Sigma methods-DMAIC and DMADU, Six Sigma Organizational Architecture. Case Studies.

Course Outcomes / Competencies:

End of the course student would able to

- Apply quality assurance in health care management with overview of quality assurance and total quality management
- Able to understand and apply on Designing Quality Improvement models and Quality in Health Care and Relationship between patient satisfaction and utilization of services
- Expose to the concept of accreditation through quality monitoring cycle
- Able to interpretate six sigma concept in health care management setting

Text Books:

- Managing Quality in Healthcare.-P.R.Sodani -Rawat Publications 2010
- Sridhar Bhat, Total Quality Management, Himalaya House publications, Mumbai, 20024. Sundara Raju, S.M., Total Quality Management: A Primer, Tata McGraw Hill, 1995. Srinivasan, N.S. and V. Narayana, Managing Qualiy- concepts and Tasks, New Age International, 1996.

Reference Books:

- Raandi Schmidt J. Trumbo and R. Jonson, Quality in Health Care Sector – ASQC Quality –Press.
- Quality Improvement in Health Care,2nd Ed, Nelson Thrones
- Total Quality Management: The Health Care Pioneers Mara Minerva Melum and Marie Kuchuris Sinioris, 2010

MPHT65 08: Public Health Ethics **L T P C**

3 1 0 4

Course Description:

This course provides an overview of ethical framework, guidelines, moral issues and legal issues relation to public health practice. The course examines the major ethical and legal concepts and their impact in public health practice

Course Objectives: -

- To describe and appreciate the value of understanding the history and evolution of health care ethics.
- To demonstrate the understanding of the various philosophical foundations for health care ethics.
- To Identify and critically analyze ethical issues in health care.
- To Critique various decision-making frameworks and formulate one based on ethical philosophical foundations.
- To discuss the application of legal and ethical concepts and principals in his/her capacity and responsibility as a health care professional.
- To Recognize the integrative role of organizational ethics in health care facilities

Unit 1 **10 hours**

Introduction to philosophical and moral underpinnings of justice, equality and fairness; theories of distributive justice and relational conception of justice; concepts of ethics, morality, human rights and law and distinction among these concepts

Unit 2 **10 hours**

Concept of Health as a social good; Just health care; ethical issues in the identification and assessment of health inequality and inequity indices– various determinants and outcomes in the Indian context including those related to gender, caste and class

Unit 3 **16 hours**

Ethical issues in relation to public health care financing, health sector reforms, allocation and distribution of funds to public health programmes; issues related to privatization and state supported private public mix approach, Ethical issues in relation to public health policies and programs; ethics of implementation of public health programmes like routine immunisation, HIV testing of ANC cases, blood safety programmes, health camp approach for sterilization; ethical issues in relation to prevention and control of epidemics; ethics and the use of health technologies for public health goals

Unit 4 **8 hours**

Ethical issues in relation to governance and management of health care delivery systems, issues of distribution, accountability and transparency in resources management and procurement; corruption, misappropriation of public health gods and violation of public health services practices

Unit 5 **16 hours**

Ethics and public health research, history of ethics in public health research; ethical issues related to the design, conduct, dissemination and publication of public health research including application of voluntary participation, informed consent, privacy and confidentiality principles; ethical issues in designing and conducting randomized controlled trials, case control studies, studies on vulnerable populations; protection of research participants; ethics of evaluation research; power relations and social hierarchies at play in health research - researcher and the researched; users of research and donor groups; responsible reporting of findings; research misconduct including plagiarism, National guidelines for ethics in public health research; ethical issues in collaborative, international and multidisciplinary public health research, Select ethical debates – case studies of past and contemporary public health debates

Course Outcomes / Competencies:

End of the course completion student would be

- Describe and appreciate the value of understanding the history and evolution of health care ethics.
- Demonstrate the understanding of the various philosophical foundations for health care ethics.
- Identify and critically analyze ethical issues in health care.
- Critique various decision-making frameworks and formulate one based on ethical philosophical foundations.
- Discuss the application of legal and ethical concepts and principals in his/her capacity and responsibility as a health care professional.
- Recognize the integrative role of organizational ethics in health care facilities

Text Books:

- Anand, S., Peter, F. and Sen, A. (2004) (eds.). Public health, ethics and equity. New Delhi: Oxford University Press
- Madhiwala, N., Mamdani, B. and others (Eds.). (2005). Indian Journal of Medical Ethics: Selected Readings 1193-2003. Mumbai: Forum for Medical Ethics Society and Centre for Studies in Ethics and Rights

Reference Books:

- Barer, M L., Getzen, T. E. and Stoddardt, G.L. (1998) (eds.). Health, health care and health economics. New York: Wiley
- Coughlin, S.S., Soskolne, C.L. and Goodman, K.W. (2005). Case studies in public health ethics. American Journal of Public Health, 95(7).
- Daniels, N., Kennedy, B and Kawachi, I. (2004) Health and inequality, or, why justice is good for our health. In S. Anand, F. Peter and A. Sen, (eds.). Public health, ethics and equity. New Delhi: Oxford University Press

MPHT65 09: Public Health Surveillance L T P C

3 1 0 4

Course Description:

This course covers the concept of surveillance and other sources of public health information. And to analyse the usefulness and range of applications of these systems

Course Objectives: -

- To understand the basic concepts of information and system theory.
- To understand the concept of surveillance and other sources of public health information
- To understand and analyse the usefulness and range of applications of these systems.

Unit 1 15 hours

Introduction to Public Health Informatics, Concepts of Informatics, Differentiation of Data vs. Information, Components of an Information System

Unit 2 12 hours

Surveillance data handling, Electronic Health Records, Data Sources and Data Tools, Management of Databases, Privacy, Security and Ethics.

Unit 3 9 hours

Public Health Informatics systems Development, Management Systems, IT Solutions, Decision Support Systems Development, Systems development, Design Implementation.

Unit 4 12 hours

Evaluation for Public Health Informatics, Standards and Benchmarks in Public Health Informatics, Types of Evaluations in informatics, protocol development for evaluation, Outcome assessment

Unit 5 12 hours

Information Technology Systems Topics, Artificial Intelligence and Expert Systems, Public Health Surveillance Systems

Course Outcomes / Competencies:

At the end of the course student would

- Able to understand the basic concepts of information and system theory.
- Able to understand the concept of surveillance and other sources of public health information
- Apply the concept and analyse the usefulness and range of applications of these systems.

Text Books:

- Health Monitor: Foundation for Research in Health S, Mumbai, 1990
- Public Health Informatics and Information Systems Magnuson, J.A., Fu, Jr., Paul C. (Eds.) 2nd ed. 2014, XVIII, 666 p. 114 illus., 35 illus. in color

Reference Books:

- WHO 2020, Global strategy for comprehensive Vaccine-Preventable Disease (VPD) surveillance
- Scott JN McNabb J Mark Conde Lisa Ferland, Transforming Public Health Surveillance, 1st Edition by Elsevier 2016
- Lisa M. Lee PhD, Principles and Practice of Public Health Surveillance

MPHT65 10: Global Health **L T P C**

3 1 0 4

Course Description:

Health systems and models of various countries, global health problems and trends-disparities in Health Care Access and Outcomes, Health Care System in Global Perspective

Course Objectives: -

- To understand strategic developments in global health from a historical perspective.
- To explore the cultural, behavioral, burden, emergence and re-emergence of infectious diseases in global perspective
- To learn Global health challenges and role international origination in Public Health

Unit 1 **8 hours**

Introduction to international health, scope & importance. Socio-cultural perspectives of International health, Health Problems, Issues and concerns that transcend national boundaries. Policy development in international health, health care, educational and economic development, Globalization-Cultural, Political, Social and economic globalizing processes at work in today's world.

Unit 2 **12 hours**

Global Health systems, Models of various countries, global health problems and trends-Disparities in Health Care Access and Outcomes, Health Care System in Global Perspective

Unit 3 **10 hours**

Global Health Competency, Globalization and Health- Global Population Change- Global comparisons in Health indicators, situation and systems.- Global Health Collaboration-International Health Regulations International and Regional Health

Unit 4 **14 hours**

Global burden of Diseases, How disease burden is measured and the causes of morbidity and mortality at global scale. Global Governance-Neoliberal and neorealist regime theory, critical theory approaches, international law, role of corporations and private authority and the activity of global civil society.

Unit 5 **16 hours**

Public Health in developing & developed countries, International Drug Policies & programmes, International health legislations-Recruitment laws, Health Insurance Policies, academic equivalence etc. International funding for health care & conditions-Structural Adjustment Program (SAP). International Health Agencies and their role and contribution, International Public Health Programs- Millennium Development Goals(MDG), Sustainable Development Goals (SDGs) International Health tourism, Ethical issues in international health research. Overview of the role of AYUSH systems in public health, including disease prevention and health promotion,Discussion of the potential benefits and challenges of using

Ayurveda and other AYUSH systems in public health programs and interventions, Analysis of case studies and examples of successful integration of AYUSH systems into public health programs and interventions

Course Outcomes / Competencies:

End of the course completion student would be

- Explored strategic developments in global health from a historical perspective.
- Understood the cultural, behavioral, burden, emergence and re-emergence of infectious diseases in global perspective
- Learnt the Global health challenges and role international origination in Public Health

Text Books:

- Textbook of International Health: Global Health in a Dynamic World By Yogan Pillay, Timothy H. Holtz, 3rd Edition. Oxford University Press.
- Textbook of International Health By Paul F. Basch, Oxford University Press

Reference Books:

- Health Care Systems around the world Characteristics, Issues, Reforms-Marie L. Lassey, William R. Lassey, Martin J. Jinks, -Pearson, 1996
- World Health Organization 2013: Global Action Plan for the Prevention and Control of NonCommunicable Diseases, 2013-2020, WHO, Geneva, Switzerland

MPHL65 03:	Total Quality Management- Practical	L	T	P	C
		0	0	2	2

Course Description:

Total Quality Management - Practical introduces students to the principles and practices of Total Quality Management (TQM) with a practical focus. The course covers quality management systems, quality control measures, statistical quality control techniques, data quality assurance, data management and analysis, data visualization, quality improvement principles, Lean Six Sigma methodologies and root cause analysis. Field visits to various organizations enhance practical understanding of quality management in real-world settings.

