



*Your Dreams Our Goal*  
**POORNIMA**  
**UNIVERSITY**

Member of Association of Indian Universities & Approved by UGC (Govt. of India) under 2(f) & 12(B)



## **FACULTY OF PUBLIC HEALTH**

### **PROGRAM: MASTER IN PUBLIC HEALTH**

**SCHEME & SYLLABUS**

**BOOKLET**

**BATCH 2025-27**

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**Disclaimer:** The scheme, syllabus and other materials published in this booklet may be changed or modified as per the requirement after approval of competent authority. The decision taken by the management of Poornima University will be final and abiding to all.

## Student Details

Name of Student:

Name of Program: Master of Public Health

Semester: I                      Year: I                      Batch: 2025-27

Faculty: Faculty of Public Health



# *Your Dreams Our Goal* **POORNIMA** **UNIVERSITY**

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## **Vision**

Our vision is to create knowledge-based society with scientific temper, team spirit and dignity of labour to face global competitive challenges.

## **Mission**

Our mission is to evolve and develop skill-based systems for effective delivery of knowledge so as to equip young professionals with dedication and commitment to excellence in all spheres of life.

## **Quality Policy**

To provide quality education through faculty development, updating of facilities and continual improvement for meeting norms laid down by the government, keeping the stakeholders satisfied. Poornima University has forged industrial alliances with Top MNC's worldwide which assures high educational standards, up to-date and forward-thinking curricula, and professional relevance. At Poornima University you will have a distinct advantage through exposure to the corporate standard environment through industry sponsored infrastructure and expert faculty. The University involves global industry leaders in many ways.

## Knowledge Wheel

At Poornima, the academic atmosphere is a rare blend of modern technical as well as soft skills and traditional systems of learning processes.



## **About Program and Program Outcomes (PO):**

**Title of the Program: Master in Public Health**

**Nature of the Program: Two Year Degree Program which** prepares students to become leading public health professionals capable of addressing current global health problems with multidisciplinary, evidence-based approaches. The course provides graduate professionals training in quantitative and qualitative research methodologies, demography, epidemiology, community-based research and community engagement strategies.

### **Program Outcomes (POs):**

Public health graduates will be able to:

**PO1. Education:** Provide public health education that equips students for a public health career.

**PO2. Research:** Undertake evidence-based research and application of knowledge into practice in public health.

**PO3. Service:** Facilitate preventive, promotive, rehabilitative and palliative services to the people.

**PO4. Leadership:** Apply principles of leadership, management and governance for fostering collaboration, problem solving and decision making.

**PO5. The Public Health Professional and Society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional public health practice.

**PO6. Environment and Sustainability:** Understand the impact of the professional public health solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**PO7. Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the public health practice.

**PO8. Individual and Team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**PO9. Communication:** Communicate effectively on complex public health activities with the public health community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

**PO10. Project Management and Finance:** Demonstrate knowledge and understanding of the public health and management principles and apply these to one's own work, as a member and leader in a team, to manage public health programs/projects and in multidisciplinary environments.

**PO11. Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change in public health.

**Programme Specific outcomes (PSO):**

**PSO1.** Design population-based policy and programs to prevent disease and promote health.

**PSO2.** Apply multiple dimensions of the policy-making process and its implementation for population health.

**PSO3.** Apply appropriate epidemiological methods in public health practice.

**PSO4.** Demonstrate knowledge and skills for advocacy with appropriate authorities for healthy public policies and services.

**Programme Educational Objectives (PEOs):**

The Master of Public Health (MPH) program aims to prepare the graduates with the following objectives:

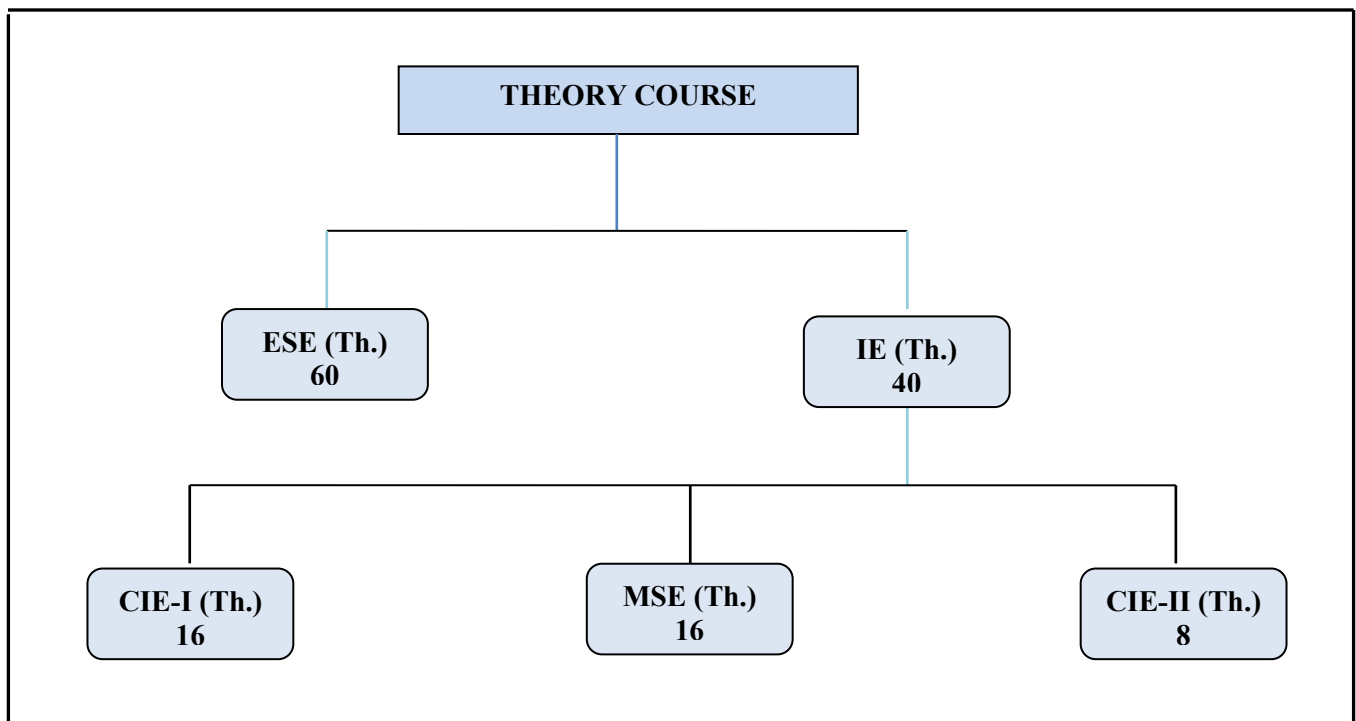
**PEO1.** Graduates shall be able to provide solutions to pressing public health issues and allied areas by adopting public health approach, prevention and health promotion initiatives, public health management strategies and use of tools and techniques of public health.

**PEO2.** Graduates shall be able to perceive the limitation and impact of population health solutions in social, cultural, legal, environmental, economical and multidisciplinary contexts.

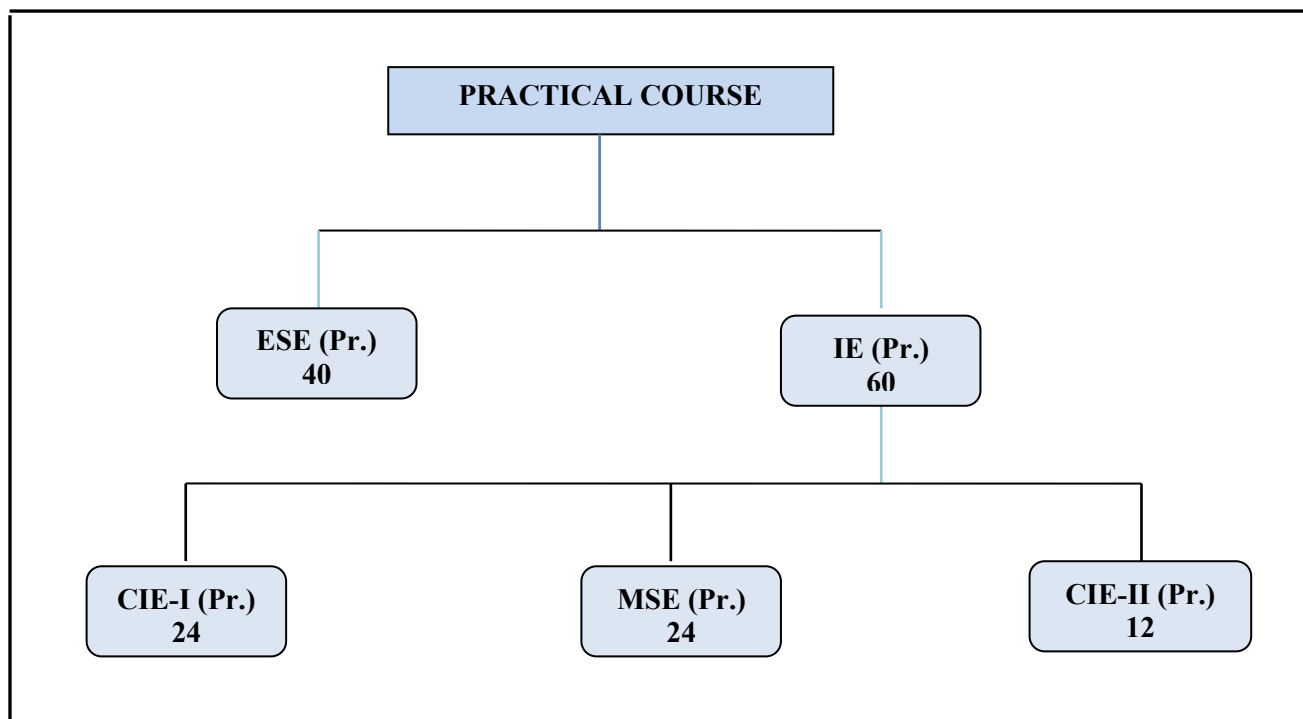
**PEO3.** Graduates shall demonstrate professional and ethical responsibilities and thrive to reinforce their knowledge being a part of higher educational programmes.

**Examination System:**

**Marks Distribution of Theory Course:**



**A. Marks Distribution of Practical Course:**



**Th.:** Theory, **Pr.:** Practical, **ESE:** End Semester Examination, **MSE:** Mid Semester Examination, **CIE:** Continuous Internal Evaluation.

**CO Wise Marks Distribution:**

<b><u>Exam Entity</u></b>	<b>Theory Subject</b>		<b>Practical/ Studio Subject</b>	
	<b>Maximum Marks</b>	<b>CO to be Covered</b>	<b>CO to be Covered</b>	<b>Maximum Marks</b>
<b>CIE-I</b>	16 (8 + 8)	1 & 2	1 & 2	24 (12 + 12)
<b>MSE</b>	16 (8 + 8)	3 & 4	3 & 4	24 (12 + 12)
<b>CIE-II (Activity/ Assignment)</b>	8 (8)	5	5	12 (12)
<b>ESE</b>	60	-	-	40
<b>TOTAL</b>	100	-	-	100

**Minimum Passing Percentage in All Exams:**

S. No.	Program Name	Minimum Passing Percentage in		
		IE Component	ESE Component	Total Component
1	Course Work for PhD Registration	-	-	50%
2	B. Arch., FIRE Dept. (BBA, B. Com., MBA)	-	45%	50%
3	MBA, MCA, M. Des., M. Tech., M. Plan, MHA, MPH	-	40%	40%
4	B. Tech., B. Des., BVA, BCA, B.Sc., BBA, B.Com., B.A. & any other program	-	35%	35%

**SGPA Calculation**

$$SGPA = \frac{C_1G_1 + C_2G_2 + \dots + C_nG_n}{C_1 + C_2 + \dots + C_n}$$

$$SGPA = \frac{\sum_i C_i \times G_i}{\sum_i C_i}$$

where (as per teaching scheme & syllabus):

$C_i$  is the number of credits of subject  $i$ ,

$G_i$  is the Grade Point for the subject  $i$  and  $i = 1$  to  $n$ ,

$n$  = number of subjects in a course in the semester

## CGPA Calculation

$$CGPA = \frac{C_1G_1 + C_2G_2 + \dots + C_nG_n}{C_1 + C_2 + \dots + C_n}$$

$$CGPA = \frac{\sum_i C_i \times G_i}{\sum_i C_i}$$

where (as per teaching scheme & syllabus):

$C_i$  is the number of credits of subject  $i$ ,

$G_i$  is the Grade Point for the subject  $i$  and  $i = 1$  to  $n$ ,

$n$  = number of subjects in a course of all the semesters up to which CGPA is computed

## Grading Table:

**Table-A**

Applicable for B.Arch., FIRE Courses  
(BBA, B. Com, MBA), & PhD. Course Work

Academic Performance	Grade	Grade Point	Marks Range (in %)
Outstanding	O	10	$90 \leq x \leq 100$
Excellent	A+	9	$80 \leq x < 90$
Very Good	A	8	$70 \leq x < 80$
Good	B+	7	$60 \leq x < 70$
Above Average	B	6	$50 \leq x < 60$
Fail	F	0	$x < 50$
Absent	Ab	0	Absent

**Table-B**

Applicable for All Courses except Table-A

Academic Performance	Grade	Grade Point	Marks Range (in %)
Outstanding	O	10	$90 \leq x \leq 100$
Excellent	A+	9	$80 \leq x < 90$
Very Good	A	8	$70 \leq x < 80$
Good	B+	7	$60 \leq x < 70$
Above Average	B	6	$50 \leq x < 60$
Average	C	5	$40 \leq x < 50$
Pass*	P	4	$35 \leq x < 40$
Fail	F	0	$x < 35$
Absent	Ab	0	Absent

\* Not applicable for master programs

## **CGPA to percentage conversion rule:**

$$\text{Equivalent \% of Marks in the Program} = \text{CGPA} * 10$$

### **Award of Class**

CGPA	Percentage	Equivalent Division
$7.50 \leq \text{CGPA}$	75% or more	First Division with Distinction
$6.00 \leq \text{CGPA} < 7.50$	$60\% \leq x < 75\%$	First Division
$5.00 \leq \text{CGPA} < 6.00$	$50\% \leq x < 60\%$	Second Division
$4.00 \leq \text{CGPA} < 5.00$	$40\% \leq x < 50\%$	Pass Class

## **Guidelines for Massive Open Online Courses (MOOCs)**

### **(Session 2023-24)**

Poornima University, in its never-ending endeavor to equip students with best-of-class learning and knowledge, has undertaken to include MOOC courses as part of its credit scheme from session 2023-24 onwards. The objective behind this is to enable students to study courses designed by the best teachers in the country and to scale their knowledge base with the rest of learners from the nation. The MOOCs which are included under this scheme is can be chosen from SWAYAM-NPTEL.

#### **1. Introduction of MOOCs: SWAYAM-NPTEL**

##### **About SWAYAM-NPTEL**

NPTEL (National Programme on Technology Enhanced Learning), is a joint venture of the IITs and IISc, funded by the Ministry of Education (MoE) Government of India, and was launched in 2003. Initially started as a project to take quality education to all corners of the country, NPTEL now offers close to 600+ courses for certification every semester in about 22 disciplines.

##### **Some highlights:**

- Largest online repository in the world of courses in engineering, basic sciences and selected humanities and management subjects
- YouTube channel for NPTEL – most subscribed educational channel, 1.3 billion views and 40+ lakhs subscribers
- More than 56000 hours of video content, transcribed and subtitled
- Most accessed library of peer-reviewed educational content in the world
- Translation of more than 12000 hrs of English transcripts in regional Indian languages

##### **NPTEL Online Certification:**

The objective of enabling students obtain certificates for courses is to make students employable in the industry or pursue a suitable higher education programme. Through an online portal, 4, 8, or 12-week online courses, typically on topics relevant to students in all years of higher education along with basic core courses in sciences and humanities with exposure to relevant tools and technologies, are being offered. Enrolment to and learning

from these courses is free. Following these online courses, an in-person, proctored certification exam is conducted and a certificate is provided through the participating institutions and industry, as applicable.

Some statistics regarding the open online courses since March 2014 till Dec 2021

Completed courses: 3496;

Enrollments across courses: 1.58 CRORE +

Number of exam registrations: 15.1 LAKH +

All the statistics pertaining to completed courses are available at <https://beta.nptel.ac.in/courses>.

All courses are completely free to enroll and learn from. The certification exam is optional and comes at a fee of Rs 1000/course exam.

## **2. MOOCs at Poornima University:**

MOOCs envelops best in class teaching - learning processes along with meeting the requirements of various courses in terms of quality of teaching and evaluation system. To promote the MOOCs among students of Poornima University, it is decided to consider the credits earned through MOOCs.

### **(a) MOOCs as Credit Courses**

**(For this document, only those MOOCs will be considered which are available only on NPTEL platforms)**

- Credit and Non-credit SWAYAM-NPTEL MOOCs can be opted by anyone, anytime, anywhere and in any language. However, prior-permission of the University Authorities is mandatory if the credits are to be transferred to regular degree.
- As Open Elective (for batches entered till 2022) / Multidisciplinary Courses (for batches admitted from 2023-24 onwards): Open Elective (for batches entered till 2022) courses were available at university level in offline mode till 2022-23 for which relevant booklets were published. From session 2023-24, Multidisciplinary Courses are introducing in lieu of open elective courses as per NEP 2020. These courses carry 02 credits. These category/types of courses (similar/different) are available as MOOC courses on SWAYAM-NPTEL platform which are being introduced from session 2023-24 onwards for all the students. The respective Deans / HODs shall provide all the information to all the students pertaining to MOOCs as per details given below:
  1. Deans / HODs shall prepare a list of up to 10 appropriate MOOC courses (From NPTEL Only) of Minimum 02/03 credits each, well in advance (at-least 15 days prior to commencement of semester) and take approval from the Office of Dean, Academics / Pro-President, PU.