Course Objectives:

- To familiarize students with the components and implementation of quality management systems.
- To enable students to apply and understand quality control measures and techniques.
- To equip students with statistical quality control techniques for process improvement.
- To train students in data quality assurance techniques and data management.
- To introduce students to quality improvement principles and methodologies like Lean Six Sigma and root cause analysis.

List of experiments - Practical:

- **Quality Management System:** Students will apply and get exposure to the quality management system and its components, such as quality policy, quality objectives, quality manual and quality procedures.
- **Quality Control Measures:** Students will apply and get exposure to quality control measures such as sampling, testing and inspection, to ensure the accuracy and reliability of results.
- **Statistical Quality Control:** Students will apply and get exposure to statistical quality control techniques such as control charts, process capability analysis and statistical process control, to monitor and improve the quality of processes and products.
- **Data Quality Assurance Techniques:** Students will apply and get exposure to data quality assurance techniques such as data cleaning, verification, validation and analysis, to ensure data accuracy and reliability.
- **Data Management and Analysis:** Students will apply and get exposure to data management and analysis techniques such as database management, data mining and statistical analysis, to ensure data quality and improve decision-making.

- **Data Visualization:** Students will apply and get exposure to about data visualization techniques such as graphs, charts and tables, to communicate data insights effectively.

- **Quality Improvement Principles**: Students will apply and get exposure to quality improvement principles such as continuous improvement, customer focus and leadership commitment, to improve the quality of processes and products.

- **Lean Six Sigma:** Students will apply and get exposure to Lean Six Sigma methodologies such as DMAIC (Define, Measure, Analyze, Improve, Control), to identify and eliminate process variations and defects.

- **Root Cause Analysis:** Students will apply and get exposure to about root cause analysis techniques such as fishbone diagrams, 5 Whys and fault tree analysis, to identify and address the underlying causes of problems.

Field Visits:

- **Public Health Laboratory:** Students can visit a public health laboratory and learn about the quality control measures implemented to ensure the accuracy and reliability of test results. Students can also learn about the quality management system in place to identify and address errors and deviations.

- **Quality Control in a Food Manufacturing Company:** Students can visit a food manufacturing company and learn about quality control measures implemented to ensure the safety and quality of food products. Students can also learn about quality management systems in place to identify and address errors and deviations.

- **Public Health Department:** Students can visit a public health department or agency and learn about the quality assurance measures implemented for public health surveillance systems, such as disease reporting and outbreak investigations.

- **Data-Driven Organization:** Students can visit a data-driven organization such as a research center and learn about data quality assurance techniques such as data cleaning, verification, validation and analysis, to ensure data accuracy and reliability.

- **Hospital Quality Management:** Students can visit a hospital and learn about the quality management system in place to ensure patient safety and satisfaction. This could include visiting different departments and learning about quality improvement initiatives and patient feedback mechanisms.

- **Community-Based Quality Improvement:** Students can visit a community-based organization and learn about the quality improvement initiatives in place to improve health outcomes in the community. This could include learning about community needs assessment, program development and implementation and program evaluation.

Course Outcomes:

By the end of this course, students will be able to:

- Implement and articulate the components of a quality management system.
- Apply quality control measures effectively to ensure product and process reliability.
- Utilize statistical quality control techniques to monitor and improve process performance.
- Apply data quality assurance techniques to ensure accuracy and reliability of data.
- Implement quality improvement methodologies such as Lean Six Sigma and root cause analysis to enhance organizational processes.

Textbooks:

- Total Quality Management: Text with Cases" by Dale H. Besterfield, Pearson Education.
- Quality Management for Organizational Excellence: Introduction to Total Quality" by David L. Goetsch and Stanley Davis, Pearson Education.

Reference Books:

- Lean Six Sigma for Dummies" by John Morgan and Martin Brenig-Jones, Wiley.
- The Six Sigma Handbook, Fourth Edition" by Thomas Pyzdek and Paul Keller, McGraw-Hill Education.
- Statistical Quality Control" by Eugene L. Grant and Richard S. Leavenworth, McGraw-Hill Education.

MPHL65 04:	Public Health Surveillance - Practical	L	T	P	C
		0	0	2	2

Course Description:

The course Public Health Surveillance and Information Systems provides students with practical skills and knowledge in managing and utilizing public health surveillance data and information systems. Emphasis is placed on understanding major surveillance systems, designing information systems and evaluating their effectiveness in public health practice.

Course Objectives:

- To familiarize students with major public health surveillance systems and data sources.
- To develop skills in collecting, analyzing and interpreting surveillance data using statistical software.
- To understand the design and implementation of public health information systems.
- To assess the impact of health information systems on clinical care and public health outcomes.
- To conduct a research project or program evaluation focused on public health surveillance or information systems.

List of experiments - Practical:

I. Overview of major public health surveillance systems and data sources

Practical Exercise: Surveillance Data Collection and Analysis

- Students will participate in a group exercise to collect, analyze and interpret data from a mock public health surveillance system.
- Data analysis using statistical software such as Jamovi or SPSS
- Students will develop and present a report on their findings and conclusions

Field Visit 1: Public Health Agency

- Visit a public health agency that collects and analyzes surveillance data in the local area.
- Observe how data is collected and processed and how it informs public health decisions and interventions.
- Discuss challenges and opportunities in surveillance data collection, analysis and utilization.

II. Public Health Information Systems

- Overview of major public health information systems and data sources

Practical Exercise: Health Information System Design and Implementation

- Students will work in groups to design and implement a mock public health information system for a specific public health issue.
- Students will use design thinking methodologies to understand user needs and develop a user-centered system.
- Students will develop and present a report on their system design and implementation plan.

Field Visit 2: Health Information System Implementation Site

- Visit a health care facility or public health agency that has implemented an electronic health record or other health information system.
- Observe how the system is used in practice and how it impacts clinical care and public health outcomes.
- Discuss challenges and opportunities in health information system design, implementation and evaluation.

III. Final Project: Public Health Surveillance and Information System Evaluation

- Students will develop a research project or program evaluation focused on public health surveillance and/or information systems.
- Students will use relevant methods to evaluate the effectiveness and/or efficiency of a specific surveillance or information system, or propose improvements to an existing system.
- Students will present their findings and conclusions in a final report or presentation.

Course Outcomes:

By the end of this course, students will be able to:

- Describe major public health surveillance systems and their roles in monitoring population health.
- Collect, analyze and interpret data from public health surveillance systems using appropriate statistical software.
- Design and implement a mock public health information system addressing a specific public health issue.
- Evaluate the effectiveness and efficiency of public health surveillance or information systems.
- Propose improvements to existing public health surveillance or information systems based on evaluation findings.

Textbooks:

- Principles and Practice of Public Health Surveillance by Lisa M. Lee and Steven M. Teutsch, Oxford University Press.
- Public Health Informatics and Information Systems by Patrick W. O'Carroll et al., Springer.

Reference Books:

- Epidemiology and Public Health Informatics by Daniel E. Ford and E. William Driebe, Springer.
- Surveillance in Health and Disease by David L. Heymann, CABI.
- Health Informatics: Practical Guide for Healthcare and Information Technology Professionals by Robert E. Hoyt and Ann K. Yoshihashi, Lulu Press.

Second Year

Third Semester

MPHT75 11: Research Methodology **L T P C**

3 1 0 4

Course Description:

The course is aimed at developing a clear understanding of the theory, techniques and applications of research methods. It would equip the participants with a scientific temper

Course Objectives: -

- Able to examine the reasons for using procedures/techniques in research.
- Able to identify an appropriate topic for their master's dissertation
- Framing research questions, selecting appropriate study design and methods of data collection
- Able to analyze and write basic research reports

Unit 1 **10 hours**

Introduction to Research Methodology: Definition, Objectives of Research, Types of Research, Importance of Research in Public Health, Research Design, Features of a good Research, Research Proposal: Identification & Formulation of a Research Problem, Research Methods, Qualitative (Development of conceptual framework & Qualitative methods: FGDs, in-depth interviews, ethnographies, participatory methods, participant observation etc. Data collection & Recording), Quantitative: Statistical Methods in Public Health Research, Application and Interpretation

Unit 2 **10 hours**

Sampling and survey methods, Selecting a Sample size, Survey design & Planning, Interview schedule, questionnaire construction, validation etc, Research Data Collection, Management, Coding procedures, Participatory Research and Analysis (PRA) Methods, Ethical Aspects in Health Research and Clinical trials.

Unit 3 **12 hours**

Parametric tests, Analyzing Small and large Samples: t- tests, Z – tests and Chi- square, Distribution, Estimation of Population Parameters – Standard Errors, Confidence Intervals, Tests of Significance, Bibliography: Writing Review of literature and Bibliography

Unit 4 **13 hours**

Testing of Hypothesis and Significance, Introduction & Concept of Errors, Parametric Tests– Small samples & large samples & Quantitative and qualitative data, ANOVA, F test, Multivariate Analysis

Unit 5 **15 hours**

Non-parametric Tests, Correlation – Concept and Computation of Correlation Coefficient, Regression - Concept and Computation of Regression Coefficient, Application of statistical software's in data management and analysis – SPSS, Istat, Systat etc.

Course Outcomes / Competencies:

At the end of the course the student will be

- Able to examine the reasons for using procedures/techniques in research.
- Able to identify an appropriate topic for their master's dissertation
- Framing research questions, selecting appropriate study design and methods of data collection
- Able to analyze and write basic research reports

Text Books:

- Research Methodology, Pannneerselvan, PHI Publications,
- Kothari C R. Research Methodology Methods & Techniques. New Age International Private Ltd., New Delhi:2000

Reference Books:

- Research Methodology by A.P.Kulkarni Power Publication, Calcutta
- Health Research Methods – A Guide for Training in Research Methods, World Health Organization, Manila, 2001
- Fundamentals of Research Methodology for Health Care Professionals. -Second Edition. Hilla Brink,

Program Elective I : Epidemiology

MPHT75 12: Occupational Health

L	T	P	C
2	1	0	3

Course Description:

The course provides an introduction to basic core concepts of occupational health. Work-related health disorders and diseases that arise in their working environment. Students will be introduced to major occupational health related diseases including those of the musculoskeletal system, the lungs and the skin, as well as accidents. Overall, this course is intended to allow students to understand the interaction of the workplace and environment on the health and well-being of the workforce**.**

Course Objectives:

- To ensure and understand the occupational environment and diseases related to it.
- To appraise the role of Public Health professionals in occupational health risk assessment
- To understand and describe occupational hazards and its prevention

Unit 1 **12 hours**

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

Unit 2 **5 hours**

Fundamentals of Occupational health and work safety , Meaning and Scope Evolution , Basic principles in the application of Occupational Health and Safety at the workplace ,Promotion of healthy and safe workplaces, Prevention of diseases, Protection of workers' health and well being and early diagnosis of work related disorders and diseases. Taking an Occupational History from a Worker or Patient with case examples. Basic concepts in screening of occupational diseases are presented.

Unit 3 **10 hours**

Occupations hazards and Diseases, Occupational Lung Diseases (pneumoconiosis (asbestosis, silicosis and coal worker's pneumoconiosis); asthma, hypersensitivity pneumonitis, byssinosis and inhalation fevers.), Occupational Cancers and Occupational Exposure to Solvents o Basic concepts of carcinogenesis, major occupational cancers, Metals in the Workplace o Exposure and toxicity from major workplace metals, Sick Building Syndrome vs. Building- related Illness, Idiopathic Environmental Intolerance and other subjective syndromes, Hazardous Materials and Chemical Emergencies, Exposure to

hazardous materials and acute health effects from exposures, Chemical emergencies at the workplace, Emergency measures and first aid, Basic initial treatment of chemical emergencies,

Unit 4 **10 hours**

Cardiovascular Diseases and Workplace Health & Productivity, How does the working environment influence the risk of cardiovascular diseases?, What occupations and occupational factors have been associated with a higher risk for cardiovascular diseases?, Health productivity management, Definition of absenteeism and presenteeism, Justification for workplace health promotion activities, Popular workplace health promotion programs: preventive screenings, smoking cessation, fitness, weight management, disease management, Occupational Dermatology and Shift Work and Sleep Disorders and Work

Unit 5 **8 hours**

Occupational noise exposure and hearing loss, Exposure to and health effects from extremes of temperature, pressure, vibration, radiation, etc. Musculoskeletal Disorders o Low back pain, neck pain, cumulative trauma disorders, rotator cuff disorders, epicondylitis, carpal tunnel syndrome.

Course Out-comes / Competencies gained

End of the course completion student would be

- Understand the occupational hazards and causes of occupational environment and diseases related to it.
- Appraise the role of Public Health professionals in occupational health risk assessment
- Understand and describe occupational hazards and its prevention
- Identify some of the major Occupational hazard and safety precautionary measures .

Text Books

- Textbook of Clinical and Environmental Medicine, 2nd Edition, 2004, by Linda Rosenstock, Mark Cullen, Carl Brodkin and Carrie Redlich
- Environmental & Occupational Medicine, 4th Edition, 2007, by William N. Rom (Editor)

Reference Books

- 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

L	T	P	C
2	1	0	3

MPHT75 13: Application of Quantitative and Qualitative research methods in Public Health

Course Description:

This course aims to provide expose to research methods, concepts and techniques that are used in public health. To improve student skills in the area of basics statistics, use of software in analysis and evaluation of public health information. By understanding the concept of analytical statistics by using appropriate research method for study

Course Objectives: -

- To introduce overview of software used in public health data analysis and its applications
- To understand about application and indications of various statistical tests
- To understand survey methods used in qualitative and quantitative data
- To acquaint with approaches in qualitative research To introduce students to quantitative research methods in public health including issues of ethics and biosafety
- To train students in the method of analysis of data and report writing. The information from this course will be subsequently used for planning health interventions
- To orient students about use of various qualitative data collection methods for use in public health research.
- To introduce various interpretive analytic approaches, explore their use and guide students in applying them to data.

Unit 1 **7 hours**

Introduction, Scope & Application of Statistics in Public Health, Overview of quantitative and qualitative research methods, Comparing quantitative & qualitative research methods, Recruitment in qualitative research, Survey methods: Quantitative and Qualitative methods used in public health surveys, Collection and presentation of Primary and secondary data.

Unit 2 **10 hours**

Queuing Theory: Introduction, Elements of Queuing systems, Operating Characteristics of Queuing sytem, classification of queuing models, Probability Distribution in queuing system Network Models: Evolution of OR, Application of O.R Techniques PERT, CPM. Advantages, limitations, Differences, Use in Resource Allocation

Unit 3 **10 hours**

Linear Programming: Introduction, Mathematical Formulation of a LPP, Graphical Solution Method, Various types of LPP and its applications in Public Health, Decision Tree Analysis: Introduction, Decision making Problems & Process, Decision under uncertainty or risk.

Unit 4 **10 hours**

Research Designs: Qualitative Research Methods and Participative Rural Appraisal (PRA),Introduction to qualitative research, Ethnography ,Phenomenology, Narrative Enquiry, Focus Group Discussions , In depth Interviews ,Recording qualitative interviews ,transcription ,analysis paradigms grounded theory methodology , content analysis , discourse analysis , Reflective analysis ,Qualitative data analysis software ,coding ,thematic analysis ,conceptual diagram ,Participative Rural Appraisal , social mapping , resource mapping ,time lines ,seasonal charts ,ranking ,structured observations ,Venn diagrams , Ethical issues in qualitative research

Unit 5 **8 hours**

Foundation of qualitative research and epistemology, Approaches in qualitative research: Substantive theory, Grounded theory approach, interpretivist approach, Role of theory in qualitative health research, Quality Control of qualitative data: setting standards, judging quality, validity and credibility, Analytic approaches, methods and techniques: Principles of analysis, Steps in analysis; thematic analysis, content analysis, narrative analysis, Computer assisted applications for qualitative analysis and Presenting, report writing and paper writing using qualitative data

Course Outcomes / Competencies:

End of the course student would

- Studied quantitative and qualitative research methods in public health including issues of ethics and biosafety
- Apply the method of analysis of data and report writing. The information from this course will be subsequently used for planning health interventions
- Able to use of various qualitative data collection methods for use in public health research.
- Able to define various interpretive analytic approaches, explore their use and guide students in applying them to data

Text Books:

- Ulin P, Robinson E, Tolley E. Qualitative Methods in Public Health : A field guide for Applied Research, Jossey Bass Pub, 2005
- Bryman, A., (1988). Quantity and Quality in Social Research. London: Unwin Hyman.

Reference Books:

- Ritchie J and Jane Lewis. 2003. Qualitative Research Practice. London. Sage Pub.
- Punch Keith. 2001. Introduction to Social Research: Quantitative and Qualitative Approaches. London. Sage pub.
- Auerbach, Carl F. and Louise B. Silverstein 2003 Qualitative Data: An Introduction to Coding and Analysis. New York: New York University Press.

MPHT75 14: Public Health Nutrition L T P C

2 1 0 3

Course Description:

This course provides an overview of concepts, principles and scope of practice of public health nutrition. Course focuses Principles of nutrition in health and disease, provides an integrated overview of the physiological requirements and functions of protein, energy and the major vitamins and minerals that are determinants of health and diseases in human populations

Course Objectives: -

- Understand the role of nutrients in the body.
- Explain the importance of food and nutrition in public health.
- Provide an overview of the major macro and micronutrients relevant to human health.