2. After approval, the respective Deans / HODs shall circulate a notice to all their respective students so that they can select any one course from the list, the credits (only 02) of which will be counted against Open Elective/ Multidisciplinary courses pertaining to that particular semester.
3. The tutor of the class shall monitor the progress (assignments, feedback, any problem etc.) on weekly basis and report to Head/Dean and provide the academic support to students as per requirement.

**(b) Important points related to MOOCs at Poornima University**

- Only one MOOC shall be allowed in a particular semester for the purpose of credit transfer in the beginning.
- No attendance will be taken for MOOC courses.
- The method of assessments of MOOC such as assignments and examination are completely associated with that particular MOOC and no internal exam (IE component) will be conducted by the department as well as by the Examination Cell.
- The respective Dean / HOD must submit the detail of course i.e., code, name and credit of MOOC opted against that particular course in particular semester attached with highlighting in the related examination scheme of syllabus of that semester signed by BOS Convener / HoD and Dean of Faculty to the office of Pro-President before commencement of the classes.
- The center of examination for MOOCs will be finalized by SWAYAM-NPTEL. All the responsibility related to registration for MOOCs, timely submission of assignments, examinations etc. will be borne by the students only.
- NPTEL will award a certificate to all the students passing the examination.
- The list of registered students in MOOC along with name of course will be submitted to the Examination Cell by the Deans / HoDs before commencement of the classes.
- An ESE Exam of each said MOOC course will also be conducted by the University as per University norms.
- The award of marks/grading will be computed as given below:

Award of marks/grading	Remarks
1. 20% weightage taken from MOOC Certificate +80% weightage taken from ESE Exam of Poornima University <b>OR</b> 2. 100% of weightage taken from MOOC Certificate <b>Note: The Higher Marks/Grades of the above two will be considered</b>	The Certificate of MOOC to be Submitted as per date notified by COE, Poornima University

- Any student who would not be able to clear/pass the said course, will be required to appear as a back exam candidate of the University as per PU norms. Students who have not passed the MOOC exam are required to register and participate in the next semester for either the same subject or a similar subject (Ensuring at least 60% of the syllabus matches with the back subject and also approved by respective Dean) offered through NPTEL.
- The scorecard and related certificate of MOOC along with a consolidated list of students with marks of assignment and final exam will be submitted to the examination cell by the concerned Dean / HOD for further process. It is also recommended that alteration/changes/scaling in marks obtained by the students in any MOOC will not be considered.
- The exam registration fee of MOOC up to Max. INR 1000/- will be reimbursed to the student only after successful completion of the course in first attempt and submission of the fee receipt, score-card and certificate of the MOOC to the concerned department within stipulated time after declaration of the results.
- There will be no provision of re-evaluation of MOOC.

**NOTE: This is to be noted that the procedure for getting approval from BOS, Faculty Board, Academic Council and BoM is to be followed as per regular process.**

**Attached Items:**

Ability Enhancement Courses	Annexure-1
Value Added Course Booklet	Annexure-2

## I SEMESTER

### MAJOR (CORE COURSES)

**MPHCPH1101**

**Principles & Practices of Public Health.**

**3 Credit [LTP:3-0-0]**

#### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Recall the definition, vocabulary and relevant terminologies in Public Health	Remember
CO2	Understand the concept, ecology, responsibilities and various approaches of Public Health Care in India	Understand
CO3	Interpret the concept and application of different system in the medicine	Understand
CO4	Enumerate the different concept and dimensions of the health as well as the level of prevention in public health system	Remember
CO5	Explain different definitions, concept, dimensions, and determinants of health.	Understand

#### **B. MAPPING MATRIX OF CO, PO & PSO**

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
CO1	1	-	3	-	3	3	2	2	-	-	1	2	3	3	1
CO2	3	-	-	1	-	3	2	-	-	1	-	3	1	1	2
CO3	1	1	-	2	-	1	1	1	1	2	1	-	1	-	3
CO4	3	2	2	2	2	1	2	1	-	2	2	2	3	2	2
CO5	1	3	3	3	2	1	1	-	2	1	-	-	1	3	2

<b>WT.</b>																
<b>AV</b>	<b>1.80</b>	<b>2.00</b>	<b>2.67</b>	<b>2.00</b>	<b>2.33</b>	<b>1.50</b>	<b>1.60</b>	<b>1.00</b>	<b>1.50</b>	<b>1.50</b>	<b>1.33</b>	<b>2.33</b>	<b>1.50</b>	<b>2.25</b>	<b>2.25</b>	
<b>G</b>																

### C. OUTLINE OF THE COURSE

<b>Unit No.</b>	<b>Title of the Unit</b>	<b>Time required for the Unit (Hours)</b>
<b>1.</b>	History, context, basic Principles & Practices of Public Health	9
<b>2.</b>	Concept of Public Healthcare & Medical care as well as Public Health Approach	9
<b>3.</b>	Different Systems of Medicine	9
<b>4.</b>	Basic Concept of Health & Levels of Prevention	9
<b>5.</b>	Basic Concept of Health determinants	9

### D. DETAILED SYLLABUS

<b>Unit</b>	<b>Unit Details</b>
<b>1.</b>	<b>History, Context and Basic Principles &amp; Practices of Public Health</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Public Health Definition key terms with mission of Public Health</li> <li>• History of Public Health in India &amp; Global</li> <li>• Public Health as a system</li> <li>• Interdisciplinary nature of public health</li> <li>• Conclusion of the Unit</li> </ul>

<b>2.</b>	<b>Concept of Public Healthcare &amp; Medical care as well as Public Health Approach</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Concept of Medical care &amp; Public Health care</li> <li>• Ecology, responsibility, right to health</li> <li>• Various Approaches to Public Health</li> <li>• Healthcare in India approaches and challenges</li> <li>• Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Different Systems of Medicine</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Medicine in antiquity</li> <li>• Scientific Medicine</li> <li>• Modern Preventive and social medicine</li> <li>• Indigenous system of medicine</li> <li>• AYUSH</li> <li>• Naturopathy</li> <li>• Concept of Allopathic Medicine</li> <li>• Concept of Holistic Medicine</li> <li>• Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Basic Concept of Health &amp; Level of Prevention</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Defining Health and understanding Concept of different approaches to Health</li> <li>• Positive &amp; Negative Concept of Health</li> <li>• Concept of ill Health</li> <li>• Dimensions of Health</li> <li>• Basic concept of Prevention &amp; Levels of Prevention</li> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Basic Concept of Health determinants</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Concept and definition of health Spectrum of health</li> <li>• Various dimensions of health and wellness (Positive health, wellness, illness, sickness, social, emotional, spiritual, environmental, occupational, intellectual and physical wellness),</li> <li>• Concept of Health determinants (social and economic environment, physical environment, and a person's individual characteristics and behaviors.)</li> <li>• Effect of various health determinants over health</li> <li>• Leading health indicators</li> </ul>

- Conclusion of the Unit

### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Preventive and Social Medicine	K Park	27 <sup>th</sup> Edition, 2023	Banarsidas Bhanot
2	Introduction to Public Health	Mary Jane Schnieder	6 <sup>th</sup> Edition, 2020	Jones and Bartlett Publishers, Inc
3	Determinants of Health Status in India	Keya Sengupta	1 <sup>st</sup> Edition, 2016	Springer, India, Private Ltd

**MPHCPH1102                      Health Education, Promotion & Communication                      3 Credits [L-T-P:3-0-0]**

### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Define the Concept of Health Education and Health Promotion	Remember
CO2	Understand the definition, process, functions, channels and tools of health-communication	Understand
CO3	Understand human behaviors and theories of behavior change.	Understand
CO4	Understand the use of various types of media (e.g. electronic, print, social and folk media) for health promotion and communication	Understand
CO5	Determine how to evaluate health promotion plans	Apply

### B. MAPPING MATRIX OF CO, PO & PSO

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4	

CO1	2	-	-	1	3	3	1	1	3	2	-	3	2	-	-
CO2	-	3	3	3	1	-	-	1	1	-	2	2	2	-	-
CO3	2	-	2	-	1	-	3	1	1	2	1	2	1	3	2
CO4	-	3	1	3	1	-	-	-	-	3	2	1	-	2	-
CO5	3	2	2	1	1	3	3	-	3	3	3	1	-	-	2
WT.															
AV	2.33	2.67	2.00	2.33	1.40	3.00	2.33	1.00	2.00	2.67	2.00	1.80	1.50	2.50	2.00
G															

### C. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
1.	Introduction to Health Education	9
2.	Introduction to Health Promotion	9
3.	Introduction to Health Communication	9

4.	Communication Strategies for Health Promotion	9
5.	Evaluation for Health Promotion plans	9

#### D. DETAILED SYLLABUS

Unit	Unit Details
<b>1.</b>	<b>Introduction to Health Education</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Concept of Health Education &amp; its principles</li> <li>• Various approaches to achieve better Health</li> <li>• Contents of Health Education</li> <li>• Stages in adoption to new ideas and approaches of Health Education</li> <li>• Educational Aids in Health Education</li> <li>• Methods of Health Education</li> <li>• Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Introduction to Health Promotion</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Concept of Health Promotion &amp; its principles</li> <li>• Contents of Health Promotion</li> <li>• conceptual framework for Health Promotion</li> <li>• Approaches for Health Promotion</li> <li>• Problems facing Health Promotion in developing countries</li> <li>• Health Education Vs Health Promotion</li> <li>• Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Introduction to Health Communication</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Stages and Levels of Health Communication.</li> <li>• Principles of Communication.</li> <li>• Key Components of Communication</li> <li>• Communication Process</li> <li>• Types and Forms of Communication</li> <li>• Barriers to Health Communication</li> <li>• Conclusion of Unit</li> </ul>
<b>4.</b>	<b>Communication strategies for Health Promotion</b>
	<ul style="list-style-type: none"> <li>• Introduction of the Unit</li> </ul>

	<ul style="list-style-type: none"> <li>• Concept of IEC: Definition, Importance, Objective &amp; component of IEC</li> <li>• Planning of IEC in Health Sector</li> <li>• Role of Mass Media in Health Education &amp; Awareness</li> <li>• Role of Folk Media in Health Promotion</li> <li>• Role of Social Media in Health Promotion</li> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Evaluation for Health Promotion Plans</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Designing Health promotion and communication strategies</li> <li>• Media Advocacy</li> <li>• Community Mobilization</li> <li>• Importance of Research in Health Communication</li> <li>• Conclusion of the Unit</li> </ul>

#### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Preventive and Social Medicine	K Park	27 <sup>th</sup> Edition, 2023	Banarsidas Bhanot
2	Health Behavior: Theory, Research, and Practice,	Karen Glanz, Barbara K. Rimer, K. Viswanath	5 <sup>th</sup> Edition, 2015	Jossey-Bass
3	Communicating Health. An action guide to health education and promotion	John Hubley	1 <sup>st</sup> Edition, 2023	Mac Milan
4	Essentials of Health Behavior: Social and Behavioral Theory in Public Health	Edberg Mark	3 <sup>rd</sup> Edition, 2019	Jones and Bartlett Publishers, Inc

**MPHCPH1103**

**Basic Epidemiology**

**3 Credits [L-T-P:3-0-0]**

#### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level

<b>CO1</b>	Define the concept, History, Aim Applications and Clinical perspectives of Epidemiology	Remember
<b>CO2</b>	Understand the epidemiological concept of the disease	Understand
<b>CO3</b>	Apply the different methods of assessment and measurement techniques in Epidemiological studies	Apply
<b>CO4</b>	Understand the definitions and basic concepts of different experimental epidemiology applicable in epidemiological studies.	Understand
<b>CO5</b>	Understand type and nature of outbreaks, different steps of outbreak investigation and associated Preparedness for prevention and controls for future outbreak	Understand

### B. MAPPING MATRIX OF CO, PO & PSO

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
<b>CO1</b>	3	-	-	1	3	1	2	2	2	1	-	2	-	1	-
<b>CO2</b>	1	3	1	3	3	2	1	2	-	2	2	-	1	-	-
<b>CO3</b>	-	1	1	1	-	-	2	-	1	-	3	-	2	1	-
<b>CO4</b>	2	1	-	1	2	-	3	3	2	2	2	3	1	-	3
<b>CO5</b>	2	2	1	2	-	2	1	1	-	3	3	3	3	1	1
<b>WT.</b>															
<b>AV</b>	<b>2.00</b>	<b>1.75</b>	<b>1.00</b>	<b>1.75</b>	<b>2.67</b>	<b>2.00</b>	<b>1.80</b>	<b>2.00</b>	<b>1.67</b>	<b>2.33</b>	<b>2.50</b>	<b>2.67</b>	<b>1.75</b>	<b>1.00</b>	<b>2.00</b>
<b>G</b>															

### C. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
1.	Epidemiology: Introduction	9

2.	Epidemiological concept of disease	9
3.	Epidemiological methods	9
4.	Experimental Epidemiology	9
5.	Outbreaks and Epidemic Investigations	9

#### D. DETAILED SYLLABUS

Unit	Unit Details
<b>1.</b>	<b>Epidemiology: Introduction</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Concepts of Epidemiology</li> <li>• History and significance of epidemiology</li> <li>• Aims of Epidemiology</li> <li>• Clinical Versus epidemiological approach</li> <li>• Applications and uses of epidemiology</li> <li>• Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Epidemiological concept of disease</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Concept of disease and its causation</li> <li>• The natural history of the disease</li> <li>• Epidemiological Triad</li> <li>• Epidemiological triad in infectious diseases.</li> <li>• Web causation of disease</li> <li>• Iceberg theory</li> <li>• Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Epidemiological Methods</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Basic measurement in Epidemiology</li> <li>• Measuring disease frequencies</li> <li>• Principles of Screening, reliability and validity in epidemiology</li> <li>• Incidences and prevalence</li> <li>• Observational Studies</li> </ul>

	<ul style="list-style-type: none"> <li>• Descriptive Epidemiology (Time Place and Person)</li> <li>• Analytical (Ecological, Cross-Sectional, case-control and cohort studies)</li> <li>• Bias, Confounders and Errors</li> <li>• Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Experimental Epidemiology</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Defining Experimental Studies</li> <li>• Randomized Controlled Trial (RCT), Basic concepts and types</li> <li>• Field Trials</li> <li>• Community Trials</li> <li>• Systematic Reviews and Meta-Analysis</li> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Outbreaks and Epidemic Investigations</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Endemic vs Endemic</li> <li>• Outbreak vs Epidemic</li> <li>• Sources of Information to detect outbreaks</li> <li>• Early Warning Signals for outbreak</li> <li>• Why we should investigate the outbreak</li> <li>• Steps for Outbreak Investigation</li> <li>• Constraints of Field Outbreak Investigation</li> <li>• Preparedness for prevention and controls for future outbreak</li> <li>• Conclusion of the Unit</li> </ul>

### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Epidemiology	Leon Gordis	6 <sup>th</sup> Edition, 2019	Elsevier
2	Basic Epidemiology	Kenneth Rothman, Tyler J	2 <sup>nd</sup> Edition, 2012	Oxford University Press Inc
3	Preventive and Social Medicine	K. Park	27 <sup>th</sup> Edition, 2023	Banarasidas Bhanot
4	Basics Of Epidemiology	Dr Anil Mishra	1 <sup>st</sup> Edition, 2018	Nation Press IC

**A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING**

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Measure the collected/available data through different methods in Epidemiology.	Imitate
CO2	Execute the experimental epidemiology.	Manipulate
CO3	Demonstrate the outbreaks and different steps of outbreak investigation	Manipulate
CO4	Execute the methods for data interpretation and data analysis	Manipulate

**B. MAPPING MATRIX OF CO, PO & PSO**

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
CO1	1	3	1	3	3	2	1	2	-	2	2	-	1	-	-
CO2	-	1	1	1	-	-	2	-	1	-	3	-	2	1	-
CO3	2	1	-	1	2	-	3	3	2	2	2	3	1	-	3
CO4	2	2	1	2	-	2	1	1	-	3	3	3	3	1	1
WT.															
AV	2.00	1.75	1.00	1.75	2.67	2.00	1.80	2.00	1.67	2.33	2.50	2.67	1.75	1.00	2.00
G															

**C. EXPERIMENTS**



	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PSO 1	PSO 2	PSO 3	PSO 4
CO1	1	3	1	1	-	1	3	-	3	-	2	1	3	-	2
CO2	-	2	-	-	-	1	2	-	1	1	1	2	1	3	1
CO3	1	1	-	-	1	1	1	1	2	-	1	3	3	1	3
CO4	2	2	2	3	-	-	1	3	1	2	3	3	-	2	2
CO5	2	-	-	3	2	1	1	2	1	-	-	1	1	2	3
WT. AV G	1.50	1.67	1.50	3.00	1.50	1.00	1.60	2.00	1.60	1.50	1.75	2.00	1.67	2.00	2.25

### C. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
1.	Public Health Laws: An Overview	5
2.	Public Health Ethics : An Overview	5
3.	Public Health Laws and Regulation: Indian & global context	5
4.	Regulations during emergencies and outbreaks	7
5.	Global Health Hazard and safety	8

### D. DETAILED SYLLABUS

Unit	Unit Details
<b>1.</b>	<b>Public Health Laws: An Overview</b>
	<ul style="list-style-type: none"> <li>● Introduction of the Unit</li> <li>● Historical perspective</li> <li>● Characteristics of Public Health Laws</li> <li>● Need of Public Health Laws</li> <li>● Human Rights in Public Health</li> <li>● Impact of violation of human rights on health.</li> <li>● Role of National/International agencies in protection of human rights.</li> <li>● Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Public Health Ethics: An Overview</b>
	<ul style="list-style-type: none"> <li>● Introduction of the Unit</li> <li>● History of medical ethics and bioethics.</li> <li>● Public Health Ethics</li> <li>● Comparison of Ethics in medical care and Public Health,</li> <li>● Health fascism, Health imperialism, Paternalism, Health commercialism,</li> <li>● Ethics in Public Health Research</li> <li>● Public health information and privacy</li> <li>● Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Public Health Laws and Regulations: Indian and Global Context</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● Historical perspective</li> <li>● Public Health Regulations in India</li> <li>● Importance of these regulations</li> <li>● Impact of these regulations on public health practice</li> <li>● Public Health Laws in developed nations</li> <li>● Public Health Laws in developing nations</li> <li>● Role of these Laws in improving and propagating public health</li> <li>● Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Regulations during emergencies and outbreaks</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>➤ Epidemic Diseases Act, 1897</li> </ul>

	<ul style="list-style-type: none"> <li>➤ Epidemic Disease Act, 2020</li> <li>➤ Disaster Management Act, 2005</li> <li>➤ Role of all levels of governance in emergencies and outbreaks</li> <li>➤ Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Global Health Hazard and Safety</b>
	<ul style="list-style-type: none"> <li>● Introduction of the Unit</li> <li>● Gender Equity and Equality</li> <li>● Role of gender in determining public health policies</li> <li>● Bioterrorism</li> <li>● Conflicts and emerging infectious diseases</li> <li>● Conclusion of the unit</li> </ul>

### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Preventive and Social Medicine K Park	K Park	27 <sup>th</sup> Edition, 2023	Banarsidas Bhanot
2	Public Health Ethics and Equity	Sudhir Anand, abienne Peter, Amartya Sen	1 <sup>st</sup> Edition, 2006	Oxford publication.
3	Human Rights Education	Jagannath Mohanty	1 <sup>st</sup> Edition 2008	Deep and Deep Publications Pvt. Ltd.