Unit 1 6 hours

Introduction to nutrition, Inter relationship between food, nutrients & health, Nutritional Status, Common terms related to nutrition, Classification, function, sources of Carbohydrates, Fibre, Lipids, Proteins, protein, Vitamins and Minerals

Unit 2 16 hours

Public health nutrition, Nutrition Transition: Demographic, economic transition, poverty alleviation, food consumption patterns, Under nutrition: global and Indian prevalence of under nutrition, risk factors consequences , Micronutrient deficiency disorders: prevalence, risk factors, Interventions that worked globally, lessons learnt, Over nutrition: Evolutionary principle, Obesity: prevalence and risk factors: Physical activity and inactivity, screening of those at nutritional risk, Life style diseases Interventions that worked globally, lessons learnt, Guidelines for prevention of non- communicable diseases

Unit 3 6 hours

Food Security, Factors affecting food security, economics food security and community development, Food security bill

Unit 4 18 hours

Nutritional Survey, Surveillance, Monitoring and Evaluation, Tools and Techniques: Anthropometry, Height and weight measurements, BMI, Z score, WHO software's: Anthro, Anthro plus, Circumference measurements- MUAC cut offs: SAM, MAM, Old classification in comparison with new. Other circumferential measurements- Skinfold measurement, Comparison to standards, Technical error of measurement, Growth charts- growth monitoring, Types of charts, target height, percentiles, deriving third percentile.

Unit 5 12 hours

Dietary and Nutrient intake analysis, Energy expenditure, energy balance, Diet recall, Food frequency, Weighment method, comparison with standards; Units of measurement in foods, Standardization of foods for portion sizes, Nutritional questionnaires, Nutritional screens -

Physical examinations for clinical signs and symptoms, Biochemical assessment methods, cut offs. Standards for comparison – RDA, NCHS standards, ICMR standards

Course Outcomes / Competencies:

Student would be familiar with the following concepts at the end of the course

- Will understand the role of nutrients in the body.
- Able to explain the importance of food and nutrition in public health.
- Able to provide an overview of the major macro and micronutrients relevant to human health

Text Books:

- Prescribed Text Book: Public Health Nutrition in Developing Countries Vol 1 and 2.- Edited by Sheila Chandra Vir. –Wood head Publishing India, 2008
- Text Book of Human Nutrition: -Mahtab S. Bamji, Kamala Krishnaswamy and GNV Brahman. Third Edition, -Oxford& IBH,2009

Reference Books:

- Advanced textbook on food and Nutrition: Dr. M Swaminathan, The Bangalore Publishing Co. Ltd. Bangalore, 1974
- Recent Trends in Nutrition: C Gopalan, Oxford University Press, New York 1993.
- Nutrition for Developing Countries: E. Savage King, Oxford University Press, Oxford, 1992

MPHT75 15: Reproductive and Child Health **L T P C**

2 1 0 3

Course Description:

This course introduces students to the essential components of reproductive maternal and child health and health care programme and discuss global and national maternal and child morbidity and mortality trends its important interventions to responsible for the change in trends

Course Objectives: -

- To understand the fundamentals of RMNCH+A
- To know the components of services under MCH
- To attain knowledge about adolescent health
- To understand the evolution process of MCH in India

Unit 1 **10 hours**

Women's , maternal Health, Burden of reproductive ill-health: unintended pregnancies, unsafe abortions, MTP act, non-sexually transmitted infections, infertility, violence against women, Evolution of the concept of reproductive health and its implications, Early human development and public health implications, Gametogenesis, fertilization, implantation, Fetal development, Preconception period , maternal and paternal risk factors for maternal and fetal outcomes ,

Unit 2 **9 hours**

Developmental origins of adult diseases, Antepartum – antenatal care and significance, physiological changes during pregnancy, complications of pregnancy, high risk pregnancy Intrapartum- stages of labour and delivery, components of labour, danger sign and management of labour complications of labour and delivery, Postpartum – care, complications of postpartum, Maternal morbidity and mortality; levels and causes of maternal mortality, Contraception, sterilization, population control

Unit 3 **10 hours**

Child Health, Levels and trends in child mortality , major causes of neonatal, infant and child mortality and public health interventions, Major causes of neonatal mortality; Preterm births, low birth weight and public health interventions ; birth defects, Common morbidities among young children; lower respiratory tract infections, diarrhoea, Immunization; coverage, factors, Infancy and child hood : Growth and development; physical, motor, cognitive, psycho-social and language development, Child nutrition,

Unit 4 **8 hours**

Adolescent & Sexual Health, Adolescent and Sexual Health relevance and challenges; The determinants of fertility and measurements; WHO 10 core Life Skills; Adolescent Sexuality and Pregnancy; psychological changes; Reproductive Tract Infections; Sexually Transmitted Infections and HIV/AIDS; Health Benefits of Family Planning; Methods of birth control; Contraceptive Behavior; Reproductive Health Indicators - couple protection rate; unmet need of family planning

Unit 5 **8 hours**

Policy and programmes, The main national and international interventions for prevention of reproductive and childhood/adolescent morbidity and mortality, including RMNCHA+, JSSK, RBSK, IYCF, IMNCI, maternity benefit schemes

Course Outcomes / Competencies:

End of the course student would

- Able to understand the fundamentals of RMNCH+A
- Gained knowledge about the components of services under MCH
- Explored knowledge about adolescent health
- Able to apply the evolution process of MCH in India

Text Books:

- Maternal And Child Health Programs, Problems and Policy in Public Health-3rd Edition by Jonathon Katoch, -Aspen Publications, Maryland, 2007
- A Strategic Approach to Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A) in India" by Ministry of Health & Family Welfare, Government of India, February 2013

Reference Books:

- Reproductive Health and Human Rights: Integrating Medicine, Ethics and Law" by Rebecca J. Cook, Bernard M. Dickens and Mahmoud F. Fathalla (Oxford University Press, 2003)
- Essential Reproductive Medicine" by Malcolm G. Potts and Roger Jeffries (Wiley-Blackwell, 2004)
- Maternal and Child Health Nursing: Care of the Childbearing and Childrearing Family" by Adele Pillitteri (Wolters Kluwer Health, 2017)

MPHT75 16: Public Health Environment

L	T	P	C
2	1	0	3

Course Description:

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

Course Objectives: -

- Learn the basic concepts of environmental health sciences and key environmental health issues.
- Understand the risk assessment concepts, used 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

Unit 1 **10 hours**

Environmental Impact On Human Health, Pollution Types, Health impact of pollution, global environmental concerns, multilateral efforts in reducing environmental degradation

Unit 2 **8 hours**

Environmental Epidemiology, Principles of Environment Epidemiology, Environment Risk assessment, Health Impact Assessment, Environmental research methods

Unit 3 **6 hours**

Conceptual frame work of Sustainable development, Importance of Sustainability in development, Threats for sustainable development. Challenges in adopting, sustainable strategies,

Unit 4 **10 hours**

Sustainable development Goals, Evolution of SDGs, Concept and Rationale for each of SDGs, Implication of SDG for Human development, Ethical basis for SDGs. Efficiency and sufficiency SDGs.

Unit 5 **11 hours**

Politics and Economics Sustainable development, Environmental protection and economic growth. Roles private sector and public sector in furthering sustainable development efforts, Challenges in combining sustainability and business success

Course Outcomes / Competencies:

All students would be able to perform the following concepts in the filed

- Learn the basic concepts of environmental health sciences and key environmental health issues.
- Understand the risk assessment concepts, used 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.

Text Books:

- Essentials of Environmental Epidemiology for Health Protection: A handbook for field professionals - Irene A.Kreis et al. First Edition OUP Oxford; 2012
- Environmental Health: From Global to Local" by Howard Frumkin (3rd Edition, Jossey-Bass, 2016)

Reference Books:

- Environmental Health Criteria. -WHO. 2005-WHO. 2005
- Topics in Environmental Epidemiology -Steen and Kyle-Oxford University Press 1997
- New York / London (W.W. Norton) Perman, Roger et al. (2011): Natural Resource and Environmental Economics, 4th ed., Harlow (Pearson)

MPHT75 17: Systematic Reviews and Meta-analysis

L	T	P	C
2	1	0	3

Course Description:

To familiarize student with the methods, involve in scientific research study and systematic review. For Measuring things that cannot be measured directly. To develop skills in planning process and synthetic of system native review and ensure protocol using open-source software

Course Objectives: -

- To understand the overview of systematic review and protocols
- To learn the planning process and synthesis of systematic reviews
- To study the application of systematic review in meta-analysis
- To explore the critical review steps

Unit 1 **10 hours**

Introduction to Systematic Review, Evidence based health care, role of systematic reviews in evidence based health care practice - Introduction to Systematic Reviews, Rationale, Potential and promise of systematic reviews, Principles and procedures of Systematic reviews, Advantages , Problems and limitations in conducting Systematic reviews – Types of systematic reviews – systematic review of observational studies, clinical trials and diagnostic studies – differences between narrative and systematic reviews

Unit 2 **12 hours**

Planning Process and synthesis of Systematic reviews, Planning a review, Protocol writing, searching for studies – search strategy, locating and selecting studies, assessing the quality of studies, assessing the risk of bias in included studies – Introduction to Review Manager (Rev Man) software for systematic reviews

Unit 3 **8 hours**

Introduction and process of Meta analysis, Introduction to Meta analysis, stages in Meta analysis, Minimizing error and bias, Criticisms of Meta analysis, advantages and limitations in Meta analysis

Unit 4 **10 hours**

Application of Meta analysis in systematic reviews –I, Systematic review and meta-analysis , statistical methods for combining results from several studies – weighted average, effect size based on means, effect size based on correlations, effect based on binary data, Forest Plot

Unit 5 **5 hours**

Application of Meta Analysis in Systematic Reviews – II, Model: Fixed effect model and random effect model, Diversity and Heterogeneity, Sensitivity analyses. Publication bias – meaning, detecting and managing publication bias – Funnel Plot. Critical review of systematic Reviews

Course Outcomes / Competencies:
End of the course student would able to

- Understand the overview of systematic review and protocols
- Able to understand the planning process and synthesis of systematic reviews
- Able to apply open source software for application of systematic review in meta-analysis
- Gained knowledge about critical review steps

Text Books:

- Cochrane Handbook for Systematic Reviews of Interventions, Julian PT Higgins and Sally Green, Oxford: Cochrane collaboration, 2011.
- Systematic Reviews and Meta-Analysis: A Practical Guide" by Julia H. Littell, Jacqueline Corcoran and Vijayan Pillai (Sage Publications, 2008)

Reference Books:

- Practical meta-analysis, Mark W. Lipsey, David B. Wilson, Sage Publications, 2001.
- The Handbook of Research Synthesis Harris Cooper and Larry V. Hedges , Russsel sage, 1994.
- Systematic Reviews and Meta-Analysis- Pocket guide to social work research methods, Julia H.
- Littell, Jacqueline Corcoran, Vijayan Pillai, Oxford Univ Press, 2008

MPHT75 18: Population Dynamics and Health

L	T	P	C
2	1	0	3

Course Description:

This course provides students with basic statistical concepts and techniques that are used in public health. Introduces the students to demography, basic techniques of demographic analysis. Students will familiarize in source of data available for demographic research, how population is changed by fertility, mortality and migration and how these affect population structure of a country

Course Objectives: -

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

- Identify appropriate sources of data
- Perform basic demographic analysis
- Compare population nd projections, interpret data using demographic methods

Unit 1 **8 hours**

Introduction: Definitions, Scope and nature, importance of the study, Historical review, difference and similarities between Demography and Population Sciences.

Unit 2 **9 hours**

Methods of Demographic Data Collection: Primary and Secondary sources of data collection, Procedures, Uses, Strengths and weakness of census, vital statistics, sample survey, duel reporting system – SRS, Data from national health program/disease surveillance, hospital statistics, police records, remand homes etc.

Unit 3 **9 hours**

Population composition: Gender composition, factors affecting sex composition, Age structure Population pyramids, impact of various demographic processes on the age structure. Comparison – developed and developing countries.

Unit 4 **8 hours**

Demographic transition Fertility: Determinants: Social economic, political, natural fertility levels and trends in India and world, Measures of fertility, Impact of level of fertility on reproductive health, selected theories of fertility, policies about fertility control. Mortality: Measures of mortality, Causes of Death: epidemiological perspective, Infant & neonatal mortality rates, maternal mortality, disease wise mortality, Trends of Mortality in India, differentials in mortality in developed and developing countries.

Unit 5 **11 hours**

Migration and urbanization: General terms and concepts, internal migration, measures of migration, Differential migration, International migration, Migration in India. Urban challenge of health and environment. Population Growth and Problems: Population growth, reasons for sudden growth in population, problems emerging out of that. Rural-urban distribution of

growth pattern, population growth and related problems. Population Policy: Health planning in terms of Family planning, Health services, Vital processes. Policies and programmes influencing demographic processes in the context in India's population.
Demographic dividend-Concept, scope and applications

Course Outcomes / Competencies:
After completion of the course the student would be

- Able to Identify appropriate sources of data
- Able to Perform basic demographic analysis
- Would be familiar in Comparing population and projections, interpret data using demographic methods.

Text Books:

- Principles of population Studies: Asha Bhende and Tara Kanitkar, Himalaya Pub, Houses, Mumbai, 1996
- Population: John Weeks, Wordsworth pub., California, USA,1994.

Reference Books

- Bouge Donald: Principles of Demography, Johnwiley & Sons, New York
- Asha A Bhende & Thara Kanitkar : Principles of population studies, Himalaya Publishing Hse.
- Agarwal S.N: India's population problems, Tata McGrew Hill, New Delhi

Program Electives -II
Health Management & Policy

MPHT75 19: Fundamentals of Health Planning & National Health Policies

L	T	P	C
2	1	0	3

Course Description:

To provide the students a basic insight into the main features of Indian health care delivery system and how it compares with the other systems of the world

Course Objectives: -

- To equips the students with the necessary skills to understand the health problem Scenario
- To develop appropriately focused strategies through introducing national policies
- To provide holistic overview Health system in India, for planning, implementing and analyzing policy

Unit 1 **8 hours**

Concept of health policy

Normative and value base of health policy; Formulation of health policy factors to be considered: interest groups; regional variation and requirements; health policy in the context of market economy and globalization; Implementation of health policy; Role of central and state governments; Role of non- governmental sector.

Unit 2 **5 hours**

Health policy analysis

National Health Policy; National Drug Policy; National Population Policy; National Medical Education Policy.

Unit 3 **11 hours**

Health policy and planning

Policies and programs, policy formulation, policy development / assessment process. Frameworks for policy analysis and policy evaluation. Case studies of various public health policies, Policy implementation plans

Unit 4 **9 hours**

Healthcare Legislation in India:

Legal aspects of healthcare, the Medical, Termination of Pregnancy Act, The maternity benefit act, The immoral traffic, (prevention) act, The transplantation of human organs act, PNDT Act, The registration of birth and Death act, The child labour (prohibition and regulation) act, Biomedical waste Rules, COPRA Act, Indian factories act, ESI act.

Unit 5 **12 hours**

Health Planning in India

Committees, Planning commission, Five year plans, Health for all, Universal Health Coverage, National Population Policy, Public Health Declarations, Jakarta Health Declaration Ottawa Charter, Alma-Ata Declaration, Social marketing, Medical audit, Social audit – Performance Appraisal, Health Insurance

Course Outcomes / Competencies:

End of the course student would

- Able to explored the necessary skills to understand the health problem Scenario
- Able to understand appropriately focused strategies through introducing national policies
- Expose into provide holistic overview Health system in India, for planning, implementing and analyzing policy

Text Books:

- Health Planning in India by G. Ramachandrud
- Health Policies and Programmes in India-Dr D K Taneja, 12th edition-Doctors' Publication, 2013

Reference Books:

- National Health and Research Policy Documents
- Expert Committee Report on Public Health Systems in India 1996
- Collins, C., Green, A., 2014. Valuing Health Systems: A Framework for Low and Middle Income Countries. SAGE Publications.

MPHT75 20: Public Health Economics

L	T	P	C
2	1	0	3

Course Description:

Public Health Economics provides a comprehensive exploration of economic principles applied to public health systems and policies. The course covers fundamental concepts such as health economics, demand and supply for healthcare services, economic analysis techniques, health care financing and various health financing models.

Course Objectives:

- To introduce students to the fundamental principles and concepts of health economics.
- To analyze demand and supply dynamics in healthcare services.
- To conduct economic evaluations and understand efficiency metrics such as QALY and DALY.
- To explore different health financing mechanisms and their implications for equity and efficiency.
- To examine various health financing models and their impact on resource allocation and healthcare delivery**.**

Unit 1 **8hrs**

Fundamentals of Health Economics

Introduction to health economics, opportunity cost, Goods and services in public health- merit good, public good or social good, actors and institutions in health care, Informational asymmetry and concept of agency, Supplier induced demand, Monopolies and incomplete market, Efficiency- technical efficiency, cost effective efficiency, allocative efficiency.

Unit 2 **10hrs**

Demand and Supply for Health Care Services

Marginal Analysis,Cost analysis- catastrophic payments. Equity and equality- health outcomes, Market concept- Concept of demand- Need and demand; Concept of Supply- Analyzing supply and supply shifters, Elasticity of supply, Supply of health services, Interaction of supply and Demand, Effective allocation of society's resources, Consumers' and Producer's surplus, Issues in the interactions of supply and demand in health care days

Unit 3 **10hrs**

Economic Analysis

Economic Evaluation of Efficiency, When to use which Technique, Component of Economic Evaluation, QALY, DALY, Measuring health inequalities- Quintile, concentration curve, concentration index, benefit incidence analysis, SES, SES data collection methods, SES scales

Unit 4 **10hrs**

Health Care Financing Concepts How much we are spending, The three functions of health financing, Types of Financing-General revenue, Insurance, Community financing, Out of pocket payment and user fee, External source of finance, Equity, What Is Risk-Pooling and Why Is It Needed?, The Levels of Risk-Pooling, contracting in, contracting out

Unit 5 **7hrs**

Health Financing Models

Supply side and demand side financing, General Revenue-Based Systems, Social Health Insurance, Community Health Insurance, Private Health Insurance, resource allocation, Organization of resource allocation, Provider payment methods, Hospital Payment Method, Contracting, The effect of payment systems on patients

Course Outcomes:

By the end of this course, students will be able to:

- Explain the basic principles and concepts of health economics and their application in public health.
- Analyze demand and supply factors affecting healthcare services, including elasticity and efficiency.
- Perform economic evaluations using techniques such as QALY, DALY and benefit incidence analysis.
- Evaluate different health financing mechanisms and their roles in achieving equitable healthcare access.
- Critically assess health financing models and their implications for healthcare resource allocation and provider payment systems.