**MPHEPH1112**

**Epidemiology of Communicable and Non-Communicable Diseases**

**2 Credits[L-T-P:2-0-0]**

### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
<b>CO1</b>	Recall the Magnitude of Global, National and Regional burden of Communicable diseases	Remember
<b>CO2</b>	Differentiate between traits, seasonality and epidemics	Understand

<b>CO3</b>	Understand trends of communicable diseases	Understand
<b>CO4</b>	Illustrate the burden of non-communicable diseases	Understand
<b>CO5</b>	Apply the various steps to control Communicable and Non-Communicable Diseases.	Apply

### B. MAPPING MATRIX OF CO, PO & PSO

	<b>PO</b>	<b>PO</b>	<b>PO</b>	<b>PO</b>	<b>PO</b>	<b>PO</b>	<b>PO</b>	<b>PO</b>	<b>PO</b>	<b>PO1</b>	<b>PO1</b>	<b>PSO</b>	<b>PSO</b>	<b>PSO</b>	<b>PSO</b>	
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
<b>CO1</b>	-	1	1	3	1	-	3	-	1	1	3	1	2	2	3	
<b>CO2</b>	1	3	-	-	1	2	1	2	-	-	-	2	3	2	-	
<b>CO3</b>	2	1	3	3	1	2	2	1	2	2	-	-	-	-	-	
<b>CO4</b>	-	3	2	1	-	-	-	1	2	1	2	3	3	-	1	
<b>CO5</b>	3	1	-	1	1	2	2	3	-	2	3	3	-	2	1	
<b>WT.</b>	<b>2.0</b>	<b>1.8</b>	<b>2.0</b>	<b>2.0</b>	<b>1.0</b>	<b>2.0</b>	<b>2.0</b>	<b>1.75</b>	<b>1.67</b>	<b>1.5</b>	<b>2.67</b>	<b>2.25</b>	<b>2.67</b>	<b>2.0</b>	<b>1.67</b>	
<b>AV</b>																
<b>G</b>																

### C. OUTLINE OF THE COURSE

<b>Unit No.</b>	<b>Title of the Unit</b>	<b>Time required for the Unit (Hours)</b>
1.	Introduction to Communicable Diseases	5
2.	Epidemiology of Infectious Disease	6
3.	Surveillance	6
4.	Introduction to Non-Communicable Diseases I	5

5.	Introduction to Non-Communicable Diseases II	8
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#### D. DETAILED SYLLABUS

Unit	Unit Details
<b>1.</b>	<b>Introduction to Communicable Diseases</b>
	<ul style="list-style-type: none"> <li>• Introduction of the Unit</li> <li>• Burden of Communicable diseases</li> <li>• Factors affecting Communicable diseases</li> <li>• Key Concepts in Communicable diseases</li> <li>• Incubation Period</li> <li>• Epidemic Patterns</li> <li>• Modes of Transmission and Transmission dynamics</li> <li>• Secondary attack rates</li> <li>• Classification of infectious diseases</li> <li>• Conclusion of the unit</li> </ul>
<b>2.</b>	<b>Epidemiology of Infectious Disease</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Transmission dynamics of diseases</li> <li>• Control Measures for communicable diseases (Epidemiology of common communicable diseases like TB, Malaria, Leprosy, Polio, STIs, AIDS, Meningococcal meningitis, Smallpox, chickenpox, Measles, Rubella, Mumps, Influenza, Diphtheria, Whooping cough, SARS, typhus, Q Fever, Yaws.)</li> <li>• Emerging and Re-emerging Communicable Diseases.</li> <li>• Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Surveillance</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Surveillance</li> <li>• Types of Surveillance</li> <li>• Identification of Case</li> <li>• Case in point</li> <li>• Outbreak investigation</li> <li>• Steps in outbreak investigation</li> <li>• Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Introduction to Non-Communicable diseases-I</b>

	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Global burden of NCDs</li> <li>• Epidemiology of NCDs</li> <li>• Determinants of NCD</li> <li>• Identification of Risk factors</li> <li>• Basic concepts in NCDs</li> <li>• Population v/s Public Health based approach</li> <li>• Cost of Inaction vs Cost of Action</li> <li>• Genetic epidemiology- Basic Genetics, Monogenic disorders, multifactorial disorders</li> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Introduction to Non-Communicable Diseases II</b>
	<ul style="list-style-type: none"> <li>• Introduction of the Unit</li> <li>• Economic burden of NCDs</li> <li>• Population based screening</li> <li>• Prevention and control of NCDs: Global Action</li> <li>• Major challenges in prevention and control of NCDs</li> <li>• link between NCDs and the three pillars of sustainable development</li> <li>• Surveillance system for NCD</li> <li>• Conclusion of the Unit</li> </ul>

### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Epidemiology	Leon Gordis	6 <sup>th</sup> Edition, 2019	Elsevier
2	Basic Epidemiology	Kenneth Rothman, Tyler J	2 <sup>nd</sup> Edition, 2012	Oxford University Press Inc
3	Preventive and Social Medicine	K. Park	27 <sup>th</sup> Edition, 2023	Banarasidas Bhanot
4	Basics Of Epidemiology	Dr Anil Mishra	1 <sup>st</sup> Edition, 2018	Nation Press IC

## ABILITY ENHANCEMENT COURSE

**MPHCPH1113**

**Effective Communication in Public Health**

**2 Credits[L-T-P:2-0-0]**

### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

<b>Course Outcomes (COs):</b>	<b>At the end of this course, learners will be able to:</b>	<b>Bloom Level</b>
<b>CO1</b>	Recall the basic Communication strategies in Public Health.	Remember
<b>CO2</b>	Understand importance of consensus building in Public Health	Understand
<b>CO3</b>	Understand importance of evidence-based advocacy	Understand
<b>CO4</b>	Illustrate about various communication techniques	Remember
<b>CO5</b>	Understand importance of analytical thinking in Public Speaking	Understand

### **B. MAPPING MATRIX OF CO, PO & PSO**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PSO 1	PSO 2	PSO 3	PSO 4
<b>CO1</b>	1	-	-	3	1	-	3	2	2	3	3	1	2	-	3
<b>CO2</b>	2	-	3	1	3	3	-	3	1	1	1	3	-	3	2
<b>CO3</b>	-	3	1	2	-	3	-	-	3	1	-	1	-	2	3
<b>CO4</b>	1	3	3	1	3	-	1	1	2	3	2	3	2	-	-
<b>CO5</b>	2	1	2	1	3	-	2	3	1	3	3	-	3	2	3

<b>WT.</b>	<b>1.2</b>	<b>1.4</b>	<b>1.8</b>	<b>1.6</b>	<b>2.0</b>	<b>1.2</b>	<b>1.2</b>	<b>1.8</b>	<b>1.8</b>	<b>2.2</b>	<b>1.8</b>	<b>1.6</b>	<b>1.4</b>	<b>1.4</b>	<b>2.2</b>
<b>AV</b>															
<b>G</b>															

### C. OUTLINE OF THE COURSE

<b>Unit No.</b>	<b>Title of the Unit</b>	<b>Time required for the Unit (Hours)</b>
1.	Effective Communication in Public Health	6
2.	Science of Behavior Change	6
3.	Message Construction in Public Health	6
4.	Communication strategies in Public Health	6
5.	Advocacy in Public Health	6

### D. DETAILED SYLLABUS

<b>Unit</b>	<b>Unit Details</b>
<b>1.</b>	<b>Effective Communication in Public Health</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Stages and levels of Communication</li> <li>• Key components of Effective communication</li> <li>• Communication process</li> <li>• Barriers to Communication</li> <li>• Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Science Of Behavior Change</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Key concepts of Sociology as applied to the study of Health</li> <li>• Introduction to behavior change theories and communications.</li> <li>• Health and Human Behavior</li> <li>• Human Behavior and Communications, its role in public health</li> <li>• Conclusion of the unit</li> </ul>

<b>3.</b>	<b>Message Construction in Public Health</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Objectives of message construction in Public Health</li> <li>• Types of Messages</li> <li>• Principles of Communication</li> <li>• Factors for seeking audience attention</li> <li>• Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Communication strategies in Public Health</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Types of Communication strategies in Public Health</li> <li>• Concept of Information, Education and Communication and its Importance</li> <li>• Types of Mass media and their role in Public Health</li> <li>• Role of Social Media in Health Communication</li> <li>• Folk Media and its importance</li> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Advocacy In Public Health</b>
	<ul style="list-style-type: none"> <li>• Introduction of the unit</li> <li>• What is Advocacy</li> <li>• Importance Of advocacy</li> <li>• Activities for Advocacy</li> <li>• Media Advocacy</li> <li>• Barriers to Advocacy</li> <li>• Community Mobilization</li> <li>• Conclusion of the Unit</li> </ul>

### RECOMMENDED STUDY MATERIAL

<b>S. No</b>	<b>Reference Book</b>	<b>Author</b>	<b>Edition</b>	<b>Publication</b>
1	Preventive and SocialMedicine	K Park	27 <sup>th</sup> Edition, 2023	Banarsidas Bhanot
2	Health Information Management	Marc Berg	1 <sup>st</sup> Edition	Routledge
3	Textbook of Community Medicine (Preventive & Social Medicine)	Sundar Lal, Adarsh, Pankaj	3 <sup>rd</sup> Edition, 2011	CBS Publishers, New Delhi
4	Health Promotion- Philosophy, Prejudice and Practice,	David Seedhouse	2 <sup>nd</sup> Edition, 2003	John wiley & Sons Ltd.

**SKILL ENHANCEMENT COURSE**

**MPHCPH1114**

**Basic Biostatistics**

**2 Credits [L-T-P: 2-0-0]**

**A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING**

<b>Course Outcomes (COs):</b>	<b>At the end of this course, learners will be able to:</b>	<b>Bloom Level</b>
<b>CO1</b>	Define basic statistical methods used in Public Health research	Remember
<b>CO2</b>	Demonstrate data, its types and their interpretation	Understand
<b>CO3</b>	Understand and calculate measures of central tendency	Understand
<b>CO4</b>	Explain about Hypothesis, their types and how to form a hypothesis	Understand
<b>CO5</b>	Illustrate about various Statistical Tests in Public Health Research	Understand

**B. MAPPING MATRIX OF CO, PO & PSO**

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
<b>CO1</b>	-	3	-	1	3	-	-	-	1	2	1	3	3	1	2
<b>CO2</b>	-	-	3	1	-	-	2	1	2	-	1	-	2	3	-
<b>CO3</b>	3	1	1	1	2	3	1	-	2	2	-	1	1	-	1
<b>CO4</b>	3	1	2	1	3	2	-	1	1	2	1	3	3	-	2
<b>CO5</b>	-	2	2	2	2	1	-	1	-	-	3	-	-	1	-
<b>WT.</b>															
<b>AV</b>	<b>3.00</b>	<b>1.33</b>	<b>2.00</b>	<b>1.25</b>	<b>2.50</b>	<b>2.00</b>	<b>1.50</b>	<b>1.00</b>	<b>1.50</b>	<b>2.00</b>	<b>1.50</b>	<b>2.33</b>	<b>2.00</b>	<b>1.67</b>	<b>1.50</b>
<b>G</b>															

### C. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
1.	Basic Concept of Data	9
2.	Frequency Calculation of Frequency & Variation	9
3.	Measures of central Tendency & Dispersion	9
4.	Formulation of Hypothesis and its testing	9
5.	Basic Statistical Tests & Type of Error	9

### D. DETAILED SYLLABUS

Unit	Unit Details
<b>1.</b>	<b>Basic Concept of Data</b>
	<ul style="list-style-type: none"> <li>• Introduction To the Unit</li> <li>• Concept Of Data</li> <li>• Types Of Data,</li> <li>• Displaying Data &amp; Data Presentation,</li> <li>• Tables And Graphs</li> <li>• Conclusion Of the Unit</li> </ul>
<b>2.</b>	<b>Basic Calculations of Frequency and Variation</b>
	<ul style="list-style-type: none"> <li>• Introduction To the Unit</li> <li>• Basic Calculations of Frequency and Variation</li> <li>• Data Analysis</li> <li>• Symmetric Distribution &amp; Skewed Distribution</li> <li>• Normal Distribution</li> <li>• Conclusion Of the Unit</li> </ul>
<b>3.</b>	<b>Measures Of Central Tendency &amp; Dispersion</b>
	<ul style="list-style-type: none"> <li>• Introduction To the Unit</li> <li>• Measures Of Central Tendency (Mean, Median and Mode)</li> <li>• Measures Of Variation</li> <li>• Probability</li> <li>• Internal &amp; External Validity</li> </ul>

	<ul style="list-style-type: none"> <li>• Sampling, Types of Sampling</li> <li>• Sample Size Estimations</li> <li>• Conclusion Of the Unit</li> </ul>
<b>4.</b>	<b>Formulation Of Hypothesis and Its Testing</b>
	<ul style="list-style-type: none"> <li>• Introduction To the Unit</li> <li>• P-Value</li> <li>• Confidence Intervals,</li> <li>• What is a Hypothesis?</li> <li>• Null Vs. Alternate Hypothesis,</li> <li>• Type I &amp; Type II Error</li> <li>• Conclusion Of the Unit</li> </ul>
<b>5.</b>	<b>Basic Statistical Test &amp; Type of Error</b>
	<ul style="list-style-type: none"> <li>• Introduction Of the Unit</li> <li>• Basic Stats Tests</li> <li>• Z -Test,</li> <li>• T-Test,</li> <li>• Chi-Square,</li> <li>• Correlation,</li> <li>• ANOVA</li> <li>• Types of Errors</li> <li>• Conclusion of the Unit</li> </ul>

#### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Preventive and Social Medicine	K. Park	27 <sup>th</sup> Edition, 2023	Banarsidas Bhanot
2	Basic Biostatistics - Biostatistics for Public Health Practice	B. Burt Gerstman	2 <sup>nd</sup> Edition, 2009	Jones and Bartlett Publishers, Inc
3	Mahajan's Methods of Biostatistics for Medical Students & Research Workers	V K Mahajhan	10 <sup>th</sup> Edition, 2024	Jaypee Brothers Medical Publishers
4	Fundamentals of Statistics	Goon A.M., Gupta M.K., and Dasgupta B,	2 <sup>nd</sup> Edition, 2016	World Press, Calcutta.

- Family health is a state in which the family is a resource for the day-to-day living and health of its members. A family provides its individual members with key resources for healthful living, including food, clothing, shelter, a sense of self-worth, and access to healthcare.
- Family visits should give the students sufficient exposure to make them understand the association of various environmental factors, socio-economic factors and the psychological or emotional factors with the health and disease of the family. They should learn family interactions and life cycle approach.
- Each student should be allotted at least four families—two families each in rural and urban areas and in each area one family should be from low socioeconomic status and the second from good socioeconomic status. This will give opportunity to learn varied factors influencing health and will expose the students to the challenges of behaviour change communication.
- Students should visit their allotted families regularly at least for a month.