Textbooks:

- Health Financing Revisited" by Pablo Gottret and George Schieber, The World Bank, 2006.
- A Primer of Health Economics" by V.R. Ramankutty, Allied Publishers Pvt. Ltd., 2010.

Reference Books:

- Health Economics" by Pushpalata Pattnaik, Black Print/Wisdom Press, 2010.
- Health Care Economics: 7th Edition" by Paul J. Feldstein, Delmar Cengage Learning, 2012.
- Health Care Economics and Health Care Management" by I. Sundar, Serials Publications, New Delhi, 2012.

MPHT75 21: Health Insurance & Managed Care

L	T	P	C
2	1	0	3

Course Description:

This is course to provide a comprehensive Evolution of Health Insurance in India, Social security Schemes in India, role of (IRDA) Insurance Regulatory Authority of India along with in-depth knowledge of health insurance products.

Course Objectives: -

- To understand the historical evolution of health insurance globally and in India.
- To explore the landscape of social security schemes in India, including CGHS, ESI and government insurance schemes.
- To examine the regulatory role and functions of IRDA in managing health insurance in India.
- To analyze different types of health insurance products and their features.
- To evaluate the impact of health insurance on economic development and healthcare delivery systems.

Unit 1 **9 hours**

Early Days and Development of Insurance in India, Evolution: Insurance in early days, Different forms of Insurance, Lloyds, The Insurance business, Evolution of the insurance concept as a specific economic, commercial activity, Evolution of the insurance market, Development of Insurance in India Growth and evolution of insurance as a specific economic, commercial activity in India Early Days, Insurance Companies, Nationalist movement and insurance, Insurance Legislation, The Insurance Act, 1938 ,Amendments in 1950

Unit 2 **8 hours**

Introduction to insurance: History and Evolution of Insurance in India, Principles of insurance, Insurance documentation. Health Insurance: Concept of Asset, Risk & Pooling. Insurance for the Patient, Premium and factors influencing premium for various policies. Managed Care: The Key "Ingredients" of Managed Care, Health insurance products, Professional Indemnity Schemes for doctors, Medical Care system & Health Insurance System in different countries (USA, UK, India) Role of Insurance in Economic Development of a country

Unit 3 **8 hours**

Evolution of Health Insurance in India, Social security Schemes in India– CGHS, ESI, Insurance schemes: RSBY, JSY, Pradhan Mantri Suraksha Bima Yojana

Unit 4 **10 hours**

Insurance Regulatory Authority of India (IRDA): Role, function and Control, Third Party Administration- Function, Importance & Challenges, TPA: Intermediary between provider & Patient, Role of Health Insurance companies

Unit 5 **10 hours**

Health Insurance Products, Products sold by General Insurers, Product design, Types of Products, individual, family, group, indemnity, medical expenses, fixed benefit, major illness, top up, catastrophe covers, accidental and disability benefits, overseas health insurance, tailor made covers, key features, coverage, exclusions pricing and premium setting, different variants in market cost sharing mechanisms - value added services

Course Outcomes / Competencies:

By the end of this course, students will be able to:

- Trace the historical development of health insurance from early concepts to its current forms.
- Identify and discuss major social security schemes and insurance initiatives in India.
- Explain the regulatory framework established by IRDA and its role in managing health insurance.
- Analyze various health insurance products, their design, coverage and pricing strategies.
- Assess the economic implications of health insurance and its role in healthcare financing and delivery.

Textbooks:

- IRDA Regulations on Health Insurance", Government of India, New Delhi.
- Insurance Industry: The Current Scenario" edited by U. Jawaharlal, ICFAI University Press.

Reference Books:

- Fundamentals of Health Insurance: A General Textbook" by D. Razdan, 2012.
- Understanding Health Insurance" by Jo Ann C. Rowell, 2012.
- Health Insurance in India: Evolution, Regulatory Challenges and Prospects" by S. Kumar and R. Singh, Springer, 2019.

MPHT75 22: Logistics and Supply Chain Management

L	T	P	C
2	1	0	3

Course Description:

This course aims to introduce overview of system of principle, quality assurance, supply chain, network design, skills for effective transportation in Humanitarian Supply Management and Logistics in the Health Sector

Course Objectives: -

- To introduce the principle, definition and logistic in health program
- To explore the inventory management, quality assurance in components of distribution system
- To study the logistic Management information system
- To understand the humanitarian Supply Management and Logistics in the Health Sector

Unit 1 **10 hours**

Introduction to Logistics Management Logistics- Key Logistics Terms and Definitions, Logistic in health program, Commodity Security, Basics of supply chain management, 7 "C's" of Commodity Security, Six Rights Ensure Customer Service, Selecting Products, Factors to Consider When Selecting a Product, Steps in Quantifying Commodity Requirements, Forecasting Commodities

Unit 2 **11 hours**

Standard Supply Chain Functions, Network design, Demand forecasting, Supply demand planning, Product procurement, Transportation procurement , Transportation planning, Transportation management , Trade compliance , Warehouse management , Inventory management, Order management , Customer management, Building a Supply Plan Financing Your Forecast, Procurement, Phases of Procurement, Inventory Management, Inventory Control Systems, Quality Assurance, Components of a Distribution System, Rationing

Unit 3 **9 hours**

Supply Chain Management in PH, Johns Snow Inc Framework (JSI) for integrated supply chain management, Principles and practices in supply chain management, characteristics of integrated supply chain management, sequential phases of integration ad hoc phase, organized phase, integrated phase, institutionalizing supply chain management. Supply chain integration framework, Impact of Logistics on Health Programs, Strategic Pathway to Reproductive Health Commodity Security Framework

Unit 4 **10 hours**

Logistics Management Information System, Integrated and Vertical Logistics Systems, Integrated Supply Chain Management for Public Health, Monitoring, Stock Status and Procurement Plans, Role of Leaders and Policymakers in Logistics

Unit 5 **5 hours**

Logistics and Disaster, Introduction to humanitarian logistics, Humanitarian logistics components, procurement, distribution, assessment, Humanitarian supply chain, Humanitarian Supply Management and Logistics in the Health Sector

Course Outcomes / Competencies:

End of the course student would

- Able to understand the principle, definition and logistic in health program
- Explored the inventory management, quality assurance in components of distribution system
- Able to understand the logistic Management information system
- Able to understand the humanitarian Supply Management and Logistics in the Health Sector

Text books:

- Supply Chain Management: Strategy, Planning and Operation by Sunil Chopra and Peter Meindel (Prentice Hall of India, 2002)
- Logistics Management in Health Programs by Rakesh Singh (Oxford University Press India, 2015)

Reference books:

- Quantitative Models for Supply Chain Management. Sridhar Tayur, Ram Ganeshan, Michael Magazine (editors), 2003
- Introduction to Supply Chain Management R.B. Handfield and E.L. Nochols, 2006
- Logistics Management for Health Services" by Dr. Ravi Shankar (Jaypee Brothers Medical Publishers, 2018)

MPHT75 23: Managing Human Resources For Health

L	T	P	C
2	1	0	3

Course Description:

This course is providing some experience in the healthcare industry with an interest in understanding and fully utilizing Human Resources (HR) function in health care organizations. Focused on Human capital in an organization through the management of people-related activities. Introduced to leadership, values, employment planning, recruiting and selecting employees, training and compensating them and evaluating their performance.

Course Objectives: -

- To provide Strategic importance and impact of HR in meeting an organization's mission and vision,
- To study Organizational-development initiatives that make HR the strategic business partner organizations
- To understand Value HR brings to the organization.
- To expose the functional areas within HR and how they contribute to the fully functional human resources program that supports the organization's goals and objectives

Unit 1 **6 hours**

Introduction to Human Resource Management, Introduction and Course Overview, Human Resources Management, Strategic Human Resources in healthcare organization, strategies and align organizational design to support and achieve an organization's mission and vision. Healthcare Professionals/Credentialing, Workforce Planning and Strategic Issues, Organizational Culture, Leadership Healthcare Workforce Planning, Diversity in the Workforce, Issues and Human Resources Management

Unit 2 **12 hours**

Staffing and Compensation & Benefits, HR as a strategic tool: Staffing & Manpower planning in Healthcare Institutions, Systems Approach to Staffing, Staff Recruitment & Selection, Training and Development, Training Needs, Types of Training. Case presentation and discussion with reference to Health Sector, Job Design and Job Analysis, Staff Retention, Succession Planning, Compensation Administration, Benefits Administration, Labor Relations and Employee Relations

Unit 3 **6 hours**

Performance Management and Human Resource Development, Getting to Yes – Conflict Resolution, Training and Development of Staff, Manage and lead people, teams and organizations, including the ability to work effectively with diverse colleagues to build inclusive organizations. human Resources Performance, Measurement Performance and Accountability

Unit 4 **9 hours**

Global Human Resource Management & Future Issues, Social determinants of health and work collaboratively with leaders across sectors, disparities and inequities and to promote population and community health. Evidence-based management practices to improve managerial decision-making and organizational performance,

Unit 5 **12 hours**

Declining productivity, substantial demographic shifts, changing employee attitudes and expectations, innovation technologies, Financial management for healthcare organizations, accounting and budgeting practices, Communicate effectively with diverse stakeholders using a variety of communication approaches, innovations to improve organizational performance and population health. Manage and behave legally and ethically in a complex, highly-regulated healthcare environment

Course Outcomes / Competencies:

End of the course student would able to

- Understand Strategic importance and impact of HR in meeting an organization's mission and vision,
- Able to understand Organizational-development initiatives that make HR the strategic business partner organizations
- Understand Value HR brings to the organization.
- Expose to functional areas within HR and how they contribute to the fully functional human resources program that supports the organization’s goals and objectives

Text Books:

- Human Resource & Personnel Management by K. Aswathappa, Tata McGraw-Hill Education.
- Managing Human Resources by Luis R. Gomez-Mejia, David B. Balkin, Robert L. Cardy, Pearson Education.
-

Reference Books:

- Fried, Bruce and Fottler, Myron. (2008). Human Resources in Healthcare: Managing for Success, 3rd Ed. Health Administration Press.
- Fried, B., & Fottler, M. D. Human Resources in Healthcare: Managing for Success (4th ed.). Chicago, IL: Health Administration Press, 2015
- Ellis L, Morrow D, Bradley A. Case 3: Performance feedback now and then. In: Fried BJ,

MPHT75 24: Disaster Risk Reduction And Management

L	T	P	C
2	1	0	3

Course Description:

The course provides an in-depth understanding of the fundamental concepts and strategies related to disaster management. The course covers various types of disasters, their historical context and modern approaches to disaster risk reduction and management. Students will learn about hazard analysis, risk assessment, mitigation strategies, preparedness, response, recovery and the role of various agencies in disaster management. This course aims to equip students with the knowledge and skills necessary to effectively manage and mitigate the impacts of disasters.

Course Objectives:

- To understand the basic concepts and definitions related to disaster management and risk reduction.
- To identify and analyze various hazards and assess their potential impacts.
- To evaluate risk components and develop appropriate mitigation strategies.
- To comprehend the preparedness and response mechanisms for managing disasters.
- To explore the roles of government, international organizations, NGOs and individuals in disaster management.

Unit 1 **8 hrs**

Introduction to Disaster management, Disaster definition, types of disasters, Disasters in history, Disaster trends, Modern disaster management, Hazards, Hazards identification and profiling, Hazard analysis.

Unit 2 **7 hrs**

Risk, Risk and vulnerability, Components of risk, Risk perception and evaluation, **Mitigation,** Types of mitigation: structural and non-structural, Obstacles, Assessing and selecting mitigation options, Emergency response and risk mitigation

Unit 3 **10hrs**

Preparedness, Overview of disaster preparedness, Government Preparedness, Public preparedness, Media, Obstacles, **Response,** What is response (DN), Response to emergency, Recognition pre disaster action, Recognition –post disaster, Provision of water, food, shelter, healthcare, Water management, Media response, **Recovery,** Effects of disaster on society, Components of recovery, Types of recovery.

Unit 4 **10 hrs**

Agencies, Role of government in disaster management, Government disaster management agencies, Organization structure, International organization, Bilateral organizations, Role of NGOs and individuals

Unit 5 **10 hrs**

Introduction to Emergency Planning, Contexts of Emergency Planning, Emergency Planning Process, Mandates, Structure and Guidelines, Human Behaviour in Disasters: What a Planner Must Know, Emergency Planning Conditions and considerations, Analyzing and Selecting Protective Actions: How to Make Effective Choices, The Content and Format of Emergency Plans, Continuity of Operations Plans, Population Warning: Behavioral Foundations and Practical Applications, Structures for Managing Emergency Response: Executing Emergency Plan Provisions

Course Outcomes:

By the end of this course, students will be able to:

- Define and classify different types of disasters and understand their historical and modern contexts.
- Identify and profile hazards and conduct hazard analysis to determine potential risks.
- Assess risk components, understand risk perception and implement structural and non-structural mitigation measures.
- Develop and evaluate preparedness plans and understand the response and recovery processes in disaster management.
- Recognize the roles and responsibilities of various agencies and stakeholders involved in disaster risk reduction and management.

Textbooks:

- Introduction to International Disaster Management" by Damon P. Coppola, Butterworth-Heinemann, 2006.
- Emergency Planning" by Ronald W. Perry and Michael K. Lindell, John Wiley & Sons, 2007.

Reference Books:

- Disaster Management and Preparedness" by Larry R. Collins, CRC Press, 2000.
- Handbook of Disaster Research" by Havidan Rodriguez, Enrico L. Quarantelli and Russell R. Dynes, Springer, 2007.
- The Role of NGOs in Disaster Risk Reduction and Management" by Rajib Shaw, UNISDR, 2012.

MPHT75 25: Gender issue in Public Health **L T P C**

2 1 0 3

Course Description:

To introduce students to the concept of gender and importance of gender issues in in public health practice and research and policy planning

Course Objectives:

- To understand basic concepts like gender and sex and inequality and inequity
- To study the gender as a social determinant of health.
- To learn that how far male and female roles and status affects not only each other's health but also the whole population.

Unit 1 **7 hours**

Gender and Health, 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.

Unit 2 **10 hours**

Women's Health, Life cycle approach, Safe Motherhood Initiative; Concepts, definition, measures and models; Maternal morbidity and mortality causes, determinants of MMR; Essential antenatal, perinatal and postnatal care; 3 delay model; Customs, norms, attitudes and practices pertaining to various aspects of women's health like Menstruation, puberty and menopause. Role and involvement of men in RH.

Unit 3 **8 hours**

Vulnerability by different factors, Race and ethnicity (Tribal, Dalits, Indigenous populations), Gender (male, female, transgender), Geographical area (rural/urban, remote & hilly areas), Age (Child, adolescent, elderly), Disability (Physical & Mental – Social and health inequalities) Migration & Displacement, Stigma and Discrimination (PLW HIV/AIDS, Sexual Minorities, Sex workers), High Risk Occupations (Farmers-Farm workers, Industrial workers, Mining workers, Sex Workers, Child Labour, Street Children) Environment, War and Natural Calamities .

Unit 4 **10 hours**

Violation of right to health of vulnerable populations- Concept of gender, Social structure and gender, Gender discrimination, Consequences of gender discrimination on health, Gender in the context of development, Violence against women, Girl trafficking, Global issues related to gender, Legal aspects and acts related to gender: MTP, PNDT, Prostitution, homosexuality etc.

Unit 5 **10 hours**

Issues related to Children and Adolescent, Child abuse/Child labour/Street Children & malnutrition, Girl Trafficking & anemia in adolescents, reproductive rights of adolescents. Health inequality and health care disparities among vulnerable populations Advocacy of health and human rights of vulnerable groups, Public health preparedness of vulnerable populations,

Vulnerable populations in medical/health research, Assessment & addressing the needs of vulnerable populations, Special schemes, projects, programs for vulnerable populations, International aid agencies supporting vulnerable populations

Course Outcomes / Competencies:

At the end of the course, the student will be

- Able to understand basic concepts like gender and sex and inequality and inequity.
- Describe gender as a social determinant of health.
- Able to understand, how far male and female roles and status affects not only each other's health but also the whole population.

Text Books:

- Adolescent and Youth reproductive health in India -Gupta SD-ICMR, 2005
- Maternal And Child Health Programs, Problems and Policy in Public Health-3rd Edition by Jonathon Katoch, -Aspen Publications, Maryland, 2007

Reference Books:

- Public Health Preparedness and Response for at-risk populations by Anne Rader, Margo Edmunds, John Bishop, Booz Allen Hamilton Publications
- Rieker and Bird (2005) Rethinking gender differences in health: Why we need to integrate social and biological perspectives. Journal of Gerontology. Series B. 60B, II, 40-47.
- Fausto-Sterling, Anne. Sex / Gender: Biology in a Social World. Routledge, 2012. ISBN: 9780415881463

MPHP75 01:	Research Methodology Project	L	T	P	C
		0	0	2	2

Course Description:

The course is designed to equip students with practical research skills through hands-on experience. Students will engage in various research activities, including field visits to public health settings, systematic reviews, sample size estimation, questionnaire design, interviews, pilot studies, data analysis and proposal writing. This course aims to enhance students' ability to conduct comprehensive public health research projects**.**

Course Objectives:

- To understand the practical aspects of conducting field research in various public health settings.
- To develop skills in systematic reviews and meta-analysis for evidence-based research.
- To learn and apply techniques for sample size estimation in research projects.
- To design and implement effective questionnaires and conduct interviews for data collection.
- To analyze research data and write detailed research proposals and reports.

List of experiments

- Visit to any of following setting Urban, rural community, public health system at district level to block level facility, old age home/ water sanitation/ PWD dept., Pollution control dept./ Medical waste dept. Health Insurance companies/Bhamashah scheme, Industrial visit,
- Systematic Reviews and Meta-analysis
- Sample size estimation,
- Questionnaire
- Interview and pilot study
- Data analysis
- Proposal writing and report submission

Course Outcomes:

By the end of this course, students will be able to:

- Conduct field research in urban, rural and various public health settings.
- Perform systematic reviews and meta-analyses to synthesize research evidence.
- Estimate sample sizes accurately for different types of research studies.
- Design questionnaires, conduct interviews and carry out pilot studies effectively.
- Analyze research data, write comprehensive research proposals and submit detailed reports.

Textbooks:

- Research Methodology: A Step-by-Step Guide for Beginners" by Ranjit Kumar, Sage Publications, 2014.
- Systematic Reviews in Health Care: A Practical Guide" by Paul Glasziou, Les Irwig, Chris Bain and Graham Colditz, Cambridge University Press, 2001.

Reference Books:

- Public Health and Community Medicine" by Rajvir Bhalwar, AFMC & WHO, 2009.
- Sample Size Determination and Power" by Thomas P. Ryan, John Wiley & Sons, 2013.
- Qualitative Research & Evaluation Methods" by Michael Quinn Patton, Sage Publications, 2015.

MPHL75 05: Application of Public Health Software – Practical **L T P C**

0 0 2 2

Course Description:

The course to improve student skills in the area of basics statistics, use of software in analysis and evaluation of public health information. By understanding the concept of analytical statistics by using appropriate statistical techniques. Using the computer to solve health problems in the community. Skill involve to execute any information or data gathered during research activity

Course Objectives: -

- To explore and install various statistical software used in public health research.
- To study data import and execution processes within these software applications.
- To develop skills in analytical techniques and interpretation of data using statistical software.
- To apply statistical software for the analysis and evaluation of public health information.
- To utilize computer technology to solve community health problems and execute data gathered during research activities.

Unit 1 **20 hours**

Introduction, Concept of hardware and software devices, Concept of operating systems, Computer and communications, Programming languages and classification, Computer management and virus protection, data Analysis with MS Excel and V&X Lookup

Unit 2 **20 hours**

Application of statistical software R, Introduction, Basic R, Install R, Data exploration, Exploring relationships, Probability, Random variables and probability distributions, Estimation, Hypothesis testing, Statistical inference for the relationship between two variables

Unit 3 **25 hours**

Application of statistical software SPSS and EPI Info, Introduction, Basic SPSS Epinfo, Install SPSS, Epi info, Data exploration, Exploring relationships, Probability, Random variables and probability distributions, Estimation, Hypothesis testing, Statistical inference for the relationship between two variables, Spatial Mapping with EPI info, sample size calculation, Geo mapping

Unit 4 **25 hours**

Application of statistical software ATLASti and Nvivo , Introduction, Basic, Install, Qualitative data analysis with ATLAS-ti, NVivo, Code the data, visualize the results and data analysis and Data exploration and Analysis.

Unit 5 **30 hours**

Application of statistical software CSPro and STATA, Introduction, Basic CSPro and STATA, Install CSPro and STATA , Data exploration, Exploring relationships, Probability, Random variables and probability distributions, Estimation, Hypothesis testing, Statistical inference for the relationship between two variables

Course Outcomes / Competencies:

End of the course completion student would be

- Install and explore various statistical software applications used in public health.
- Import and execute data using different statistical software tools.
- Develop and demonstrate skills in analyzing and interpreting data outputs from analytics software.
- Apply statistical techniques using software to solve public health issues.
- Utilize various statistical software to analyze and evaluate public health information effectively.

Text Books:

- Mahajan BK. Methods in Bio-statistics. Jaypee Brothers, Medical Publishers (p) Ltd., G16, EMCA House, 23/23B, Ansari Road, Daryaganj, Post Box: 7193, New Delhi 110 002, India, 1991. List Current Essential Reference
- IBM SPSS Statistics 26 Step by Step - Inside Book Publishing

Reference Books:

- Public Health and Community Medicine" by Rajvir Bhalwar, AFMC & WHO, 2009.
- Systematic Reviews in Health Care: A Practical Guide" by Paul Glasziou, Les Irwig, Chris Bain and Graham Colditz, Cambridge University Press, 2001.
- Introduction to Qualitative Data Management and Analysis in ATLAS.ti v.7" by Marta Alvira-Hammond, CFDR Workshop Series, Summer 2012.

Fourth Semester

MPHT76 26: Public Health Management **L T P C**

3 1 0 4

Course Description:

To give an idea about the background objectives, action plan, targets, operations, achievements and constraints of various project management methods and project cycle

Course Objectives: -

- To provide in site of Public Health Management
- To study veracious method of project analysis
- To expose to gender issue in project management
- To develop project indicator and assessment through monitoring and evaluation
- To understand the effective supportive supervision

Unit 1 **10 hours**

Principles of Management and results-based management, Concept, principles and theories of programme planning; Application of programme planning to Health education and extension

Unit 2 **14 hours**

Systematic development of plan of work, Project management cycle, Situational analysis - SWOT, Strategy formulation (formulation of alternatives and selection of a strategy), Planning tools: Log frame, PERT, CPM, Quality assurance in project management, programme projection;. Machinery for planning at the National level. Inventory programs.

Unit 3 **14 hours**

Activity based implementation plan, Human aspects of project management like motivating people, team building, improving personal, Influence and effectiveness. Gender issues in Project Management. National health programme, Indicators for programs/Projects, Critical analysis of India's Five Year Plans in relation to developmental objectives and programmes for the rural India;

Unit 4 **14 hours**

Evaluation techniques and their applications. Methods of monitoring and evaluation; types, procedures, steps, techniques and principles of evaluation; health audit, Approaches of planning: Need based Approach (NBA), Right Based Approach (RBA). Organizing

Unit 5 **8 hours**

Health Programmes: planning, implementation, Monitoring and Evaluation Supervision: Definition, objectives, tools, techniques/ methods, process, skills needed for effective supervision, supportive supervision (concept and characteristics, issues and constraints regarding current supervision system in health service management

Course Outcomes / Competencies:
End of the course student would

- Developed in-depth information about Public Health Management
- Able to study various method of project analysis
- Exposed to gender issue in project management
- Able to apply project indicator and assessment through monitoring and evaluation
- Able to understand the effective supportive supervision

Text Books:

- Public Health and Community Medicine RajVirThalwar. First edition-AFMC & WHO, 2009
- Equity, Social Determinants and Public Health Programs,-Blas.E.,Kurup. A.S.-WHO, 2012

Reference Books:

- Health care economics and health care management-I Sundar, -Serials Publications New Delhi 2012
- Handbook on Project Cycle management, European commission, version 2.0, 2002
- The project management life cycle, Jason Westland, First published in Great Britain and the United States in 2006 by Kogan Page Limited

MPHI76 01:	Dissertation – comprehensive Viva-voce	L	T	P	C
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Course Description:

Research is the backbone of solving any public health issue. Therefore, acquiring research skill by doing research in the programme is important. To learn it in a better way, carrying out a detailed research project spread over the entire study period is very much essential.

Course Objectives: -

Public Health Program requires mandatory fulfillment of a project work at the end of the coursework. The Project should have a direct or indirect relevance to areas of Public Health. Each student has to individually conduct this project work. Students can choose a project on any of the categories:

- Any research project following the research methods studied in that particular semester.
- A review of a health policy or an issue of public health importance.
- An exploratory study in the area of public health.
- A health management issue.
- A systematic review in health studies area

Project Process

- Allocation of a project supervisor. A minimum of 1 and maximum of 2 co-supervisors are allowed.
- In consultation with the main project supervisor and co-supervisor, the student should
- select any topic that falls into the category of the project described above to work on.
- A brief synopsis of the project, consisting of the title, background, objectives and proposed methods (data collection tools) of the study, with outline analysis plan should be submitted to the guide.
- For survey of human participants, consent and information sheets for participants needs to be submitted for clearance from ethics committee.
- On approval of the ethics committee and concerned authorities the data collection can be undertaken in the time period allocated for the same.
- A project report described as under has to be presented and defended as part of the assessment and examination for the project work in the time period specified.
- Project Report

The project report shall follow the guidelines as specified as under.

- 1 hard and 1 soft copy of the project report has to be submitted to the supervisor within the time specified.
- The report shall not exceed 50 pages and maintain standard format. It should have 1.5 lines spacing with 12 point Times New Roman font.
- The report should include the title page, certificate of fulfillment (duly signed by supervisor and co-supervisors) content page, introduction, review of literature, objectives, methods, results, discussions, recommendations, conclusions, any limitations, references and annexures.

- The hard copy of the Project report should be spiral bound while the Final MPH
- Dissertation should be hard bound.
- Viva voce will be conducted in the department. The supervisor(s) at the place of training will award marks out of 25% of the total marks and a panel of departmental experts will award marks out of the remaining 75% on the basis of viva voce. Those who successfully complete their viva voce will be awarded the degree provided they complete all other requirements

Course Outcomes / Competencies:
By the end of this course, students will be able to:

- Demonstrate comprehensive knowledge and understanding of research methodologies and their application in public health.
- Conduct independent, original research projects that address public health issues using appropriate research methods.
- Critically review and synthesize existing literature and policies related to public health.
- Develop and present well-structured research proposals, including objectives, methodology and analysis plans.
- Effectively communicate research findings through written reports and oral presentations, defending their work in a viva voce setting.

Textbooks:

- Public Health and Community Medicine" by Rajvir Bhalwar, AFMC & WHO, 2009.
- Research Methods in Public Health" by Ann Bowling, Open University Press, 2009.

Reference Books:

- Public Health and Community Medicine" by Rajvir Bhalwar, AFMC & WHO, 2009.
- Systematic Reviews in Health Care: A Practical Guide" by Paul Glasziou, Les Irwig, Chris Bain and Graham Colditz, Cambridge University Press, 2001.
- The Public Health Researcher's Handbook" by Ron Iphofen, Policy Press, 2017

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