**AREAS TO BE COVERED IN THE FAMILY & COMMUNITY STUDY**

- Index Cases in the Family
- Priority to the vulnerable family members
- Infrastructure (Kuchha & Pucca House), Drainage System, Drinking Water Supply, Personal Hygiene - Hand Washing Techniques, Safe Drinking water & Sanitation, Monitoring of Food Storage & Dining area
- Living Standards – Quality of Life

**Apprenticeship** is a system for training of students about the course accompanied with classroom work and reading. Apprenticeships also enable to have hands-on experience at the organisations and skill development. Most of their training is done while working for an employer who helps the apprentices learn about their profession, for an agreed period after they have achieved measurable competencies.

## II SEMESTER

### MAJOR (CORE COURSES)

**MPHCPH2102****Fundamentals of Demography****3 Credits [LTP: 3-0-0]**

#### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Recall the global health	Remember
CO2	Enumerate the population transition in developed and developing countries.	Remember
CO3	Understand the concept of demographic cycle	Understand
CO4	Understand the fertility and mortality indicators of India	Understand
CO5	Understand the population pyramid and the impact of ageing in a society	Understand

#### **B. MAPPING MATRIX OF CO, PO & PSO**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3	PSO4
CO1	1	-	-	3	1	-	3	2	2	3	3	1	2	-	3
CO2	2	-	3	1	3	3	-	3	1	1	1	3	-	3	2
CO3	-	3	1	2	-	3	-	-	3	1	-	1	-	2	3
CO4	1	3	3	1	3	-	1	1	2	3	2	3	2	-	-
CO5	2	1	2	1	3	-	2	3	1	3	3	-	3	2	3
WT. AVG	1.50	2.33	2.25	1.25	2.50	3.00	2.00	2.33	1.80	2.00	2.25	2.00	2.50	2.33	2.67

#### **C. OUTLINE OF THE COURSE**

Unit No.	Title of the unit	Time Required for the Unit (Hours)
1	Basic Concept & Definition of Demography	6
2	Demographic Structure and Cycle	7
3	Demographic Transition & Trends in Developing & Developed regions	6
4	Fertility & Mortality Indicators & Trends	6

**D. DETAILED SYLLABUS**

<b>Unit</b>	<b>Unit Details</b>
<b>1</b>	<b>Basic Concept &amp; Definition of Demography</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Concept &amp; Scope of Demography</li> <li>• Demographic Process</li> <li>• Types of Demography</li> <li>• Conclusion of the Unit</li> </ul>
<b>2</b>	<b>Demographic Structure and Cycle</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Basic Structure of Demography</li> <li>• Stages of Demographic Cycle</li> <li>• Stages of Demographic Cycle with Countries</li> <li>• Conclusion of the Unit</li> </ul>
<b>3</b>	<b>Demographic Transition &amp; Trends in Developing &amp; Developed regions</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Various Stages of Demographic Transition</li> <li>• Causes of Demographic Transition</li> <li>• Demographic Transition Theory &amp; Model</li> <li>• Demographic Transition in Japan, America and France</li> <li>• Demographic Trends in India</li> <li>• Conclusion of the Unit</li> </ul>
<b>4</b>	<b>Fertility &amp; Mortality Indicators &amp; Trends</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Measurement of Mortality</li> <li>• Measurement of Mobility</li> <li>• Measurement of Disability</li> <li>• Measurement of Natality</li> <li>• Measurement of Demographic Variables</li> <li>• Tools of Measurement</li> <li>• Fertility &amp; Mortality Trends in India</li> <li>• Conclusion of the Unit</li> </ul>
<b>5</b>	<b>Population Pyramid, Impact of Ageing</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Concept of Population Pyramid</li> </ul>

- Objectives of the Population Pyramid
- Types of Population Pyramid
- Impact of Ageing Population
- Social Impacts of Ageing Population
- Conclusion of the Unit

#### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Preventive and Social Medicine	K Park	27 <sup>th</sup> Edition, 2014	Banarsidas Bhanot
2	Introduction to Public Health	Mary Jane Schnieder	6 <sup>th</sup> Edition, 2020	Jones and Bartlett Publishers, Inc
3	Determinants of Health Status in India	Keya Sengupta	1 <sup>st</sup> Edition, 2015	Springer

**MPHCPH2102**

**Social Behavior and Change**

**3 credits [LTP:3-0-0]**

#### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Recall the concepts of Sociology, Medical Sociology & Social Medicine	Remember
CO2	Understand Indian Society, its structure, stratification and diversity in order to acknowledgedifferentials in health status.	Understand
CO3	Understand the various Social and Behavioral theories	Understand
CO4	Determine the role of Social and Behavioral sciences in understanding a public healthproblem	Apply
CO5	Operate in designing and conducting research, intervention, in policy and decisionmaking based on social and behavioral sciences approach	Apply

#### **B. MAPPING MATRIX OF CO, PO & PSO**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3	PSO4

CO1	2	2	3	1	-	2	2	3	3	1	2	-	2	1	3
CO2	-	1	1	-	-	3	-	-	2	1	3	1	3	-	-
CO3	-	-	2	-	2	3	-	-	3	-	1	3	1	-	-
CO4	2	3	1	-	-	1	3	1	3	3	3	2	2	1	2
CO5	2	2	2	-	2	3	2	-	3	1	2	3	2	2	-
WT. AVG	2.0	2.0	1.8	1	2.0	2.4	2.33	2.0	2.8	1.5	2.2	2.25	2.0	1.33	2.5

### C. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
1.	Introduction to Social and Behavioral Sciences	9
2.	Understanding Indian Society, its stratification and diversity	9
3.	Social and Behavioral Theories	9
4.	Health and Health Seeking Behaviors and Models	9
5.	Social Epidemiology	9

### D. DETAILED SYLLABUS

Unit	Unit Details
1.	<b>Introduction to Social and Behavioral Sciences</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Concept of Sociology, Medical Sociology &amp; Social Medicine</li> <li>• Concept of Social Epidemiology</li> <li>• Need for the study of Sociology &amp; Medical Sociology</li> <li>• Concept of Society, Community, Culture &amp; Social Pathology</li> <li>• Conclusion of the Unit</li> </ul>
2.	<b>Understanding Indian Society, its stratification and diversity</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• History of Anthropology</li> <li>• Vision of Anthropology</li> <li>• Different Fields of Anthropology</li> <li>• Concept, origin &amp; Causes of Social Stratification</li> <li>• Impacts of Social Stratification on our Life</li> <li>• Forms of Social Stratification</li> <li>• Conclusion of the Unit</li> </ul>

<b>3.</b>	<b>Introduction to Social and Behavioral Theories</b>
	<ul style="list-style-type: none"> <li>• Introduction to the unit</li> <li>• Sociological theories</li> <li>• Functionalism</li> <li>• Symbolic Interactionism</li> <li>• Conflict Perspective</li> </ul>
<b>4.</b>	<b>Health Seeking Behaviors and Models</b>
	<ul style="list-style-type: none"> <li>• Illness, Disease, Health &amp; Wellbeing</li> <li>• Dimensions and Determinants of Health</li> <li>• Health Behaviors</li> <li>• Types of Health Behavior</li> <li>• Illness and Sickness roles</li> <li>• Health Seeking Behavior</li> <li>• Theories and Models for understanding health behaviors and behavioral change</li> </ul>
<b>5.</b>	<b>Social Epidemiology</b>
	<ul style="list-style-type: none"> <li>• Introduction to the unit</li> <li>• Biopsychosocial Paradigm</li> <li>• The Population Perspective</li> <li>• Multi-Level Analysis</li> <li>• Gender and Health</li> <li>• Stigma and exclusion</li> <li>• Conclusion of the Unit</li> </ul>

**RECOMMENDED STUDY MATERIAL**

S. No	Reference Book	Author	Edition	Publication
1	Preventive and Social Medicine	K Park	27 <sup>th</sup> Edition, 2024	Banarsidas Bhanot

**A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING**

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Define the fundamentals of Health Economics.	Remember
CO2	Understand the Economics of Health Care Services in India	Understand
CO3	Explain and manage finances for health care services.	Understand
CO4	Understand cost and investment analysis for decision making in Hospital sectors	Understand
CO5	Apply the Basics of Economic Evaluation for Decision Making	Apply

**B. MAPPING MATRIX OF CO, PO & PSO**

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
CO1	1	2	-	-	-	3	2	3	2	2	1	-	3	3	2
CO2	-	1	-	1	2	3	2	3	1	1	3	1	-	-	-
CO3	3	3	-	2	2	3	3	1	1	1	1	3	2	-	2
CO4	3	1	-	-	3	3	1	1	1	1	2	1	2	1	-
CO5	3	-	1	3	2	1	1	1	-	1	3	3	-	2	3
WT.	2.5	1.75	1	2.0	2.25	2.6	1.8	1.8	1.25	1.2	2.0	2.0	2.33	2.0	2.33
AV G															

### C. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
1.	Basic concepts of economics: Principles of macroeconomics and microeconomics,	9
2.	Economics of Healthcare Services in India	9
3.	Fundamentals of Health Insurance	9
4.	Cost Analysis for Managerial Decisions	9
5.	Economic Evaluation for Decision making	9

### D. DETAILED SYLLABUS

Unit	Unit Details
1.	<b>Basic concepts of economics: Principles of macroeconomics and microeconomics,</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Meaning &amp; Definitions Health Economics.</li> <li>• Relevance of Economics in Health and Medical Care.</li> <li>• Micro-economic tools for health economics.</li> <li>• Concept of Scarcity, Abundance and efficient use of resources</li> <li>• Flow of money, resources and commodities</li> <li>• Conclusion of the Unit</li> </ul>
2.	<b>Economics of Healthcare Services in India</b>
	<ul style="list-style-type: none"> <li>• Introduction of the Unit</li> <li>• Public Sector healthcare services in India.</li> <li>• Private Sector healthcare services in India.</li> <li>• Demand for Healthcare</li> <li>• Supply for Healthcare</li> <li>• Financial incentives by Government to healthcare.</li> <li>• Stakeholders of healthcare industry.</li> <li>• Market Structure and Price determination</li> </ul>

	<ul style="list-style-type: none"> <li>• Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Fundamentals of Health Insurance</b>
	<ul style="list-style-type: none"> <li>• Introduction of the Unit</li> <li>• Health Insurance</li> <li>• Economic benefits of health insurance</li> <li>• Types of Health Insurance</li> <li>• Employee Health Insurance Scheme</li> <li>• Universal Health Coverage and other health programs</li> <li>• Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Cost analysis for managerial Decisions</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Costs: Conceptual Foundations</li> <li>• Understanding Cost Classifications</li> <li>• Programme Costing</li> <li>• Use of Cost Data by Programme Managers</li> <li>• Cost Allocation</li> <li>• Cost Volume Profit Analysis</li> <li>• Standard Costing and Variance Analysis</li> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Economic Evaluation for Decision Making</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Cost Minimization Analysis</li> <li>• Cost Effectiveness Analysis</li> <li>• Cost Utility Analysis</li> <li>• Cost Benefit Analysis</li> <li>• Steps for Economic Evaluation</li> <li>• Identification of Cost and Consequences</li> <li>• Conclusion of the Unit</li> </ul>

### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Economics for Healthcare Management	Clewer Ann and Perkins Davis	1 <sup>st</sup> Edition, 2009	Pearson Education

2	Health Care Finance and Economics	Eastaugh Steven R.,	1 <sup>st</sup> Edition, 2004	Jones Bartlett Publishers. Phelps Charles
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**MPHCPH2201**

**Demography Lab**

**2Credits [LTP:0-0-4]**

**A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING**

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Measure the population transition in developed and developing countries.	Imitate
CO2	Execute and calculate fertility and mortality indicators	Manipulate
CO3	Demonstrate the population pyramid and the impact of ageing in a society	Manipulate

**B. MAPPING MATRIX OF CO, PO & PSO**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3	PSO4
CO1	-	3	1	2	-	3	-	-	3	1	-	1	-	2	3
CO2	1	3	3	1	3	-	1	1	2	3	2	3	2	-	-
CO3	2	1	2	1	3	-	2	3	1	3	3	-	3	2	3
WT. AVG	1.50	2.33	2.25	1.25	2.50	3.00	2.00	2.33	1.80	2.00	2.25	2.00	2.50	2.33	2.67

**C. DETAILED SYLLABUS**

1.	EXPERIMENTS
	<ul style="list-style-type: none"> <li>Identify the different sources of data</li> <li>Describe the advantages and disadvantages of each indicator</li> <li>Ratio, Rate, and Probability</li> <li>Define and distinguish ratio, rate, and probability</li> <li>Identify fundamental rates in demography: crude and specific rates</li> <li>Define crude birth rate, crude death rate, and rate of natural increase</li> <li>Define and calculate indicators for the following characteristics: sex, age, race, marital status, education and economic status Describe the distribution of a population using these various</li> </ul>

- demographic characteristics
- Draw a Lexis diagram; use it for display of demographic data and for estimation.

## DEPARTMENT ELECTIVE COURSES

**MPHEPH2111**

**Financial Management and Budgeting**

**2 Credit [LTP:2-0-0]**

### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
<b>CO1</b>	Define the principles of Health Finance.	Remember
<b>CO2</b>	Understand health financing functions of collecting revenue, pooling funds and purchasing services	Understand
<b>CO3</b>	Determine the policy choices concerning coverage, resource allocation and market structure	Apply
<b>CO4</b>	Assess the impact of health financing and health insurance policies on overall health system	Analyze
<b>CO5</b>	Evaluate effect of health financing system on health financing policy goals	Evaluate

### **B. MAPPING MATRIX OF CO, PO & PSO**

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
<b>CO1</b>	3	2	1	2	-	3	2	1	3	2	-	3	-	-	1
<b>CO2</b>	3	3	-	3	2	-	1	1	3	3	1	2	2	2	-

CO3	2	-	1	3	3	1	-	3	3	3	3	3	1	2	-
CO4	3	1	2	-	3	-	3	1	2	-	2	3	2	1	1
CO5	3	-	-	3	1	3	1	2	2	1	3	1	1	2	3
WT.	2.8	2.0	1.3	2.75	2.25	2.33	1.75	1.6	2.6	2.25	2.25	2.4	1.5	1.75	1.66
AV															
G															

### C. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
1.	Introduction to Financial Management	5
2.	Tools of Financial Analysis and Planning in Healthcare	5
3.	Cash Flow, Accounts and Balancing Budgets	6
4.	Health Insurance	5
5.	Sustainability of Health Programs	9

### D. DETAILED SYLLABUS

Unit	Unit Details
1.	<b>Introduction to Financial Management</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Health spending scenario: Indian and global</li> </ul>

	<ul style="list-style-type: none"> <li>• Health Financing Policy</li> <li>• Importance of Health Financing Policy</li> <li>• Mechanism of Healthcare Financing</li> <li>• Three functions of Health financing: Collection, Pooling and Purchasing</li> <li>• Payment mechanisms</li> <li>• Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Tools of Financial Analysis and Planning in Healthcare</b>
	<ul style="list-style-type: none"> <li>• Introduction of the Unit</li> <li>• Mechanism of health care financing</li> <li>• General revenue, Social insurance schemes, private insurance premiums, community financing, out of pocket expenditure</li> <li>• Risk pooling</li> <li>• Basic concepts of Pooling</li> <li>• Advantages of pooling mechanism</li> <li>• Types of pooling mechanisms</li> <li>• Principles of Pooling</li> <li>• Feasibility</li> <li>• Equity</li> <li>• Efficiency</li> <li>• Sustainability</li> <li>• pooling and distribution</li> <li>• Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Cash Flow, Accounts and Balancing Budgets</b>
	<ul style="list-style-type: none"> <li>• Introduction of the Unit</li> <li>• Purchasing</li> <li>• Resource allocation</li> <li>• Provider payment mechanism</li> <li>• Budget</li> <li>• Importance of Budgeting in Health sector</li> <li>• Factors affecting budget</li> <li>• Types of Budgeting in Healthcare</li> <li>• Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Health Insurance</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> </ul>

	<ul style="list-style-type: none"> <li>• Health insurance</li> <li>• History of Health Insurance</li> <li>• Values in health insurance</li> <li>• Types of health insurance</li> <li>• Advantages of health insurance</li> <li>• Problems with health insurance</li> <li>• Premiums and types of premiums</li> <li>• Social Health Insurance</li> <li>• CGHS</li> <li>• ESIS</li> <li>• Conclusion of the unit</li> </ul>
<b>5.</b>	<b>Sustainability of Health Programs</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Costs: Conceptual Foundations</li> <li>• Understanding Cost Classifications</li> <li>• Programme Costing</li> <li>• Allocative Efficiency</li> <li>• Use of Cost Data by Programme Managers</li> <li>• Cost Allocation</li> <li>• Cost Volume Profit Analysis</li> <li>• Standard Costing and Variance Analysis</li> <li>• Conclusion of the Unit</li> </ul>

#### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Economics for Healthcare Management	Clewer Ann and Perkins Davis	1 <sup>st</sup> Edition, 2009	Pearson Education
2	Health Care Finance and Economics	Eastaugh Steven R.,	1 <sup>st</sup> Edition, 2004	Jones Bartlett Publishers. Phelps Charles

**A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING**

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Recall the fundamental difference between Sex, Gender and Sexual Orientation	Remember
CO2	Understand Social Construction of Gender; Various theoretical perspectives and concepts related to Gender	Understand
CO3	Determine the Gender based differentials in demographic, health, nutrition, healthcare access, healthcare utilization	Apply
CO4	Analyze gender mainstreaming and analysis in health related policies and programs	Analyze
CO5	Develop and understanding for Gender from rights' perspective as well as different laws and policies related to Gender & Health	Evaluate

**B. MAPPING MATRIX OF CO, PO & PSO**

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
CO1	3	3	2	2	-	1	-	3	2	1	1	-	1	1	3
CO2	-	1	3	-	2	-	1	3	-	1	2	3	2	-	-
CO3	2	2	2	1	3	3	3	-	3	3	2	-	2	3	2
CO4	1	1	2	3	1	3	1	3	-	1	3	2	-	2	2
CO5	1	-	3	1	-	1	3	1	1	2	3	1	2	-	-

<b>WT.</b>	<b>1.75</b>	<b>1.75</b>	<b>2.4</b>	<b>1.75</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.5</b>	<b>2.0</b>	<b>1.6</b>	<b>2.2</b>	<b>2.0</b>	<b>1.75</b>	<b>2.0</b>	<b>2.33</b>
<b>AV</b>															
<b>G</b>															

### C. OUTLINE OF THE COURSE

<b>Unit No.</b>	<b>Title of the Unit</b>	<b>Time required for the Unit (Hours)</b>
1.	Gender and Health: An Introduction	5
2.	Gender, Growth & Development	5
3.	Gender work and health	6
4.	Gender in Human Resources for Health	5
5.	National and International Laws and Policies related to Gender and Health	9

### D. DETAILED SYLLABUS

<b>Unit</b>	<b>Unit Details</b>
<b>1.</b>	<b>Gender and Health: An Introduction</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Introduction to sex, gender and sexuality</li> <li>• Gender Norms, Roles and relations</li> <li>• Gender and Socialization</li> <li>• Gender Identity and Gender expression</li> <li>• Gender discrimination</li> <li>• Theoretical perspectives on gender</li> <li>• Conclusion of the Unit</li> </ul>

2.	<b>Gender, Growth &amp; Development</b>
	<ul style="list-style-type: none"> <li>• Introduction to the unit</li> <li>• Gender in SDG</li> <li>• <b>Gender in Human Development Approaches</b></li> <li>• Welfare approach (1950s-1970s)</li> <li>• Women in Development (WID), 1970s</li> <li>• Women and Development (WAD), 1975</li> <li>• Gender and development (GAD), 1980s</li> <li>• Mainstreaming gender equality (MGE). 1990s onwards</li> <li>• <b>Gender &amp; migration</b></li> <li>• Transgender and health</li> <li>• Conclusion of the Unit</li> </ul>
3.	<b>Gender work and health</b>
	<ul style="list-style-type: none"> <li>• Introduction of the Unit</li> <li>• Formal/organized and Informal/Unorganized sector</li> <li>• Formal and Informal Employment</li> <li>• Challenges for workers in informal employment.</li> <li>• Gender based differentials at work</li> <li>• Gender and Governance</li> <li>• Conclusion of the Unit</li> </ul>
4.	<b>Gender in Human Resources for Health</b>
	<ul style="list-style-type: none"> <li>• Introduction of the Unit</li> <li>• Gender sensitivity in health systems</li> <li>• Gender and health workforce</li> <li>• Gender perspective in health workforce</li> <li>• Importance of gender responsive workforce</li> <li>• Characteristics and distribution of health workforce by sex</li> <li>• Gender based Research</li> <li>• Conclusion of the Unit</li> </ul>
5.	<b>National and International Laws and Policies related to Gender and Health</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Women's Health Movement – 1960s-70s</li> <li>• Women's Global Network for Reproductive Rights</li> </ul>

- ICPD – 1994
- MTP Act 1971
- PCPNDT Act
- Maternity Benefits Act 1961 (amended in 2016)
- Surrogacy Regulation Bill 2016
- Criminal Law (Amendment) Act 2012
- Dowry Prohibition Act, 1961
- The Prohibition of Child Marriage Act 2006
- Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
- The Protection of Women from Domestic Violence Act 2005 (PWDVA)
- Protection of Children from Sexual Offences Act (POCSO Act) 2012
- Clinical Establishment Act
- Conclusion of the Unit

#### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Preventive and Social Medicine	K Park	27 <sup>th</sup> Edition, 2023	Banarsidas Bhanot
2	Introduction to Public Health	Mary Jane Schnieder	6 <sup>th</sup> Edition, 2020	Jones and Bartlett Publishers, Inc
3	Determinants of Health Status in India	Keya Sengupta	1 <sup>st</sup> Edition, 2016	Springer, India, Private Ltd

#### SKILL ENHANCEMENT COURSE

**MPHCPH2113**

**Research Methodology**

**2 Credits [LTP:2-0-0]**

#### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Learn basic principles, theories, concepts, techniques and tools used in public healthresearch	Remember
CO2	Explain the concept of research Implementation.	Understand
CO3	Develop skills to review and critically appraise published public health researches	Create
CO4	Develop ability to execute research studies of different types	Create
CO5	Design research studies of different types	Create

#### B. MAPPING MATRIX OF CO, PO & PSO

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PSO 1	PSO 2	PSO 3	PSO 4
CO1	1	3	1	1	-	1	3	-	3	-	2	1	3	-	2
CO2	-	2	-	-	-	1	2	-	1	1	1	2	1	3	1
CO3	1	1	-	-	1	1	1	1	2	-	1	3	3	1	3
CO4	2	2	2	3	-	-	1	3	1	2	3	3	-	2	2
CO5	2	-	-	3	2	1	1	2	1	-	-	1	1	2	3
WT.	1.5	2.0	1.5	2.33	1.5	1	1.6	2.0	1.6	1.5	1.75	2.0	2.0	2.0	2.2
AV G															

#### C. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
1.	Fundamentals of Research Methodology	9
2.	Research Study Designs	9
3.	Research Process I	9
4.	Research Process II	9
5.	Evaluation of Research Study	9

#### D. DETAILED SYLLABUS

Unit	Unit Details
<b>1.</b>	<b>Fundamentals of Research Methodology</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● Research methodology,</li> <li>● Essential &amp; Basic Elements of a Research Study,</li> <li>● Types of Health Research</li> <li>● Significance of Research in Social sciences and Public Health.</li> <li>● Characteristics of Research</li> <li>● Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Research Study Design</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● Research Study Design.</li> <li>● Strength and weakness of each study</li> <li>● Cross sectional survey designs,</li> <li>● longitudinal surveys or cohorts,</li> <li>● Comparison group survey designs:</li> <li>● Quasi &amp; true experiments,</li> <li>● Normative &amp; case control design</li> <li>● Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>The Research Process I</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> </ul>

	<ul style="list-style-type: none"> <li>● The Research Process: Quick Glance</li> <li>● Formulation of Research Study <ul style="list-style-type: none"> <li>• Review of Literature</li> <li>• Formulating Research Problem</li> <li>• Identification of Variables</li> <li>• Hypothesis Construction</li> </ul> </li> <li>● Conceptualizing Research Design</li> <li>● Construction of tool for data collection</li> <li>● Concept of validity and reliability</li> <li>● Sample selection</li> <li>● Sampling techniques</li> <li>● Conclusion of the unit</li> </ul>
<b>4.</b>	<b>The Research Process II</b>
	<ul style="list-style-type: none"> <li>● Introduction to the unit</li> <li>● Writing a Research Proposal</li> <li>● Ethical considerations in Research study</li> <li>● Data Collection</li> <li>● Analyzing the data</li> <li>● Reporting the result</li> <li>● Compilation and Results presentations.</li> <li>● Communicating the results,</li> <li>● Writing the report</li> <li>● Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Evaluation of Research Study</b>
	<ul style="list-style-type: none"> <li>● Introduction to the unit</li> <li>● Importance of Evaluation process</li> <li>● Types of Evaluation Process</li> <li>● Cost benefit/ cost effectiveness evaluation</li> <li>● Undertaking Evaluation Process</li> <li>● Ethics in Evaluation</li> <li>● Conclusion of the unit</li> </ul>

**RECOMMENDED STUDY MATERIAL**

S. No	Reference Book	Author	Edition	Publication
1	How to conduct surveys: A step by step guide	Arlene Fink	4 <sup>th</sup> Edition, 2008	Sage publication
2	Research Methodology, Methods and Techniques	C.R. Kothari	3 <sup>rd</sup> Edition, 2013	New Age International Publishers
3	Introduction to Research in the Health Sciences	Stephen Polgar and Shane S. Thomas	7 <sup>th</sup> Edition, 2019	Churchill Livingstone Publications

**VALUE ADDED COURSE**

<b>MPHCPH2114</b>	<b>Global Health</b>	<b>2 Credits [LTP 2-0-0]</b>
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**A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING**

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Enumerate the Global Health Scenario.	Remember
CO2	Understand the various gaps in Global Health Governance.	Understand
CO3	Identify the various global health issues	Remember
CO4	Develop skills for understanding advocacy globally	Apply
CO5	Develop insights for comparing Global Health systems	Apply

**B. MAPPING MATRIX OF CO, PO & PSO**

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	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	PSO 1	PSO 2	PSO 3	PSO 4
CO 1	2	2	3	1	-	2	2	3	3	1	2	2	-	2	1	3
CO 2	-	1	1	-	-	3	-	-	2	1	3	1	1	3	-	-
CO 3	-	-	2	-	2	3	-	-	3	-	1	1	3	1	-	-
CO 4	2	3	1	-	-	1	3	1	3	3	3	2	2	2	1	2
CO 5	2	2	2	-	2	3	2	-	3	1	2	3	3	2	2	-
WT. AV G	2.0	2.0	1.8	1	2.0	2.4	2.3	2.0	2.8	1.5	2.2	1.8	2.25	2.0	1.33	2.5

### C. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
1.	Introduction to global health	4
2.	Global Health System	2
3.	Global Health Governance	5
4.	Global issues and health	5

5.	Global Health Diplomacy	4
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#### D. DETAILED SYLLABUS

Unit	Unit Details
<b>1.</b>	<b>Introduction to global health</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● Evolution of global health – from quarantine to global health</li> <li>● Health for All to Health in All</li> <li>● Globalization and Sustainable development Goals</li> <li>● Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Global Health System</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● Elements of the Global Health System</li> <li>● Key stakeholders of Global Health System - forces and interests</li> <li>● Vertical and horizontal approaches to global health</li> <li>● Current and future priorities of the Global Health System</li> <li>● Public private partnerships at the global scale</li> <li>● Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Global Health Governance</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● Intersection of political economy and global health</li> <li>● Positioning health in global governance</li> <li>● Global health financing – trends</li> <li>● Technology and global health</li> <li>● Health at the local level</li> <li>● Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Global issues and health</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit:</li> <li>● Infectious diseases, Water, Sanitation and Hygiene</li> <li>● Chronic diseases and Urbanization</li> <li>● Poverty, hunger, food security and nutrition</li> <li>● Climate change and bio -diversity</li> </ul>

	<ul style="list-style-type: none"> <li>• Global Health Security</li> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Global Health Diplomacy</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Definition and Concept of Health Diplomacy</li> <li>• Health Diplomacy at the Global Level</li> <li>• Diplomacy during Global Health Crises</li> <li>• Role of India in Global Health Diplomacy</li> <li>• Conclusion of the Unit</li> </ul>

### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Preventive and Social Medicine	K Park	27 <sup>th</sup> Edition, 2014	Banarsidas Bhanot
2	Introduction to Public Health	Mary Jane Schnieder	6 <sup>th</sup> Edition, 2020	Jones and Bartlett Publishers, Inc
3	Determinants of Health Status in India	Keya Sengupta	1 <sup>st</sup> Edition, 2015	Springer

**MPHCPH2205**

**Summer Internship**

**2 Credits [LTP: 0-0-4]**

Two months' internship will be undertaken by all the candidates with an aim to integrate learning and practice in an active public health organization. This can be undertaken at governmental or non- governmental public health organizations or program management units. The internship should include the candidate's role and support in assessing, monitoring, or conducting surveillance of health problems/services in a population; research on population-based health problems; developing and/or implementing policies and intervention strategies to meet public health needs. Overall it should contribute to the organization, and should help in understanding public health management and coordination and gaining personal confidence and leadership experience. Although finding a suitable internship opportunity lie with the candidate him/herself, mentors will facilitate the process. After the completion of 2 months of internship, candidates will be expected to submit a brief summary of public health program/challenge dealt with and solution proposed/implemented by the candidate at the end of second semester.

Here the faculty members will assign current Public Health issues concerning with Indian Healthcare system after the visits of various departments of different organization done by the students for the project. The student will prepare various projects under guidance of faculty members to be allotted by the Dean of the School. There will be regular internal assessment. The student will submit hand written report and make a presentation before a panel of internal and external examiner (Dean of the School or his or her nominee).

### III SEMESTER

#### MAJOR (CORE COURSES)

**MPHCPH3101 Introduction to Health System and Health Policy 3 Credit LTP:3-0-0]**

#### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Recall the history of Indian health system and health policies in India	Remember
CO2	Explain the multi-faceted nature of the policy response in public health	Understand
CO3	Apply the superstructure of public health and health delivery, and enlist major institutions in India	Apply
CO4	Assess key types of distributive and regulatory approaches in public health policy	Analyze
CO5	Understand the Health system framework and compare different health systems	Understand

#### **B. MAPPING MATRIX OF CO, PO & PSO**

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
CO1	3	2	-	-	1	3	-	1	2	2	1	1	1	2	3
CO2	-	1	3	2	1	-	2	3	-	-	3	2	3	1	3
CO3	2	3	-	3	3	1	3	-	3	-	-	2	3	2	3
CO4	2	2	-	2	1	-	-	2	-	2	1	2	-	2	2

CO5	1	3	3	2	-	2	3	1	2	1	3	3	-	3	3
WT.	2.0	2.2	3	2.25	1.5	2.0	2.66	1.75	2.33	1.66	2.0	2.0	2.33	2.0	2.8
AV															
G															

### C. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
1.	Introduction to Health system and Health Policy	9
2.	Health Policy, process and planning	9
3.	Health System Frameworks	9
4.	Translating research for Health Policy and Advocacy	9
5.	Current Issues in health policy: National and Global perspective	9

### D. DETAILED SYLLABUS

Unit	Unit Details
1.	<b>Introduction to Health Policy and Health System</b>
	<ul style="list-style-type: none"> <li>• Introduction of the Unit</li> <li>• Defining Policy</li> <li>• Types and Need of Policy</li> <li>• Historical aspect of Health Policy</li> <li>• Land mark policies for health</li> <li>• Health in constitution</li> <li>• Health Service Delivery structure in India (Horizontal v/s Vertical, Public v/s Private)</li> </ul>

	<ul style="list-style-type: none"> <li>• Health for All Alma Ata Declaration</li> <li>• Laws related to health</li> <li>• Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Health Policy, Process and Planning</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Policy making: key components</li> <li>• Policy framework</li> <li>• Stakeholders in policy making</li> <li>• Effects of different interest and advocacy groups in influencing health policy</li> <li>• Short term and long-term policies</li> <li>• Introduction to various health policies</li> <li>• Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Health System Frameworks</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Understanding Health system</li> <li>• Framework for health systems</li> <li>• Health system Building Blocks</li> <li>• Governance</li> <li>• Framework for analysis of governance</li> <li>• Governance principles for health system</li> <li>• Health Governance analysis framework</li> <li>• Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Translating research for Health Policy and Advocacy</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• What is Power?</li> <li>• Dimensions for power</li> <li>• Different forms of power influential to policy making</li> <li>• Different theories useful in policy analysis</li> <li>• Political nature of evidence for policy making</li> <li>• Critical appraisal of issues in health policy and financing</li> <li>• Influence of international agencies on policies</li> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Current Issues in health policy: National and Global perspective</b>

- Introduction to the Unit
- Different dimensions to international health and globalization
- Effects of globalization on health
- Changing global health policy landscape
- New global health actors
- Assessing health impacts of different policies across sectors
- Role of NGOs in healthcare
- Intersectoral coordination in health including public private partnership
- Conclusion of the Unit

### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	National Health Program of India National Policies and Legislations Related to Health	Dr. Jugal Kishore	5 <sup>th</sup> Edition, 2009	Century Publications
2	Health Program Planning and Evaluation: A Practical, Systematic Approach for Community Health	L. Michele Issel	1 <sup>st</sup> Edition, 2014	Jones- Bartlett Publishers.

**MPHCPH3102**

**Introduction to Health Programs, Design  
Monitoring & Evaluation**

**3 Credit LTP [3-0-0]**

### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
<b>CO1</b>	Enumerate about various Health Programs in India	Remember
<b>CO2</b>	Understand the concepts of design of health programs	Understand
<b>CO3</b>	Demonstrate fundamental components of health programs	Apply

<b>CO4</b>	Interpret about monitoring of health programs	Analyze
<b>CO5</b>	Understand about evaluation of health programs	Understand

### B. MAPPING MATRIX OF CO, PO & PSO

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
<b>CO1</b>	-	3	-	1	2	2	2	1	2	1	-	3	2	1	2
<b>CO2</b>	2	-	3	3	1	2	3	-	1	3	-	-	1	1	-
<b>CO3</b>	1	-	1	2	2	3	-	2	2	3	-	-	3	-	3
<b>CO4</b>	3	-	2	3	2	-	-	3	3	1	1	1	2	1	-
<b>CO5</b>	2	3	2	3	3	2	-	1	2	3	-	3	1	1	-
<b>WT.</b>	<b>2.0</b>	<b>3</b>	<b>2.0</b>	<b>2.4</b>	<b>2.0</b>	<b>2.25</b>	<b>2.5</b>	<b>1.75</b>	<b>2.0</b>	<b>2.2</b>	<b>1</b>	<b>2.33</b>	<b>1.8</b>	<b>1</b>	<b>2.5</b>
<b>AV</b>															
<b>G</b>															

### C. OUTLINE OF THE COURSE

<b>Unit No.</b>	<b>Title of the Unit</b>	<b>Time required for the Unit (Hours)</b>
<b>1.</b>	Health Programs in India	9
<b>2.</b>	Concepts underlying the design of health programs	9
<b>3.</b>	Fundamental components of Health Programs	9
<b>4.</b>	Monitoring of Health Programs	9
<b>5.</b>	Evaluation of Health Programs	9

## D. DETAILED SYLLABUS

Unit	Unit Details
<b>1.</b>	<b>Health Programs in India</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● Historical Perspective</li> <li>● National Health Mission (NHM).</li> <li>● NACP, NTEP, NLEP, NVBDCP</li> <li>● NPCDCS, NPCB, NOHP, NNM, RMNCH+A</li> <li>● Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Concepts underlying the design of health programs</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● Concepts of health program design</li> <li>● Principles of program designing</li> <li>● Importance of program design</li> <li>● Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Fundamental Components of Health Program</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● Stakeholders, Partnerships &amp; Team building</li> <li>● Importance of Social Determinants in a health program</li> <li>● Community-outreach and its importance</li> <li>● Importance of focus on outcomes</li> <li>● Development of a community-centric interventions</li> <li>● Technology and its use in health programs</li> <li>● Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Monitoring of health programs</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● Defining Monitoring.</li> <li>● Monitoring methods.</li> </ul>

	<ul style="list-style-type: none"> <li>• Issues in Monitoring</li> <li>• Use of Indicators in Monitoring</li> <li>• Importance of Monitoring in health programs</li> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Evaluation of health programs</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Defining Evaluation</li> <li>• Types of Evaluation</li> <li>• Development of Evaluation Framework</li> <li>• Issues in Evaluation</li> <li>• Use of Indicators in Evaluation</li> <li>• Importance of Evaluation in health programs</li> <li>• Conclusion of the Unit</li> </ul>

#### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	National Health Program of India National Policies and Legislations Related to Health	Dr. Jugal Kishore	5 <sup>th</sup> Edition, 2009	Century Publications
2	Health Program Planning and Evaluation: A Practical, Systematic Approach for Community Health	L. Michele Issel	1 <sup>st</sup> Edition, 2014	Jones- Bartlett Publishers.

**MPHCPH3103**

**Public Health Nutrition**

**3 Credits [LTP:3-0-0]**

#### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Describe the basic concepts of public health nutrition and prophylactic role of nutrition in tackling malnutrition among the community people.	Remember

<b>CO2</b>	Understand the concept of different assessment techniques required for the assessment of nutritional status of the population.	Understand
<b>CO3</b>	Determine the most relevant nutritional deficiencies in the community at present and enlist strategies for their prevention and management (PEM, Macro and Micronutrient Deficiency)	Apply
<b>CO4</b>	Understand the changes in the nutritional requirements of the population at different life stage and different aspects related to feeding practices at different life stages.	Understand
<b>CO5</b>	Understand the role of nutrition and related interventions in the management different Non-Communicable diseases like Diabetes, Cancer and CVD	Understand

#### B. MAPPING MATRIX OF CO, PO & PSO

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO	
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4	
<b>CO1</b>	1	1	2	3	1	3	1	3	-	1	3	2	-	2	2	
<b>CO2</b>	1	-	3	1	-	1	3	1	1	2	3	1	2	-	-	
<b>CO3</b>	2	1	-	-	3	3	-	1	-	-	-	2	3	3	3	
<b>CO4</b>	3	2	-	-	1	3	-	1	2	2	1	1	1	2	3	
<b>CO5</b>	-	1	3	2	1	-	2	3	-	-	3	2	3	1	3	
<b>WT.</b>																
<b>AV</b>	1.75	1.33	2.67	1.50	1.50	2.33	2.00	1.50	1.50	2.00	2.50	1.60	2.25	2.00	3.00	
<b>G</b>																

#### C. OUTLINE OF THE COURSE

<b>Unit No.</b>	<b>Title of the Unit</b>	<b>Time required for the Unit (Hours)</b>
1.	Introduction to Public Health Nutrition	4
2.	Assessment of Nutritional Status in Individuals and Populations	6
3.	Macronutrient and Micronutrient Malnutrition	6
4.	Nutrition and Lifecycle	8
5.	Nutrition and NCD	6

#### **D. DETAILED SYLLABUS**

<b>Unit</b>	<b>Unit Details</b>
<b>1.</b>	<b>Introduction to Public Health Nutrition</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Definition and Importance</li> <li>• Prophylactic Role of Nutrition</li> <li>• Nutrition Challenges</li> <li>• Framework of tackling Malnutrition</li> <li>• Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Assessment of Nutritional Status in Individuals and Populations</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Anthropometrics</li> <li>• Clinical Assessment</li> <li>• Dietary Assessment</li> <li>• Biomarkers in Nutritional Status</li> <li>• Food Choice</li> <li>• Error in Methods of Assessment of Nutrition of Nutritional Status</li> <li>• Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Macronutrient and Micronutrient Malnutrition</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Epidemiology of Macronutrient definition and Framework</li> <li>• Determinants of PEM</li> <li>• Epidemiology of Hidden hunger</li> <li>• Common Nutrition Deficiencies</li> </ul>

	<ul style="list-style-type: none"> <li>• IDA, Vitamin D Deficiency,</li> <li>• Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Nutrition and Lifecycle</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Nutrition and Maternal Health (Pregnancy and Lactation)</li> <li>• Nutrition and Child Management</li> <li>• Infant feeding</li> <li>• Nutrition and Adolescent</li> <li>• Nutrition in Geriatric Population</li> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Nutrition and NCD</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Nutrition and Prevention of NCD</li> <li>• Nutrition and Diabetes</li> <li>• Nutrition and CVD</li> <li>• Diet and Cancer</li> <li>• Conclusion of the Unit</li> </ul>

#### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Preventive and Social Medicine	K Park	27 <sup>th</sup> Edition, 2023	Banarsidas Bhanot
2	Public Health Nutrition	Michael j	2013 Edition	Blackwell Science, Nutrition Society
3	Public Health Nutrition	Judith L. Buttriss	2 <sup>nd</sup> Edition, 2017	John Wiley & Sons which

**A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING**

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Demonstrate basic skills in assessing nutritional status through anthropometric and dietary methods by following standard procedures.	Imitate
CO2	Apply and interpret growth charts and other nutrition tools under guided instructions to classify nutritional status.	Manipulate
CO3	Prepare and standardize nutritive recipes and educational aids with accuracy and minimal errors.	Precision
CO4	Integrate multiple skills to design and deliver effective nutrition and health education strategies in community settings.	Articulate
CO5	Plan, implement, and independently evaluate comprehensive nutrition and health education programmes with competence and efficiency.	Neutralize

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
CO1	3	2	1	2	-	3	2	1	3	2	-	3	-	-	1
CO2	3	3	-	3	2	-	1	1	3	3	1	2	2	2	-
CO3	2	-	1	3	3	1	-	3	3	3	3	3	1	2	-
CO4	3	1	2	-	3	-	3	1	2	-	2	3	2	1	1
CO5	3	-	-	3	1	3	1	2	2	1	3	1	1	2	3

<b>WT.</b>																
<b>AV</b>	<b>2.80</b>	<b>2.00</b>	<b>1.33</b>	<b>3.00</b>	<b>2.25</b>	<b>2.00</b>	<b>1.75</b>	<b>1.75</b>	<b>2.60</b>	<b>2.33</b>	<b>2.25</b>	<b>2.40</b>	<b>1.50</b>	<b>1.75</b>	<b>2.00</b>	
<b>G</b>																

## B. OUTLINE OF THE COURSE

<b>Unit No.</b>	<b>Title of the Unit</b>	<b>Time required for the Unit (Hours)</b>
<b>1.</b>	Assessment of Nutritional Status of Individual	<b>12</b>
<b>2.</b>	Nutritional Concerns Among Vulnerable Groups and Strategies/ Action to Tackle	<b>12</b>
<b>3.</b>	Development, Use and Evaluation of Methods and Aids for Nutrition and Health Education	<b>12</b>
<b>4.</b>	Development of Tools to Assess Nutrition Knowledge, Attitudes and Practices	<b>12</b>
<b>5.</b>	Planning and Implementation of Nutrition and Health Education Programme	<b>12</b>

<b>Unit No.</b>	<b>Title of the Unit</b>
<b>1.</b>	<b>Assessment of Nutritional Status of Individual</b> <b>Activities-</b> <ul style="list-style-type: none"> <li>• Anthropometric Measurements</li> <li>• Clinical Assessment</li> <li>• 24-hour Dietary Recall Survey</li> <li>• Using Food Frequency Questionnaire</li> <li>• Plotting and Interpretation of Growth Charts</li> </ul>
<b>2.</b>	<b>Nutritional Concerns Among Vulnerable Groups and Strategies/ Action to Tackle</b> <b>Activates-</b> <ul style="list-style-type: none"> <li>• Identification of Nutritional Problem and Strategies to Tackle the Problem in Vulnerable Group</li> <li>• Preparation of Low Cost Recipe</li> <li>• Planning A Cyclic Menu</li> </ul>
<b>3.</b>	<b>Development, Use and Evaluation of Methods and Aids for Nutrition and Health Education</b> <b>Activities-</b> <ul style="list-style-type: none"> <li>• Nutrition and Health Education Messages</li> <li>• Messages for Nutrition Education in Urban School Children</li> <li>• Development of Nutrition Education Material</li> <li>• Development of Suitable Teaching Aid</li> </ul>

4.	<b>Development of Tools to Assess Nutrition Knowledge, Attitudes and Practices</b> <b>Activities-</b> <ul style="list-style-type: none"> <li>• Formulation of Nutrition Education Tool to Assess Knowledge, Attitude and Practices</li> <li>• Evaluation of Nutrition Education Aids</li> </ul>
5.	<b>Planning and Implementation of Nutrition and Health Education Programme</b> <b>Activities-</b> <ul style="list-style-type: none"> <li>• To Plan a Nutrition and Health Education Programme</li> <li>• Conduct a Field Trip/Visit</li> </ul>

### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Preventive and Social Medicine	K Park	27 <sup>th</sup> Edition, 2023	Banarsidas Bhanot
2	Public Health Nutrition	Michael j	2013 Edition	Blackwell Science, Nutrition Society
3	Public Health Nutrition	Judith L. Buttriss	2 <sup>nd</sup> Edition, 2017	John Wiley & Sons which

### DEPARTEMTN ELECTIVE COURCES

**MPHEPH3111**

**Environment and Occupation Health**

**2 Credits [LTP: 2-0-0]**

### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
<b>CO1</b>	Define basic concepts in environmental and Occupational health	Remember
<b>CO2</b>	Explain different sources, routes and health outcome associated with chemical physical, biological agents in the environment and occupational settings	Remember
<b>CO3</b>	Use key environmental occupational health problems in a public context	Apply
<b>CO4</b>	Understand the current legislation, policies and regulation regarding environmental and occupational health issues	Understand

CO5	Understand the principles of Disaster management	Understand
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### C. MAPPING MATRIX OF CO, PO & PSO

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
CO1	3	2	1	2	-	3	2	1	3	2	-	3	-	-	1
CO2	3	3	-	3	2	-	1	1	3	3	1	2	2	2	-
CO3	2	-	1	3	3	1	-	3	3	3	3	3	1	2	-
CO4	3	1	2	-	3	-	3	1	2	-	2	3	2	1	1
CO5	3	-	-	3	1	3	1	2	2	1	3	1	1	2	3
WT.															
AV	2.80	2.00	1.33	3.00	2.25	2.00	1.75	1.75	2.60	2.33	2.25	2.40	1.50	1.75	2.00
G															

### D. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
1.	Environment Health –An Overview	9
2.	Occupational Health: An Overview	9
3.	Management of Environmental and Occupational Hazards	9
4.	Environment Health Policy and Guidelines	9
5.	Emergency and Disaster Management	9

## E. DETAILED SYLLABUS

Unit	Unit Details
<b>1.</b>	<b>Environmental Health – Overview</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● Environmental health burden and certain concepts</li> <li>● Historical background into environmental health</li> <li>● Core areas in environmental health</li> <li>● Understand environment</li> <li>● Ecosystem concepts, Bio-diversity, Niches, Zoonoses and its importance</li> <li>● Climate Change and Health</li> <li>● Pollution and its impact</li> <li>● Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Occupational Health: An Overview</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● Hazards at workplace</li> <li>● Work safety</li> <li>● Prevention of occupational hazards</li> <li>● Laws related to occupational health</li> <li>● Lifestyle and dietary effects on health, food safety and sanitation</li> <li>● Various government and other schemes for working population in India</li> <li>● Conclusion of the unit</li> </ul>
<b>3.</b>	<b>Management of Environmental and Occupational Hazards</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● Environmental pollution, waste disposal and treatment</li> <li>● Problems in developing countries and the health impact e</li> <li>● Strategies for ensuring environmental sanitation in slums and rural areas</li> <li>● Biomedical waste Management</li> <li>● Disposal mechanisms Hazards at workplace</li> <li>● Occupational safety</li> <li>● Environmental health impact assessment</li> <li>● Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Environment Health Policy and Guidelines</b>

	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Legal Mechanisms in National context</li> <li>• Legal Mechanisms in International context</li> <li>• Laws and Regulations related to Environmental and Occupational health</li> <li>• Central Pollution Control Board (CPCB) guidelines</li> <li>• Role of Public Health in determining Environmental health policy</li> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Emergency and Disaster Management</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• What is a Disaster?</li> <li>• Impact of Disaster</li> <li>• Classification of Disasters</li> <li>• Phases of Disaster Management</li> <li>• Mitigation</li> <li>• Preparedness</li> <li>• Response</li> <li>• Recover</li> <li>• Disaster Action Plan</li> <li>• Disaster Management Act 2005</li> <li>• Emergency management in specific conditions: Floods, Earthquakes, Fire</li> <li>• Conclusion of the unit</li> </ul>

#### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Preventive and Social Medicine	K Park	27 <sup>th</sup> Edition, 2023	Banarsidas Bhanot
2	Health Information Management	Marc Berg	1 <sup>st</sup> Edition	Routledge
3	Textbook of Community Medicine (Preventive & Social Medicine)	Sundar Lal, Adarsh, Pankaj	3 <sup>rd</sup> Edition, 2011	CBS Publishers, New Delhi
4	Health Promotion- Philosophy, Prejudice and Practice,	David Seedhouse	2 <sup>nd</sup> Edition, 2003	John wiley & Sons Ltd.

**A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING**

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Define the fundamentals of RMNCH+A	Remember
CO2	Understand the components of services under MCH	Understand
CO3	Illustrate the knowledge about adolescent health	Understand
CO4	Explain the evolution process of MCH in India	Understand
CO5	Understand the role of gender in public health	Understand

**B. MAPPING MATRIX OF CO, PO & PSO**

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
CO1	2	2	3	1	-	2	2	3	3	1	2	-	2	1	3
CO2	-	1	1	-	-	3	-	-	2	1	3	1	3	-	-
CO3	-	-	2	-	2	3	-	-	3	-	1	3	1	-	-
CO4	2	3	1	-	-	1	3	1	3	3	3	2	2	1	2
CO5	2	2	2	-	2	3	2	-	3	1	2	3	2	2	-

<b>WT.</b>																
<b>AV</b>	<b>2.00</b>	<b>2.00</b>	<b>1.80</b>	<b>1.00</b>	<b>2.00</b>	<b>2.50</b>	<b>2.33</b>	<b>1.00</b>	<b>2.80</b>	<b>1.67</b>	<b>2.20</b>	<b>2.25</b>	<b>2.00</b>	<b>1.33</b>	<b>2.00</b>	
<b>G</b>																

### C. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
1.	Introduction to the RMNCH+A	9
2.	Components of service delivery under RMNCH+A, Innovations and Evaluation	9
3.	Adolescent health	9
4.	Evolution of RCH services in the country	9
5.	Global strategies to improve maternal health	9

### D. DETAILED SYLLABUS

Unit	Unit Details
<b>1.</b>	<b>Introduction to the RMNCH+A</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• What is RMNCH+A?</li> <li>• Key features of RMNCHA+A</li> <li>• Components of RMNCH+A</li> <li>• Historical context</li> <li>• Evolution</li> <li>• Coverage and Innovations</li> <li>• Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Components of service delivery under RMNCH+A, Innovations and Evaluation</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Maternal, New-born and Child Health (MNCH) services</li> </ul>

	<ul style="list-style-type: none"> <li>• Related government and other programs</li> <li>• Recent advancements and innovations in service delivery</li> <li>• Evaluation Framework</li> <li>• Factors affecting utilization of services</li> <li>• Phases of delay</li> <li>• RCH Indicators</li> <li>• Factors affecting success and failure of any RCH program</li> <li>• Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Adolescent health</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Adolescence</li> <li>• Importance in current scenario</li> <li>• Adolescent Health Problems: Global and Indian Context</li> <li>• Reproductive and sexual health</li> <li>• Issues concerned with Adolescent Health</li> <li>• Adolescent Health Programs</li> <li>• Challenges concerning adolescent health</li> <li>• Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Evolution of RCH services in the country</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• National Family Planning Programme -1952</li> <li>• National Family Welfare Programme • 1977</li> <li>• Universal Immunization Programme • 1985</li> <li>• Child Survival and Safe Motherhood Programme-1992</li> <li>• RCH (Phase-I) 1997</li> <li>• RCH (Phase-II) 2005</li> <li>• Millennium Development Goals (MDG's)</li> <li>• Sustainable Development Goal (SDG's)</li> <li>• Role of media in propagation of RCH</li> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Global strategies to improve maternal health</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Innovations in service delivery</li> <li>• Task shifting</li> </ul>

- Conceptual Framework for Task shifting
- Task shifting efforts in India
- Lessons learnt for other countries
- Conclusion of the Unit

### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Preventive and Social Medicine	K Park	27 <sup>th</sup> Edition, 2023	Banarsidas Bhanot
2	Maternal and Child Health Global Challenges, Programs and Policies	Ehiri, John	2009 <sup>th</sup> Edition	Springer US
3	Maternal, Newborn and Child Health Programmes in India: A Programme Science Approach	B M Ramesh, Shiva SHalli, Krishnamurthy Jayanna, Mohan H. L.	1 <sup>st</sup> Edition, 2020	SAGE Publications

### Practical Component

- Field visit to nearest healthcare delivery centre
- Training concerning MCH programs
- Small survey on adolescent issues
- Identify fundamental issues in maternal health
- Education on Reproductive health

## ABILITY ENHANCEMENT COURSE

**MPHCPH3113**

**Healthcare Innovation and Strategic Skills**

**2 Credits [LTP 2-0-0]**

### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Recall the concept and principles of strategic management in healthcare	Remember
CO2	Understand the concept of various aspects of Entrepreneurship in Healthcare	Understand
CO3	Apply the basics of entrepreneurship in healthcare	Apply
CO4	Gain knowledge about innovations in Public Health	Analyze
CO5	Develop strategic thinking skills and decision making	Evaluate

### **B. MAPPING MATRIX OF CO, PO & PSO**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO11	PSO 1	PSO 2	PSO 3	PSO 4
CO1	1	2	-	-	-	3	2	3	2	2	1	-	3	3	2
CO2	-	1	-	1	2	3	2	3	1	1	3	1	-	-	-
CO3	3	3	-	2	2	3	3	1	1	1	1	3	2	-	2
CO4	3	1	-	-	3	3	1	1	1	1	2	1	2	1	-
CO5	3	-	1	3	2	1	1	1	-	1	3	3	-	2	3

<b>WT.</b>	<b>2.5</b>	<b>1.75</b>	<b>1</b>	<b>2.0</b>	<b>2.25</b>	<b>2.6</b>	<b>1.8</b>	<b>1.8</b>	<b>1.25</b>	<b>1.2</b>	<b>2.0</b>	<b>2.0</b>	<b>2.33</b>	<b>2.0</b>	<b>2.33</b>
<b>AV</b>															
<b>G</b>															

### C. OUTLINE OF THE COURSE

<b>Unit No.</b>	<b>Title of the Unit</b>	<b>Time required for the Unit (Hours)</b>
1.	Strategic Management: An overview	6
2.	Strategic thinking and decision making	5
3.	Innovations in Public Health	7
4.	Entrepreneurship in Healthcare I	8
5.	Entrepreneurship in Healthcare II	4

### D. DETAILED SYLLABUS

<b>Unit</b>	<b>Unit Details</b>
<b>1.</b>	<b>Strategic Management in Healthcare</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● Importance of strategic thinking for improving healthcare delivery</li> <li>● Major concepts and frameworks: SWOT, Experience Curve, Value Chain</li> <li>● <input type="checkbox"/> Application of strategic analysis for solving real-world healthcare challenges</li> <li>● <input type="checkbox"/> Preparing and presenting strategic assessments to stakeholders using clear communication</li> <li>● Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Strategic Thinking and decision making</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● Strategic thinking</li> <li>● Strategic planning. Processes.</li> <li>● Competitive strategies.</li> </ul>

	<ul style="list-style-type: none"> <li>● Strategic planning: Environmental, scenario, implementation, evaluation</li> <li>● Sustainability</li> <li>● Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Innovations in Public Health</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● What I innovation in Public Health?</li> <li>● Need if Innovation in Public Health</li> <li>● Characteristics of Innovations</li> <li>● Health informatics</li> <li>● Tele-medicine and m-Health</li> <li>● Concept of AI in health care</li> <li>● Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Entrepreneurship in Healthcare II</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● Introduction to Entrepreneurship</li> <li>● Meaning of Entrepreneur, Characteristics of Entrepreneur</li> <li>● Factors affecting Entrepreneurship</li> <li>● Advantages and disadvantages of being an entrepreneur</li> <li>● Entrepreneurship and Organizational Environment</li> <li>● Importance and types of Entrepreneurs</li> <li>● Conclusion of the unit</li> </ul>
<b>5.</b>	<b>Entrepreneurship in Healthcare II</b>
	<ul style="list-style-type: none"> <li>● Introduction to the Unit</li> <li>● Planning of Organizational Activities</li> <li>● Business Plan</li> <li>● Marketing plan</li> <li>● Operation management plan</li> <li>● Human resource planning</li> <li>● Sources of financing</li> <li>● Government policies regarding startups in health care.</li> <li>● Concept of CRM and Corporate communications</li> <li>● Conflicts management and negotiations in business world</li> <li>● Peer review of business models</li> <li>● Conclusion of the Unit</li> </ul>

## RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Management A Global and Entrepreneurial Perspective	Wehrich, Heinz and Koontz, Harold	13 <sup>th</sup> Edition, 2010	McGraw Hill
2	Essentials for Management: An International Perspective.	Koontz.	2009 Edition	Tata McGraw-Hill.
3	Principles of Management	P. C. Tripathi	7 <sup>th</sup> Edition, 2021	Tata McGraw-Hill
4	The Practices of Management	Drucker, Peter	2010 (Reissue)	Allied Publishers

## SKILL ENHANCEMENT COURSE

**MPHCPH3114**

**Advanced Biostatistics**

**2 Credits [L-T-P: 2-0-0]**

### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Recall the main concepts and statistical methods used in Public Health Research	Remember
CO2	Apply suitable statistical tools to conduct power analysis	Apply
CO3	Calculate required sample sizes for conducting health related researches	Apply
CO4	Model, forecast, and explain the dynamic of epidemics	Apply
CO5	Use appropriate statistical techniques to understand and analyze correlation between various variables.	Apply

### **B. MAPPING MATRIX OF CO, PO & PSO**

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	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2	-	2	-	2	2	1	3	1	3	3	3	3	-	-
CO2	2	1	-	3	2	2	1	1	-	2	2	3	-	1	3
CO3	1	-	2	1	1	2	2	2	1	2	-	1	1	2	3
CO4	1	-	1	2	2	1	3	1	2	2	2	1	2	1	3
CO5	1	1	3	2	-	3	-	-	3	1	-	-	-	3	-
WT. AV G	1.4	1.0	2.0	2.0	1.75	2.0	1.75	1.75	1.75	2.0	2.33	2.0	2.0	1.75	3.0

### C. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
1.	Introduction to Advanced Biostatistics	5
2.	Correlation and Regression I	6
3.	Correlation and Regression II	6
4.	Survival Analysis	5
5.	Parametric and non-parametric tests	8

### D. DETAILED SYLLABUS

Unit	Unit Details
1.	<b>Introduction to Advanced Biostatistics</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Types of data</li> <li>• Measures of central tendency</li> <li>• Sampling techniques</li> </ul>

	<ul style="list-style-type: none"> <li>• Hypothesis and its testing</li> <li>• Types of Errors</li> <li>• Sample size calculations</li> <li>• Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Correlation and Regression I</b>
	<ul style="list-style-type: none"> <li>• Introduction to the unit</li> <li>• Correlation</li> <li>• Correlation coefficient</li> <li>• Regression</li> <li>• Principles of Regression</li> <li>• Types of Regression</li> <li>• Methods of Regression</li> <li>• Conclusion of the unit</li> </ul>
<b>3.</b>	<b>Correlation and Regression II</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Linear regression</li> <li>• Logistic regression</li> <li>• Poisson regression</li> <li>• Cox proportional hazards regression</li> <li>• Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Survival Analysis</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Survival Analysis</li> <li>• Types of Censoring</li> <li>• Functions of Survival time</li> <li>• Survival function</li> <li>• Probability density function</li> <li>• Hazard function</li> <li>• Kaplan Meier survival curve</li> <li>• Conclusion of the unit</li> </ul>
<b>5.</b>	<b>Parametric and Non-Parametric Tests</b>
	<ul style="list-style-type: none"> <li>• Introduction to unit</li> <li>• Non-Parametric test</li> <li>• One sample: Wilcoxon signed rank test</li> </ul>

- Two sample:
- Independent sample: Mann Whitney U test
- Paired sample: Wilcoxon matched pair signed rank test
- More than two sample
- Independent sample: Kruskal Wallis test
- Concept of Relative Risk & Odds Ratio
- Computation and interpretation of Relative risk and Odds ratio
- Conclusion of the unit

### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Preventive and Social Medicine K Park	K. Park	27 <sup>th</sup> Edition, 2023	Banarsidas Bhanot
2	Basic Biostatistics - Biostatistics for Public Health Practice	B. Burt Gerstman	2 <sup>nd</sup> Edition, 2009	Jones and Bartlett Publishers, Inc
3	Mahajan's Methods of Biostatistics for Medical Students & Research Workers	V K Mahajhan	10 <sup>th</sup> Edition, 2024	Jaypee Brothers Medical Publishers
4	Fundamentals of Statistics	Goon A.M., Gupta M.K., and Dasgupta B,	2 <sup>nd</sup> Edition, 2016	World Press, Calcutta.

### Practical Component

- Nutritional Indicators and Determinants
- Anthropometric measurement
- Clinical Assessment
- Policy Assessment related to Nutrition Program

**A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING**

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Understand the scientific writing for Research Proposal	Imitate
CO2	Explain the coverage of concepts and trends underlying current and future developments in grantwriting	Manipulate
CO3	Understand skills related to synopsis writing	Manipulate

**B. MAPPING MATRIX OF CO, PO & PSO**

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
CO1	3	3	2	2	-	1	-	3	2	1	1	-	1	1	3
CO2	-	1	3	-	2	-	1	3	-	1	2	3	2	-	-
CO3	2	2	2	1	3	3	3	-	3	3	2	-	2	3	2
WT.															
AV	2.60	2.00	2.08	1.50	2.42	2.00	1.92	3.00	2.53	1.67	1.81	2.70	1.67	1.92	2.50
G															

**Concept Notes and Research Proposal Submission and Presentation:** Students have to submit their Research Protocol after approval of one of the concept notes. They would be examined based on their presentation. Distribution of marks would be 40 % Report and 60% marks on presentation of the protocol in front of Scientific- Committee and IRB of the University.

## IV SEMESTER

### MAJOR (CORE COURSES)

**MPHCPH4101      Health Management: Management Principles & Practices      3 Credit LTP:3-0-0]**

#### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Recall the with basic management concepts and processes in the organization.	Remember
CO2	Explain the Principles of Management as well as Technique	Understand
CO3	Apply the knowledge of management in Health system	Apply
CO4	Understand organization behavior and leadership in any organization	Understand
CO5	Understand logistic and health Quality management in Health system	Understand

#### **B. MAPPING MATRIX OF CO, PO & PSO**

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
CO1	1	-	1	2	2	3	-	2	2	3	-	-	3	-	3
CO2	3	-	2	3	2	-	-	3	3	1	1	1	2	1	-
CO3	2	3	2	3	3	2	-	1	2	3	-	3	1	1	-
CO4	2	1	1	-	2	-	1	1	2	1	2	3	2	-	2

<b>CO5</b>	2	1	3	3	1	-	-	3	1	3	2	3	2	3	-
<b>WT.</b>															
<b>AV</b>	<b>2.00</b>	<b>1.67</b>	<b>1.80</b>	<b>3.00</b>	<b>2.00</b>	<b>2.00</b>	<b>1.00</b>	<b>2.00</b>	<b>2.00</b>	<b>2.00</b>	<b>1.67</b>	<b>2.50</b>	<b>1.75</b>	<b>1.67</b>	<b>2.00</b>
<b>G</b>															

### C. OUTLINE OF THE COURSE

<b>Unit No.</b>	<b>Title of the Unit</b>	<b>Time required for the Unit (Hours)</b>
1.	Basic concepts of management	9
2.	Principles of Management	9
3.	Principles of Human Resource management	9
4.	Organizational Behavior and Public HealthLeadership	9
5.	Supply Chain Management and Quality Control	9

### D. DETAILED SYLLABUS

<b>Unit</b>	<b>Unit Details</b>
<b>1.</b>	<b>Basic concepts of management</b>
	<ul style="list-style-type: none"> <li>• Introduction of the Unit</li> <li>• Fundamentals of management,</li> <li>• Historical background</li> <li>• Theories of management</li> <li>• Functions of management</li> <li>• Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Principles of Management</b>
	<ul style="list-style-type: none"> <li>• Introduction of Unit</li> <li>• Concept of Management Principles</li> <li>• Techniques and Functions-Planning,</li> <li>• Organizing, Controlling, Coordinating, Feedback, Evaluation</li> <li>• Management Vs Administration</li> </ul>

	<ul style="list-style-type: none"> <li>• Application of Management in hospital and healthcare</li> <li>• Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Principles of Human Resource Management</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Concepts, Role of HR Department,</li> <li>• Line and staff Personnel</li> <li>• Manpower Planning</li> <li>• Job Designing (Analysis, Specifications, Descriptions, Evaluation),</li> <li>• Recruitment, Selection.</li> <li>• Transfers, Promotions, Training, Evaluation</li> <li>• Welfare activities, Wages and Salaries, Incentives, Retirement provisions.</li> <li>• Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Organizational Behavior and Public Health Leadership</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Concept of organization Behaviour</li> <li>• Diversity, Discrimination in the workplace and organizational effectiveness</li> <li>• Personality, Personality Models, Values, Importance of Values in Organization</li> <li>• Dominant Work Values</li> <li>• Leadership, and Supervision</li> <li>• Motivation,</li> <li>• Application of motivation theories</li> <li>• Conflict, types of conflict</li> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Supply Chain Management and Quality Control</b>
	<ul style="list-style-type: none"> <li>• Introduction to the unit</li> <li>• Concepts and importance of supply chain (SCM)</li> <li>• Importance of supply chain management in Health system</li> <li>• Importance of cold chain and its role in healthcare and hospitals</li> <li>• Logistical Strategy and Planning, Sustainable Logistics strategies</li> <li>• Material Management Process</li> <li>• Healthcare quality management</li> <li>• Healthcare quality standards</li> <li>• Healthcare quality Assessment methods</li> <li>• Healthcare and quality indicators</li> </ul>

- Conclusion of the unit

### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Management A Global and Entrepreneurial Perspective	Wehrich, Heinz and Koontz, Harold	13 <sup>th</sup> Edition, 2010	McGraw Hill
2	Essentials for Management: An International Perspective.	Koontz.	2009 Edition	Tata McGraw-Hill.
3	Principles of Management	P. C. Tripathi	7 <sup>th</sup> Edition, 2021	Tata McGraw-Hill
4	The Practices of Management	Drucker, Peter	2010 (Reissue)	Allied Publishers

**MPHCPH4103**

**Current Issues in Public Health**

**2 Credits [LTP 0-0-4]**

### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	To develop skills for addressing the issues in Public Health	Remember
CO2	To assess the impact of health threats and interventions to counter Health threats	Remember
CO3	Develop skills in identifying the current issues and challenges in addressing the Public Health Issues.	Understand
CO4	Develop skills for addressing the issues in Public Health	Understand
CO5	Assess the impact of health threats and interventions to counter Health threats	Understand

### **B. MAPPING MATRIX OF CO, PO & PSO**

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
CO1	2	2	1	-	3	2	-	3	3	3	1	-	1	-	3
CO2	1	2	3	1	1	2	2	1	3	-	2	3	1	3	-
CO3	2	2	3	1	-	2	2	3	3	1	2	-	2	1	3
CO4	-	1	1	-	-	3	-	-	2	1	3	1	3	-	-
CO5	-	-	2	-	2	3	-	-	3	-	1	3	1	-	-
WT.	1.66	1.75	2.0	1	2.0	2.4	2.0	2.33	2.8	1.66	1.8	2.33	1.6	2.0	3
AV															
G															

Students will identify the major public health challenges and issues both in national and international context. Identification of major public health challenges is critical for effective and sustainable health delivery. Greater prioritization, funding, collaboration, and cooperation are essential to achieve the healthcare targets. Global efforts should initiate before these challenges become public health emergencies.

### DEPARTMENT ELECTIVE COURSES

**MPHEPH4111**

**Advanced Epidemiology**

**2 Credits [L-T-P:2-0-0]**

#### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Learn principles, programmes and planning cycle in context of epidemiology.	Remember
CO2	Understand the concept of Epidemiology and Management	Understand
CO3	Demonstrate competency in developing strategies for preventing epidemics	Apply
CO4	Interpret different concepts related with special epidemiology	Understand
CO5	Understand outbreaks and different steps of outbreak investigation	Understand

### B. MAPPING MATRIX OF CO, PO & PSO

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	-	-	1	3	1	2	2	2	1	-	2	-	1	-
CO2	1	3	1	3	3	2	1	2	-	2	2	-	1	-	-
CO3	-	1	1	1	-	-	2	-	1	-	3	-	2	1	-
CO4	2	1	-	1	2	-	3	3	2	2	2	3	1	-	3
CO5	2	2	1	2	-	2	1	1	-	3	3	3	3	1	1
WT. AV G	2.00	1.75	1.00	1.75	2.67	2.00	1.80	2.00	1.67	2.33	2.50	2.67	1.75	1.00	2.00

### C. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
1.	Advanced Epidemiology: Introduction	9
2.	Bias Analysis	8
3.	Study Design	6

4.	Special Epidemiology	9
5.	Outbreak Investigation	8

#### D. DETAILED SYLLABUS

Unit	Unit Details
<b>1.</b>	<b>Advanced Epidemiology: Introduction</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Models: Causal Criteria</li> <li>• Potential Outcomes Model</li> <li>• Directed Acyclic Graphs and Conceptual Framework</li> <li>• Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Bias Analysis</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Quantitative Bias Analysis</li> <li>• Selection Bias</li> <li>• Confounding Bias and Methods to Reduce Confounding</li> <li>• Information Bias Analysis</li> <li>• Probabilistic Bias Analysis</li> <li>• Multiple Bias Analysis</li> <li>• Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Study Design</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Nested Study Designs</li> <li>• Advanced Designs in Clinical Trials</li> <li>• Systematic Reviews</li> <li>• Meta-analysis Overview</li> <li>• Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Special Epidemiology</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Vector-Borne Diseases</li> <li>• Nutritional Epidemiology</li> <li>• Infectious Disease Epidemiology</li> <li>• Environmental Epidemiology</li> </ul>

	<ul style="list-style-type: none"> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Outbreaks Investigations</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Following Disaster</li> <li>• Live Outbreak Investigation</li> <li>• Surveillance</li> <li>• Public Data Sources: CRS, SRS, Census, NFHS, DLHS, HMIS etc.</li> <li>• Conclusion of the Unit</li> </ul>

### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Epidemiology	Leon Gordis	6 <sup>th</sup> Edition, 2019	Elsevier
2	Basic Epidemiology	Kenneth Rothman, Tyler J	2 <sup>nd</sup> Edition, 2012	Oxford University Press Inc
3	Preventive and Social Medicine	K. Park	27 <sup>th</sup> Edition, 2023	Banarasidas Bhanot
4	Basics Of Epidemiology	Dr Anil Mishra	1 <sup>st</sup> Edition, 2018	Nation Press IC

**MPHEPH4112**

**Social Epidemiology**

**2 Credits [L-T-P:2-0-0]**

### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Recall the relevance of history and concept of social epidemiology	Remember
CO2	Understand the relationship between education, occupation, ethnicity and health	Understand
CO3	Demonstrate the theories and models of social epidemiology	Apply

<b>CO4</b>	Understand social determinants of health	Understand
<b>CO5</b>	Learn evaluation of inequalities and disparities in health	Understand

### B. MAPPING MATRIX OF CO, PO & PSO

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
<b>CO1</b>	1	-	-	3	1	-	3	2	2	3	3	1	2	-	3
<b>CO2</b>	2	-	3	1	3	3	-	3	1	1	1	3	-	3	2
<b>CO3</b>	-	3	1	2	-	3	-	-	3	1	-	1	-	2	3
<b>CO4</b>	1	3	3	1	3	-	1	1	2	3	2	3	2	-	-
<b>CO5</b>	2	1	2	1	3	-	2	3	1	3	3	-	3	2	3
<b>WT.</b>															
<b>AV</b>	<b>1.50</b>	<b>2.33</b>	<b>2.25</b>	<b>1.25</b>	<b>2.50</b>	<b>3.00</b>	<b>2.00</b>	<b>2.33</b>	<b>1.80</b>	<b>2.00</b>	<b>2.25</b>	<b>2.00</b>	<b>2.50</b>	<b>2.33</b>	<b>2.67</b>
<b>G</b>															

### C. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
1.	Introduction to Social Epidemiology	6
2.	Social Determinants of Health	6

3.	Inequalities and Disparities in Health	6
4.	Ecological Perspectives in Social Epidemiology	6
5.	Social Epidemiology and Policy	6

#### D. DETAILED SYLLABUS

Unit	Unit Details
<b>1.</b>	<b>Introduction to Social Epidemiology</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Background and History</li> <li>• Glossary of social epidemiology</li> <li>• Theories of social epidemiology</li> <li>• Models of social epidemiology</li> <li>• Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Social Determinants of Health</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Socio-economic position, education, occupation</li> <li>• Ethnicity and health</li> <li>• Measurement of determinants</li> <li>• Mechanisms and pathways through which income, education and occupation effect health</li> <li>• Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Inequalities and Disparities in Health</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Poverty, discrimination, vulnerability</li> <li>• Income inequality and impact on health outcome</li> <li>• Measuring poverty</li> <li>• Measuring health inequalities</li> <li>• Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Ecological Perspectives in Social Epidemiology</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Social capital, social cohesion and health</li> <li>• Community- level mechanisms/ processes through community social capital contributes to health</li> </ul>

	<p>improvement</p> <ul style="list-style-type: none"> <li>• Methods of social epidemiology</li> <li>• Social comparisons and relative deprivations</li> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Social Epidemiology and Policy</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Concept of prevention on social epidemiology</li> <li>• Public Health Strategies to reduce health disparities</li> <li>• Multilevel Approaches: Discussion on approach for research in social epidemiology</li> <li>• Neighborhood effect studies, stress and health studies</li> <li>• Conclusion of the Unit</li> </ul>

### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Epidemiology	Leon Gordis	6 <sup>th</sup> Edition, 2019	Elsevier
2	Basic Epidemiology	Kenneth Rothman, Tyler J	2 <sup>nd</sup> Edition, 2012	Oxford University Press Inc
3	Preventive and Social Medicine	K. Park	27 <sup>th</sup> Edition, 2023	Banarasidas Bhanot
4	Basics Of Epidemiology	Dr Anil Mishra	1 <sup>st</sup> Edition, 2018	Nation Press IC

**MPHEPH4113**

**Nutrition through Life Cycle**

**2 Credits [L-T-P:2-0-0]**

### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Recall the basic concept of about micronutrient, essential nutrients and	Remember

	nutritional requirement for different age groups	
<b>CO2</b>	Explain the role of Nutrition in growth and development.	Understand
<b>CO3</b>	Utilize the knowledge to understand the importance of nutrition in maintaining optimum body composition	Apply
<b>CO4</b>	Examine the need for special nutritional considerations in altered climatic conditions	Analyze
<b>CO5</b>	Update students on the recent advances in Human Nutrition	Evaluate

### B. MAPPING MATRIX OF CO, PO & PSO

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
<b>CO1</b>	1	1	2	3	1	3	1	3	-	1	3	2	-	2	2
<b>CO2</b>	1	-	3	1	-	1	3	1	1	2	3	1	2	-	-
<b>CO3</b>	2	1	-	-	3	3	-	1	-	-	-	2	3	3	3
<b>CO4</b>	3	2	-	-	1	3	-	1	2	2	1	1	1	2	3
<b>CO5</b>	-	1	3	2	1	-	2	3	-	-	3	2	3	1	3
<b>WT.</b>															
<b>AV</b>	1.75	1.33	2.67	1.50	1.50	2.33	2.00	1.50	1.50	2.00	2.50	1.60	2.25	2.00	3.00
<b>G</b>															

### C. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
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1.	Meal Planning	6
2.	Nutrition in Pregnancy and Lactation	6
3.	Nutrition in Infancy and Pre-School	6
4.	Nutrition in School Going Children and Adolescent	6
5.	Nutrition in Adulthood and Old Age	6

#### D. DETAILED SYLLABUS

Unit	Unit Details
<b>1.</b>	<b>Meal Planning</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Indian meal patterns - Vegetarian &amp; Non-vegetarian</li> <li>• Food Fadism and Faulty Food Habits</li> <li>• Nutritive value of common Indian recipes</li> <li>• Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Nutrition in Pregnancy and Lactation</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Physiological stages of pregnancy</li> <li>• Nutritional and Food Requirements during Pregnancy</li> <li>• Complication of pregnancy</li> <li>• Physiology of lactation</li> <li>• Nutritional and Food Requirements during Lactation</li> <li>• Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Nutrition in Infancy and Pre-School</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Growth &amp; development during Infancy and Pre-School</li> <li>• Advantages of Breastfeeding during Infancy</li> <li>• Nutritional and Food Requirements during Infancy and Pre-School</li> <li>• Introduction of supplementary foods/Infant Formula</li> <li>• Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Nutrition in School Going Children and Adolescent</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> </ul>

	<ul style="list-style-type: none"> <li>• Growth &amp; nutrient need for School going children and Adolescent</li> <li>• Nutrition and Feeding related problems for School going children</li> <li>• Importance of snacks and School lunch for school going children</li> <li>• Nutritional and Food requirements for Adolescents</li> <li>• Food choices and Eating habits for Adolescents</li> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Nutrition in Adulthood and Old Age</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Process of Aging</li> <li>• Nutritional And Food requirements during Adulthood and Old Age</li> <li>• Factors affecting food intake and nutrient use during Old Age</li> <li>• Nutrition related problems during old age</li> <li>• Conclusion of the Unit</li> </ul>

#### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Nutrition	B. Srilakshmi	8 <sup>th</sup> Edition, 2023	New Age Publication, New Delhi
2	Dietetics	B. Srilakshmi	9 <sup>th</sup> Edition, 2023	New Age Publication, New Delhi

**MPHEPH4114**

**Community Health and Nutrition**

**2 Credits [L-T-P:2-0-0]**

#### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level
CO1	Identify the practice of public health nutrition, discussion of significant public health nutrition problems today, and an overview of food and nutrition programs available to the community.	Remember

<b>CO2</b>	Illustrate expanding role of the community dietitian as well as understand and articulate nutrition problems and practices in the community.	Understand
<b>CO3</b>	Build skills needed to deliver nutrition services and methods of accessing community nutrition resources and information.	Apply
<b>CO4</b>	Determine beliefs, customs and food practices of various cultural groups and apply this knowledge in planning nutrition education and intervention programs.	Analyze
<b>CO5</b>	Demonstrate effective and professional oral and written communication and documentation and use of current information technologies when communicating with individuals, groups and the public.	Evaluate

### B. MAPPING MATRIX OF CO, PO & PSO

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
<b>CO1</b>	1	1	2	3	1	3	1	3	-	1	3	2	-	2	2
<b>CO2</b>	1	-	3	1	-	1	3	1	1	2	3	1	2	-	-
<b>CO3</b>	2	1	-	-	3	3	-	1	-	-	-	2	3	3	3
<b>CO4</b>	3	2	-	-	1	3	-	1	2	2	1	1	1	2	3
<b>CO5</b>	-	1	3	2	1	-	2	3	-	-	3	2	3	1	3
<b>WT.</b>															
<b>AV</b>	1.75	1.33	2.67	1.50	1.50	2.33	2.00	1.50	1.50	2.00	2.50	1.60	2.25	2.00	3.00
<b>G</b>															

### C. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
1.	Public Nutrition and Health Care Systems	6
2.	Public Health Aspects of Under nutrition	6
3.	Nutritional Assessment	6
4.	Approaches/ Strategies for Improving Nutrition and Health Status of the Community	6
5.	Food and Nutrition Security- Public Sector Programme	6

#### D. DETAILED SYLLABUS

Unit	Unit Details
<b>1.</b>	<b>Public Nutrition and Health Care Systems</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Aim, scope and content of Public Nutrition</li> <li>• Role of Public Nutritionist in National development</li> <li>• Health – definition, dimensions, determinants and indicators</li> <li>• Health care of the community</li> <li>• Health care systems</li> <li>• Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Public Health Aspects of Under nutrition</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Etiology of Malnutrition</li> <li>• Public health implications in Malnutrition</li> <li>• Preventive/curative strategies for CED/PEM</li> <li>• Micronutrient deficiencies of public health significance</li> <li>• Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Nutritional Assessment</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Direct Assessment of Nutritional Status</li> <li>• Indirect Assessment of Nutritional Status</li> <li>• Significance of nutritional assessment of community</li> </ul>

	<ul style="list-style-type: none"> <li>• Improvement of nutrition of community</li> <li>• Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Approaches/ Strategies for Improving Nutrition and Health Status of the Community</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Health based interventions including immunization, provision of safe drinking water</li> <li>• Prevention and management of diarrheal diseases</li> <li>• Food based interventions including food fortification, dietary diversification and supplementary feeding</li> <li>• Education based interventions including growth monitoring and promotion (GMP)</li> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Food and Nutrition Security- Public Sector Programme</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Concepts and definitions of food and nutrition security at National Level</li> <li>• Food and Nutrition security at Household Level</li> <li>• Food and Nutrition security at Individual Level</li> <li>• Conclusion of the Unit</li> </ul>

#### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Preventive and Social Medicine	K. Park	27 <sup>th</sup> Edition, 2023	Banarsidas Bhanot
2	Nutrition	B. Srilakshmi	8 <sup>th</sup> Edition, 2023	New Age Publication, New Delhi
3	Dietetics	B. Srilakshmi	9 <sup>th</sup> Edition, 2023	New Age Publication, New Delhi

**MPHEPH4115**

**Maternal Health**

**2 Credits [L-T-P:2-0-0]**

#### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

<b>Course Outcomes (COs):</b>	<b>At the end of this course, learners will be able to:</b>	<b>Bloom Level</b>
<b>CO1</b>	Recall the knowledge about maternal health programmes and principles	Remember
<b>CO2</b>	Understand importance of programme planning	Understand
<b>CO3</b>	Demonstrate knowledge of programme design	Understand
<b>CO4</b>	Gain knowledge with regard to health management technologies	Apply
<b>CO5</b>	Provide an understanding of planning of health activities	Apply

### B. MAPPING MATRIX OF CO, PO & PSO

	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4
<b>CO1</b>	2	2	3	1	-	2	2	3	3	1	2	-	2	1	3
<b>CO2</b>	-	1	1	-	-	3	-	-	2	1	3	1	3	-	-
<b>CO3</b>	-	-	2	-	2	3	-	-	3	-	1	3	1	-	-
<b>CO4</b>	2	3	1	-	-	1	3	1	3	3	3	2	2	1	2
<b>CO5</b>	2	2	2	-	2	3	2	-	3	1	2	3	2	2	-
<b>WT.</b>															
<b>AV</b>	<b>2.00</b>	<b>2.00</b>	<b>1.80</b>	<b>1.00</b>	<b>2.00</b>	<b>2.50</b>	<b>2.33</b>	<b>1.00</b>	<b>2.80</b>	<b>1.67</b>	<b>2.20</b>	<b>2.25</b>	<b>2.00</b>	<b>1.33</b>	<b>2.00</b>
<b>G</b>															

### C. OUTLINE OF THE COURSE

Unit No.	Title of the Unit	Time required for the Unit (Hours)
1.	Foundations of Maternal Health	6
2.	Preventive concepts in maternal and neonatal health	6
3.	Management of Maternal conditions	6
4.	Promotion of Health and Prevention of Illnesses in Newborn	6
5.	Maternal and Child Health Programmes	6

#### D. DETAILED SYLLABUS

Unit	Unit Details
<b>1.</b>	<b>Foundations of Maternal Health</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Introduction to maternal and newborn health</li> <li>• Historical development in maternal and child (MCH) in India</li> <li>• MCH health programmes and their behavioral basis</li> <li>• Issues in reduction of maternal and neonatal mortality</li> <li>• Conclusion of the Unit</li> </ul>
<b>2.</b>	<b>Preventive concepts in maternal and neonatal health</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Antenatal care</li> <li>• Prevention of Pre-Eclampsia and Eclampsia</li> <li>• Interventions to improve preterm birth outcomes</li> <li>• Prevention of maternal Peripartum infections</li> <li>• Nutrition and maternal health</li> <li>• Conclusion of the Unit</li> </ul>
<b>3.</b>	<b>Management of Maternal Conditions</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Postpartum hemorrhage</li> <li>• HIV infections</li> <li>• Malaria</li> <li>• Tuberculosis</li> </ul>

	<ul style="list-style-type: none"> <li>• Conclusion of the Unit</li> </ul>
<b>4.</b>	<b>Promotion of Health and Prevention of Illnesses in Newborn</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Care of the newborn immediately after birth</li> <li>• Postnatal care</li> <li>• Newborn Immunization</li> <li>• Management of illnesses in newborn</li> <li>• Conclusion of the Unit</li> </ul>
<b>5.</b>	<b>Maternal and Child Health Programmes</b>
	<ul style="list-style-type: none"> <li>• Introduction to the Unit</li> <li>• Assessments and interventions</li> <li>• Quality improvement through mentoring interventions</li> <li>• Interventions to improve utilization and coverage</li> <li>• Conclusion of the Unit</li> </ul>

#### RECOMMENDED STUDY MATERIAL

S. No	Reference Book	Author	Edition	Publication
1	Preventive and Social Medicine	K Park	27 <sup>th</sup> Edition, 2023	Banarsidas Bhanot
2	Maternal and Child Health Global Challenges, Programs and Policies	Ehiri, John	2009 <sup>th</sup> Edition	Springer US
3	Maternal, Newborn and Child Health Programmes in India: A Programme Science Approach	B M Ramesh, Shiva S Halli, Krishnamurthy Jayanna, Mohan H. L.	1 <sup>st</sup> Edition, 2020	SAGE Publications

**MPHEPH4116**

**Child and Adolescent Health**

**2 Credits [L-T-P:2-0-0]**

#### A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING