केरल केन्द्रीयविश्वविद्यालय
CENTRAL UNIVERSITY OF KERALA
TEJASWINI HILLS, PERIYE P.O, KASARGOD- 671 316

MINUTES OF THE 21ST MEETING OF THE ACADEMIC COUNCIL OF CENTRAL UNIVERSITY OF KERALA HELD AT 02.30 PM ON 23RD FEBRUARY, 2021

The Honorable Vice Chancellor welcomed all the members of the Academic Council to the meeting.

Before the agenda items were taken up for discussion, the Honorable Vice Chancellor briefed the following developments:

The Central University will be launching a 4 years BS Finance Programme. Further there will be an integrated programme on BS or MS data programme. It was further pointed out the need for an expert either at the national or global level in each Department to improve upon the functioning of the Department. The Academic Council should be the builder of the mission and every faculty of this University should be aware of where we stand and where we should be. It was further observed that the last date for NAAC showcasing is 10th of March and there will be an Academic and Administrative Audit between 17/3/21 to 19/3/21 at the CUK as aprelude to NAAC visit. This will be followed by NAAC rehearsal.

The external expert, Prof.(Dr.) R.K Mishra deliberated the necessity to work in the dimensions of quality, multidisciplinary, research progress and global disciplines.

With this introduction, agenda items were taken up.

AC 21:01	*TO CONFIRM the Minutes of the meeting of the Academic Council held on 15.09.2020.*

CONFIRMED the Minutes of the meeting of the Academic Council held on 15.09.2020.

AC 21:02	*TO APPROVE the Action Taken Report .*

The Action Taken Report (ATR) of the last Academic Council Meeting held on 15.09.2020 was approved.

AC 21:03	TO APPROVE the Minutes of the meeting of Board of Studies and Syllabus of various Departments.

On this agenda, the Honorable Vice Chancellor urged the need for an eminent and an accessible person in the BoS of each Department. He also stressed the need for skill component in each Department Syllabus. Regarding the age limit for PG admissions which is differing from professional to other PG courses, it was decided to leave the matter to the faculty council concerned based on whose decision, the age limit may be reviewed. The Academic Council perused the following Departments' BoS conducted, The Minutes of the BoS for revision of syllabus are received from the following Deaprtments.

(1.) **Dept. of Linguistics: -**

Approved the Minutes of the meeting of the Board of Studies of Department of Linguistics held on 24.08.2020.

(2.) **Dept. of Zoology: -**

Approved the Minutes of the meeting of the Board of Studies of Department of Zoology held on 07.10.2020.

(3). **Dept. of Public Health and Community Medicine: -**

Approved the Minutes of the meeting of the Board of Studies of the Department of Public Health and Community Medicine held on 08.01.2021.

(4). **Dept. of Mathematics: -**

Approved the Minutes of the meeting of the Board of Studies of Department of Mathematics held on 23.01.2021.

(5). **Dept. of Commerce and International Business**

Approved the Minutes of the meeting of the Board of Studies of Department of Commerce and International Business held on 07.07.2020.

(6). **Dept. of Computer Science: -**

Approved the Minutes of the meeting of the Board of Studies of Department of Computer Science held on 28.01.2021.

(7). **Dept. of Physics: -**

Approved the Minutes of the meeting of the Board of Studies of Department of Physics held on 07.12.2020.

(8). **Dept. of Bio Chemistry and Molecular Biology: -**

Approved the Minutes of the meeting of the Board of Studies of Department of Bio Chemistry and Molecular Biology held on 12.02.2021.

(9). **Dept. of International Relations: -**

Approved the Minutes of the meeting of the Board of Studies of Department of International Relations held on 15.02.2021.

(10). **Dept. of English and Comparative Literature: -**

Approved the Minutes of the meeting of the Board of Studies of Department of English and Comparative Literature held on 12.02.2021.

(11). **Dept. of Law: -**

Approved the Minutes of the meeting of the Board of Studies of Department of Law held on 17.02.2021.

(12). **Dept. of Plant Science: -**

Approved the Minutes of the meeting of the Board of Studies of Department of Plant Science held on 12.02.2021.

(13). **Dept. of Chemistry: -**

Approved the Minutes of the meeting of the Board of Studies of Department of Chemistry held on 28.01.

AC 21:04	TO RATIFY the revised Academic Calendar of the University

Dr. Elezebeth Mathews <dr.elezebethmathews@cukerala.ac.in>

Approval for the amends in the MPH Program structure

9 messages

Dr. Elezebeth Mathews <dr.elezebethmathews@cukerala.ac.in> Fri, Jan 8, 2021 at 3:19 PM
To: raman kutty <kuttyr@gmail.com>, Jagdeesan CK <jagadeesancu@gmail.com>, communitymedicine@gmail.com, "Dr.Shailendra Kumar B Hegde" <shailendra.hegde@piramalswasthya.org>, "Unnikrishnan B [MAHE-KMCMLR]" <unnikrishnan.b@manipal.edu>, Kr Thankappan <kr.thankappan@gmail.com>, "Dr. Sibasis Hense" <dr.sibasishense@cukerala.ac.in>

Dear Sir,

Greeting from the Dept. of Public Health and Community Medicine, Central University of Kerala. I wish you all a very happy and prosperous 2021.

I am writing this email to seek your suggestions and approval for a few changes that we are proposing to the MPH curriculum approved by all members of the Board of Studies (BoS) in an online meeting held on 8 July 2020.

The proposed changes are necessary to address the uncertainties around timely completion of the MPH programme by the students. The uncertainties have arisen due to the delay in running University Semesters primarily attributed to COVID-19 pandemic. As per the Choice based Credit System followed by the University, the MPH program has core (mandatory) and elective courses. In the recent BoS revision, we have included UGC's SWAYAM MOOC elective courses (Massive Open Online Courses) and have not included elective courses in semester 2. The proposed changes are:

1) To include three new in-house elective courses in **Semester-II** in addition to the current UGC's SWAYAM MOOC elective courses (Massive Open Online Courses). The details of the proposed elective courses (3 courses) are given below and the syllabi are **(attached).**

Sl.	Course Code	Course Title	Credit
1	MPC 50 03	Mixed Methods in Health Sciences	3
2	MPC 50 04	Medical Anthropology	3
3	MPC 50 05	Essentials of Global Health	3

2) To change the number of credits of the Core course **MPC 52 03 Epidemiology of Communicable and Non-communicable Diseases** to "4 Credits". Currently, the course is assigned "3 Credits".

3) To change the number of credits of the in-house elective courses **MPC 50 01: Public Health Nutrition** and **MPC 50 02: Health Inequities in Semester-I** to "3 Credits" each. Currently, the courses are assigned "2 Credits each".

4) In the event of any MPH student, interested to enroll in a MOOC course (as approved by the BoS) through SWAYAM, they may be provided with the flexibility to enroll MOOC courses in any of the four semesters during the MPH programme. However, the total credits (for each semester and the entire MPH programme) to be earned by the student shall be governed by the UGC's Choice Based Credit System (CBCS) guidelines.

5.) Currently, the Semester-wise credit allocation of the MPH programme is: Semester I = 20, Semester II = 20, Semester III = 18, Semester IV = 14. **The Department proposes the following Semester-wise credit allocation:**

Semester I = 21
Semester II = 20
Semester III = 17
Semester IV = 14.

However, the total number of credits for the MPH programme remains the same i.e., 72 (Core courses: 60; Elective Courses: 12)

6.) The current MPH students of the Department may be given the flexibility to undertake the **MPC 54 92: Internship (Semester-IV)** either through online or offline modes, considering the COVID-19 pandemic.

7.) To approve the list of SWAYAM MOOC Courses **(attached).**

8.) The Current MPH programme structure **(approved as of 8 July 2020)** and proposed structure by the Department **(as of 6 Jan 2021)** are attached.

We look forward to your kind approval/ or any suggestions on the above eight items.

Sincerely,

Elezebeth Mathews

Enclosures

1. Syllabi of the In-house Elective Courses:
   a.) Mixed Methods in Health Sciences, b.) Medical Anthropology and c.) Essentials of Global Health
2. Current MPH Programme Structure (as approved by the BoS in the meeting held on 8 July 2020)
3. Proposed MPH Programme Structure (proposed by the Faculty Council of the Dept. of Public Health in the Council meeting held on 6 Jan 2021)
4. List of SWAYAM MOOC courses for approval.

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Elezebeth Mathews, PhD
Assistant Professor and Head (I/C)
&
Wellcome Trust/ DBT India Alliance Early Career Fellow

Phone: +91- 9495221707

2 attachments

MPH Current_ProposedStructure_8Jan2021.docx
28K

Syllabi_combined.docx
49K

Vijayakumar K <communitymedicine@gmail.com> Fri, Jan 8, 2021 at 3:23 PM
To: "Dr. Elezebeth Mathews" <dr.elezebethmathews@cukerala.ac.in>

Dear Elizabeth,
It is ok in the current circumstances.
Sincerely
Vk
[Quoted text hidden]

Dr. Sibasis Hense <dr.sibasishense@cukerala.ac.in> Fri, Jan 8, 2021 at 6:34 PM
To: "Dr. Elezebeth Mathews" <dr.elezebethmathews@cukerala.ac.in>
Cc: raman kutty <kuttyr@gmail.com>, Jagdeesan CK <jagadeesancu@gmail.com>, "communitymedicine@gmail.com" <communitymedicine@gmail.com>, "Dr.Shailendra Kumar B Hegde" <shailendra.hegde@piramalswasthya.org>, "Unnikrishnan B [MAHE-KMCMLR]" <unnikrishnan.b@manipal.edu>, Kr Thankappan <kr.thankappan@gmail.com>

Dear Dr Elezebeth, I approve the suggested changes.

Regards, Sibasis
[Quoted text hidden]

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Dr Sibasis Hense, PhD (Aus), MPH (Aus), MBA (IIHMR), BBA(Hons.)
Formerly, Australia Endeavour Fellow
Assistant Professor
Department of Community Medicine & Public Health
Central University of Kerala
Kasaragod-6711316, Kerala (India)
A/E: sibahense@gmail.com
Mob:+91 7978806622

Kr Thankappan <kr.thankappan@gmail.com> Fri, Jan 8, 2021 at 6:44 PM
To: "Dr. Sibasis Hense" <dr.sibasishense@cukerala.ac.in>
Cc: "Dr. Elezebeth Mathews" <dr.elezebethmathews@cukerala.ac.in>, raman kutty <kuttyr@gmail.com>, Jagdeesan CK <jagadeesancu@gmail.com>, communitymedicine@gmail.com, "Dr.Shailendra Kumar B Hegde" <shailendra.hegde@piramalswasthya.org>, "Unnikrishnan B [MAHE-KMCMLR]" <unnikrishnan.b@manipal.edu>

Dear Elezebeh

I approve the amends in the MPH program structure

Sent from my iPhone

> On 08-Jan-2021, at 6:34 PM, Dr. Sibasis Hense <dr.sibasishense@cukerala.ac.in> wrote:
>
> Dear Dr Elezebeth, I approve the suggested changes.
> [Quoted text hidden]

Jagdeesan CK <jagadeesancu@gmail.com> Sat, Jan 9, 2021 at 11:53 AM

Dear Madam

I approve the proposed changes in the MPH program.

With Regards,

Dr. C K Jagadeesan

[Quoted text hidden]

Unnikrishnan B [MAHE-KMCMLR] <unnikrishnan.b@manipal.edu> Sun, Jan 10, 2021 at 10:55 AM
To: "Dr. Elezebeth Mathews" <dr.elezebethmathews@cukerala.ac.in>, raman kutty <kuttyr@gmail.com>, Jagdeesan CK <jagadeesancu@gmail.com>, "communitymedicine@gmail.com" <communitymedicine@gmail.com>, "Dr.Shailendra Kumar B Hegde" <shailendra.hegde@piramalswasthya.org>, Kr Thankappan <kr.thankappan@gmail.com>, "Dr. Sibasis Hense" <dr.sibasishense@cukerala.ac.in>

Dear Dr Elezebeth,
Greetings, I approve the proposed changes in the MPH curriculum.

With best regards,

Dr. B. Unnikrishnan,
Associate Dean & Professor of Community Medicine,
Kasturba Medical College, Mangalore,
Manipal Academy of Higher Education, Manipal.

From: Dr. Elezebeth Mathews <dr.elezebethmathews@cukerala.ac.in>
Sent: Friday, January 8, 2021 3:19 PM
To: raman kutty; Jagdeesan CK; communitymedicine@gmail.com; Dr.Shailendra Kumar B Hegde; Unnikrishnan B [MAHE-KMCMLR]; Kr Thankappan; Dr. Sibasis Hense
Subject: Approval for the amends in the MPH Program structure

[Quoted text hidden]

Dr.Shailendra Kumar B Hegde <Shailendra.Hegde@piramalswasthya.org> Sun, Jan 10, 2021 at 7:40 PM
To: "Dr. Elezebeth Mathews" <dr.elezebethmathews@cukerala.ac.in>, raman kutty <kuttyr@gmail.com>, Jagdeesan CK <jagadeesancu@gmail.com>, "communitymedicine@gmail.com" <communitymedicine@gmail.com>, "Unnikrishnan B [MAHE-KMCMLR]" <unnikrishnan.b@manipal.edu>, Kr Thankappan <kr.thankappan@gmail.com>, "Dr. Sibasis Hense" <dr.sibasishense@cukerala.ac.in>

Dear Dr Elezebeth,
Greetings,

I hereby approve the proposed changes in the MPH curriculum.

Thank You
All the best

Get Outlook for iOS

From: Dr. Elezebeth Mathews <dr.elezebethmathews@cukerala.ac.in>
Sent: Friday, January 8, 2021 3:19:19 PM
To: raman kutty <kuttyr@gmail.com>; Jagdeesan CK <jagadeesancu@gmail.com>; communitymedicine@gmail.com <communitymedicine@gmail.com>; Dr.Shailendra Kumar B Hegde <Shailendra.Hegde@piramalswasthya.org>; Unnikrishnan B [MAHE-KMCMLR] <unnikrishnan.b@manipal.edu>; Kr Thankappan <kr.thankappan@gmail.com>; Dr. Sibasis Hense <dr.sibasishense@cukerala.ac.in>
Subject: Approval for the amends in the MPH Program structure

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[Quoted text hidden]

E. Elezebeth Mathews

To: "Dr.Shailendra Kumar B Hegde" <Shailendra.Hegde@piramalswasthya.org>
Cc: raman kutty <kuttyr@gmail.com>, Jagdeesan CK <jagadeesancu@gmail.com>, "communitymedicine@gmail.com" <communitymedicine@gmail.com>, "Unnikrishnan B [MAHE-KMCMLR]" <unnikrishnan.b@manipal.edu>, Kr Thankappan <kr.thankappan@gmail.com>, "Dr. Sibasis Hense" <dr.sibasishense@cukerala.ac.in>

Dear Sirs,

Thank you for the kind approval.

Sincerely yours,

Elezebeth Mathews
[Quoted text hidden]

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raman kutty <kuttyr@gmail.com> Mon, Jan 11, 2021 at 10:00 AM
To: "Dr. Elezebeth Mathews" <dr.elezebethmathews@cukerala.ac.in>
Cc: "Dr.Shailendra Kumar B Hegde" <Shailendra.Hegde@piramalswasthya.org>, Jagdeesan CK <jagadeesancu@gmail.com>, "communitymedicine@gmail.com" <communitymedicine@gmail.com>, "Unnikrishnan B [MAHE-KMCMLR]" <unnikrishnan.b@manipal.edu>, Kr Thankappan <kr.thankappan@gmail.com>, "Dr. Sibasis Hense" <dr.sibasishense@cukerala.ac.in>

The suggested changes are approved

RK
V Raman Kutty M D, M Phil, M P H (Harvard), FIACS
Research Director, Amala Cancer Research Centre, Thrissur 680555

Epidemiologist and data science consultant

Honorary Chairman, Health Action by People
Ex- Professor, Sree Chitra Tirunal Institute for Medical Sciences and Technology, and
Former head, Achutha Menon Centre for Health Science Studies
Trivandrum 695011 INDIA
Phone: 91-471-2552774 (Office)

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DEPARTMENT OF PUBLIC HEALTH & COMMUNITY MEDICINE (DPH&CM)

MASTER OF PUBLIC HEALTH (MPH) PROGRAMME STRUCTURE AND CURRICULUM (16 FEBRUARY 2021)

BOARD OF STUDIES (BoS) MEETING
CENTRAL UNIVERSITY OF KERALA, KASARAGOD

16 FEBRUARY, 2021

Table of Contents

1. Central University of Kerala (CUK), Kasaragod

The Central University of Kerala, Kasaragod, came into being in 2009 under the Central Universities Act 2009 (Parliament Act No. 25 of 2009). The University is founded on the noble vision of a 'caring wisdom' and is guided by the lofty ideals of academic and social commitment, moral steadfastness and intellectual and spiritual enlightenment, as reflected in its vision statement. Located in a region characterized by linguistic and ethnic diversity and cultural richness, the University seeks to harness the local resources – human, intellectual, social, artistic and cultural – while bringing in the best that is globally available, thus maintaining a fruitful, symbiotic relationship with a region that essentially needs an educational upliftment. The University opened its academic portals in October 2009 with 17 students enrolling two PG programmes, operated from a rented building in Vidyanagar. From this humble beginning, CUK has grown into an institution offering seventeen postgraduate and research programmes with a total enrolment of 1098 odd students, in the academic year of 2017-'18. The twenty two departments, viz., Animal Science, Bio-Chemistry and Molecular Biology, Genomic Science, Plant Science, Environmental Science, Economics, Education, International Relations & Politics, Social Work, English & Comparative Literature, Hindi, Linguistics, Chemistry, Computer Science, Mathematics, Physics, Law, Malayalam, Public Health and Community Medicine, Public Administration and Policy Studies, Geology, and Yoga Studies function under eleven Schools, viz., School of Biological Sciences, School of Earth Science Systems, School of Economics, School of Education, School of Global Studies, School of Languages & Comparative Literature, School of Legal Studies, School Physical Sciences , School of Social Sciences, School of Medicine and Public health and School of Cultural Studies. As a remarkable achievement, the University at its infancy stage has completed NAAC accreditation with B++ grade.

2. Department of Public Health & Community Medicine, CUK

The Department of Public Health & Community Medicine (PH&CM) established in the year 2016 under the School of Medicine & Public Health, Central University of Kerala (CUK) is envisaged as a service oriented, academic, and research-based institution. The flagship academic programme of the Department is a two-year (4-Semesters) full-time Master of Public Health (MPH). PhD in Public Health is another programme that commenced in 2017. The Department also aspires to establishing distance education programmes in the near future.

3. Our Mission

Department of Public Health & Community Medicine is committed towards the improvement of health of communities regionally and nationally by developing professionally trained human resources for health through academics, training, research, partnerships, and related extension activities in the field of public health.

4. Our Vision

Our Department strives to excel in the field of public health through education, training, cutting edge research, innovation, thereby transforming it into a Centre of Excellence. This will contribute towards strengthening of health systems and improving public health nationally and internationally.

5. MPH Programme Goal and Outcome

The goal of CUK's MPH programme is to build necessary knowledge, competencies, attitude, and skills among the graduates who would proactively contribute in strengthening health systems and address contemporary and future public health challenges at the local, regional and international levels. The following are programme outcome and programme specific outcomes.

Programme Outcome

The learners completing the Masters Programme of the Central University of Kerala will be able to obtain knowledge and skills in the areas of critical thinking, creative thinking, oral and written communication in areas of Public Health. The MPH graduates will be able to contribute to regional, national and international Public Health needs. They will be able to demonstrate scientific temper, have a capacity to undertake research, engage in social interaction, make ethical decision making, and synthesise local and global perspectives in one's thinking and behaviour.

Programme Specific Outcomes

I. Demonstrate robust understanding fundamentals of public health and its sub-disciplines such as epidemiology, bio-statistics, health systems, research methods and health programme management.

II. Develop understanding of interrelationships between multitude of factors (medical, social, environmental, behavioural, economic and political) that can impact health of individuals and communities.

III. Apply public health concepts, principles, standards and methodologies that would address challenges experienced by individuals and communities.

6. Programme Duration and Outline

MPH at the Central University of Kerala, is a full-time two-year academic programme recognised by the University Grant Commission (UGC). It is spread across four (4) semesters consisting of core (also called mandatory courses) and elective courses. The core courses are delivered in a classroom setting and supplemented with practicals, field visits, field work, internship and dissertation. Elective courses are either offered in classroom setting in the Department or through SWAYAM MOOC (Massive Online Open Courses) platform by the respective host institutions.

7. Course Credits and Contents

The MPH programme consists of 72 Credits, of which 60 and 12 credits are offered through core and elective courses respectively. The students have the option to take in-house electives offered by the Dept. of Public Health & Community Medicine, or any other Department in the Central University of Kerala or offered by the SWAYAM MOOC courses approved by the BoS only. **Semester- I** consist of 21 credits; **Semester- II** consist of 20 Credits; **Semester-III** consist of 17 Credits; and **Semester -IV** consist of 14 credits.

The programme is structured employing a multi-disciplinary curriculum. The courses included in this programme focus on; health research methodology, bio-statistics, demography, epidemiology of chronic and infectious disease, nutrition, data analytics, Information communication technology (ICT), programme management, health promotion, health inequity, environmental and occupational health, economics and finance, health legislation and research ethics, equity, and social sciences. In addition, all students are required to complete a Dissertation (undertake a primary research of public health importance) and undertake an Internship in a reputed health organization in India serving public health.

[**Note:** As per UGC's Choice Based Credit Systems (CBCS) guidelines, one Credit is defined as one hour of lecture or 2-4 hours of laboratory/field work in a week. Each Semester has approximately 16 weeks with a minimum of 90 instructional days]

8. Current and Proposed Eligibility for Admission into MPH Programme

Current: MBBS/BDS/B.Sc. Nursing (4 years)/any Branch of Engineering (4 years)/ B.Pharma/Bachelor of Phototherapy/ B. AYUSH/ B.Vety/B.V.Sc./ Master in Social Work/ Economics/ Policy Science/ Sociology/Nutrition/ Development Economics/ Public Administration/Psychology/ Law. No upper age limits.

Proposed: Bachelor's degree in the following disciplines is eligible: Medicine / AYUSH / Dentistry / Veterinary Sciences/ Nursing/ Allied Health Sciences / Life Sciences / Statistics / Biostatistics / Demography / Population Studies / Nutrition / Sociology / Psychology / Anthropology / Social Work/ Engineering/ Bio-medical sciences/ Law/ Management Studies/ Public Policy & Administration/ Economics. No upper age limits.

9. Teaching Methodology

A variety of teaching and learning techniques, including classroom and online lectures, case studies, seminar presentations, experiential learning, group work, field visit, field survey, collaborative learning, group discussions, self-study, take home assignments, hands-on computers/software, organizational visits to health organization etc., will be employed.

10. Evaluation

As per CBCS guidelines, all courses (except MOOC) will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks. For CA, maximum 4 and minimum 2 examinations are permitted. The MOOC courses will be delivered and evaluated as per the offering host institutions.

11. Board of Studies (BoS) Members

Sl.	Name of the expert	Capacity	Designation & Affiliation
1	Dr Elezebeth Mathews	Chairperson	HOD (In-charge), DPH&CM, CUK
2	Prof. (Dr.) KR Thankappan	Member	Professor, DPH&CM, CUK
3	Assoc. Prof. Dr. Rajendra Pilankatta	Member	Dean, School of Medicine & Public Health, CUK

4.	Dr Sibasis Hense	Member	Asst. Professor, DPH&CM, CUK
5	Prof. (Dr.) Raman Kutty V	Member	Epidemiologist and Data Science Consultant, Amala Institute of Medical Sciences, Thrissur, Kerala
6	Prof. (Dr.) Unnikrishnan B	Member	Associate Dean and Professor Department of Community Medicine, Kasturba Medical College, Mangalore MAHE.
7	Dr. Shailendra Kumar B Hegde	Member	Senior Vice President - Public Health Innovations at Piramal Swasthya, Hyderabad (India)
8.	Dr. C.K . Jagadeesan	Member	State Nodal Officer of ARDRAM Mission and Deputy Director, Directorate of Health Services, Govt. of Kerala
9.	Dr. K Vijayakumar	Member	Professor, Dept. of Community Medicine, Amrita Institute of Medical Sciences, Kochi.

12. CUK's Credit Distribution Guidelines

Normal duration of the programme	Four Semesters (16 weeks X 4)/ Two years
One Semester	90 Instructional days
One Credit	1 Hour lecture or 2-4 hours of laboratory work/field work per week.
Maximum Credits from Core Courses	60 Credits
Minimum Credits from Core Courses	48 Credits
Minimum Credit from Elective Courses	12 Credits
Maximum Credits per Semester	30 Credits
Accumulated minimum Credits for Successful completion of the programme	72 Credits (Core + Elective)

SWAYAM MOOC (Massive Online Open Courses)	Only Permitted in Semester-II and III and only those courses approved by the BoS
Credits for Core Course	3 or 4

13. Course Structure in MPH Programme

SEMESTER –I			
Sl.	**Course Code**	**Core Courses**	**Credit**
1.	MPC 51 01	Principles and Practices of Public Health	3
2.	MPC 51 02	Basic Epidemiology	4
3	MPC 51 03	Demography, RMNCH+A and Family Planning	3
4.	MPC 51 04	Basic Bio-statistics	4
5	MPC 51 05	Introduction to Health Systems and Policy	4
Sl.		**In House Elective Courses – Any one (Minimum 3 Credit)**	**Credit**
1.	MPC 50 01	Public Health Nutrition	3
2.	MPC 50 02	Health Inequities	3
		Total Credits	**21**

RMNCH+A - Reproductive, Maternal, Newborn, Child and Adolescent Health

SEMESTER – II			
Sl.	**Course Code**	**Core Courses**	**Credit**
6	MPC 52 01	Research Methodology in Health Sciences (Quantitative and Qualitative)	4
7.	MPC 52 02	Health Economics and Finance	3

8	MPC 52 03	Epidemiology of Communicable and Non-communicable Disease	4
9.	MPC 52 04	Health Technology and Informatics	3
Sl.		**In House Elective Courses – Any two (Minimum 6 Credit)**	**Credit**
3	MPC 50 03	Mixed Methods in Health Sciences	3
4	MPC 50 04	Medical Anthropology	3
5	MPC 50 05	Essentials of Global Health	3
		Total Credits	**20**

SEMESTER – III			
Sl.	**Course code**	**Core Course**	**Credit**
10.	MPC 53 01	Law and Ethics in Public Health Practice and Research	3
11.	MPC 53 02	Principles of Health Management & Health Programme Design, Implementation and Evaluation	4
12.	MPC 53 03	Health Promotion Methods and Approaches	3
13	MPC 53 04	Environmental and Occupational Health	4
Sl.		**In-House Elective Courses – Any one (Minimum 3 Credit)**	
6	MPC 50 06	Data Analytics in Health Sciences (R and NVivo-)	3
		Total Credits	**17**

SEMESTER - IV			
Sl.	**Course Code**	**Core Courses**	**Credit**
14.	MPC 54 90	Dissertation	8
15.	MPC 54 92	Internship (Can be offered Online/Offline)	6
		Total Credits	**14**

Sem-I (21) + Sem-II (20) + Sem-III (17) + Sem-IV (14) = 72

Sl. no	Dept's Course Code	Title of the Courses as given by UGC SWAYAM MOOC	Course Credit as per the SWAYAM MOOC
1	MPC 50 07	Applied Multivariate Analysis [MOOC Course- 15 weeks]	
2	MPC 50 08	Urban Disaster Risk Mitigation and Climate Resilience Development [MOOC Course – 15 weeks]	
3	MPC 50 09	Organizational Development and Change in 21st Century [MOOC Course- 8 weeks]	
4	MPC 50 10	Leadership [MOOC, 4 Weeks Course]	
5	MPC 50 11	Solid and Hazardous Waste Management [MOOC, 15 Weeks Course]	
6	MPC 50 12	Academic and Report Writing [MOOC 8 Weeks Course]	
7	MPC 50 13	Developing Soft Skills & Personality [MOOC 8 Week Course]	

13.a List of SWAYAM MOOC Courses approved by the BoS

14. Semester – I

		SEMESTER-I (21 Credits)	
Sl.	**Course Code**	**Core Course**	**Credit**
1.	MPC 51 01	Principles and Practices of Public Health	3
2.	MPC 51 02	Basic Epidemiology	4
3	MPC 51 03	Demography, RMNCH+A and Family Planning	3
4.	MPC 51 04	Basic Bio-statistics	4
5	MPC 51 05	Introduction to Health Systems and Policy	4
Sl.		**Elective Course – Any one (Minimum 3 Credit)**	**Credit**
1.	MPC 50 01	Public Health Nutrition	3
2.	MPC 50 02	Health Inequities	3

Semester: I
Core Course

1. Course Code & Title: MPC 51 01 & Principles and Practices of Public Health
Credits: 3

Course objectives: This course aims to help students to get oriented to the postgraduate level program in public health. This course will serve as a warm up to all the core courses of public health. It will orient the students to understand the difference between individual and collective perspectives of health and the interdisciplinary nature of public health learning.

Course outcomes: On successful completion of the course, students will be able to:

1. Understand the principles and concepts of public health
2. Understand the determinants of health and identify areas of socio-cultural intervention to promote health
3. Understand the indicators of health and measure outcomes of health and disease in a community
4. Identify levels of prevention and intervene each of them appropriately
5. Understand health is the crux of development
6. Understand the public health relevance in disaster management and strategies involved in disaster management.

By imparting the foundational knowledge of Public Health, this course contributes towards employability of the Public Health graduates by orienting them to the basic concepts of Public Health.

Teaching methods: This course will be delivered through classroom and online lectures, self-study, case studies, written assignment, quiz, field visit and group work.

Units and Topics	Teaching Methods								Mandatory Readings
	L	FW	FV	CS	GW	SS	SP	P	
Unit-I: Introduction, Definitions & General Concepts in Public Health & Community Medicine									

Definition of Public Health, core functions and changing concepts of public health	**X**					**X**			Introduction to Public Health eBook Mary Louise Fleming, Elizabeth Parker Elsevier Health Sciences, 24-Jul-2015 K. Park. Preventive and Social Medicine
Health: Definition, Concepts and dimensions	**X**					**X**			
Concept of well-being- Standard of living. Level of living, Quality of Life, Physical Quality of Life Index, Human Development Index	**X**		**X**			**X**			
Determinants of Health- Biological, Behavioral and Sociocultural conditions, Environment and other factors	**X**								
Measuring the Level of Health in a Population: Epidemiological Measures (Indicators) of Health and Disease in a Community					**X**				
Unit-II: History of Public Health									
Ancient Medicine	**X**								
Revival of medicine, sanitary awakening, rise of public health, modern medicine-curative medicine, preventive medicine, social medicine	**X**				**X**				
Unit-III: Theories of Disease Causation, Natural History of Disease & Levels of Prevention									
Concept of Disease and Causation	**X**			**X**					Ali, A., & Katz, D. L. (2015). Disease Prevention and Health Promotion: How Integrative Medicine Fits. American journal of preventive medicine, 49(5 Suppl 3), S230–S240. https://doi.org/10.1016/j.amepre.2015.07.019
Causation and Sir Austin Bradford Hills Criteria								**X**	
Natural History of Disease	**X**								

Levels of Prevention- Primordial, Primary, Secondary and Tertiary Prevention	**X**								
Modes of intervention- Health promotion, Specific Protection, Early diagnosis and treatment, Disability limitation and Rehabilitation.	**X**							**X**	
Unit-IV: Health care Revolution									
Philosophy Behind "Health for All (HFA)", "Primary Health Care (PHC)" & "Millennium Development Goals (MDGs), Sustainable development goals	**X**						**X**		https://www.un.org/millenniumgoals/ Singh, A. R., & Singh, S. A. (2004). The goal: health for all the commitment: all for health. Menssana monographs, 2(1), 97–110.
Changing pattern of disease globally							**X**	**X**	
Unit-V: State health in the world: Disparities and divides									
Social determinants of health	**X**							**X**	Orach C. G. (2009). Health equity: challenges in low income countries. African health sciences, 9 Suppl 2(Suppl 2), S49–S51. Cowling, K., Dandona, R., & Dandona, L. (2014). Social determinants of health in India: progress and inequities across states. International journal for equity in health, 13, 88. https://doi.org/10.1186/s12939-014-0088-0
Health and Development; Health in All Policies	**X**						**X**		Key learning on Health in All Policies implementation from around the world – Information Brochure. Geneva, Switzerland: World Health Organization; 2018
Unit- VI Disaster Management									
Definition, Goals and phases of disaster management	**X**								
Health consequences of disaster	**X**								Swathi, J. M., González, P. A., & Delgado, R. C. (2017). Disaster management and primary health care: implications for medical education. *International journal of medical education*, *8*, 414–415. https://doi.org/10.5116/ijme.5a07.1e1b

Health emergency and disaster risk management framework	**X**				**X**				Health Emergency and Disaster Risk Management Framework.Geneva: World Health Organization; 2019. Licence: CC BY-NC-SA 3.0 IGO.
Health communication and health information management in disaster	**X**				**X**		**X**		

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation:
As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks.

Additional readings:

1. Doyal, L. & Pennell, I. The Political Economy of Health. (Pluto Press, 1979).
2. Porter, D. Health, Civilization and the State: A History of Public Health from Ancient to Modern Times. (Routledge, 2005).
3. Rosen, G. A History of Public Health. (JHU Press, 2015).
4. Harrison, M. Public Health in British India: Anglo-Indian Preventive Medicine 1859-1914. (Cambridge University Press, 1994).
5. Goldsteen, R. L., Goldsteen, K. & Dwelle, T. Introduction to Public Health, Second Edition: Promises and Practice. (Springer Publishing Company, 2014).
6. Holland, S. Public Health Ethics. (Polity, 2007).
7. George, S. How the Other Half Dies. (Rowman & Littlefield Publishers, 1989).
8. Coreil, J. Social and Behavioral Foundations of Public Health. (SAGE Publications Inc, 2010).
9. Patnaik, U. The Republic of Hunger and Other Essays. (Merlin Press, 2007).

Semester: I
Core Course

2. Course Code & Title: MPC 51 02 & Basic Epidemiology
Credits: 4

Course objectives: The objectives of this course are: -

1. To enable MPH students to understand the role of epidemiology in disease prevention and health promotion.
2. To introduce MPH students to the basic epidemiological terminology, concepts, outcome measures and study designs.
3. To enable MPH students, appreciate the application of epidemiological concepts in public health practice and research.
4. To equip the MPH students with the essential skillset to critically analyze the concurrent public health challenges.

Course outcomes: On successful completion of the course the student will be able to

1. Apply the concepts of epidemiology in understanding diseases and their determinants.
2. Gain transferable skills in applying epidemiological study methods in conducting public health research.
3. Develop the ability to undertake epidemiological research studies.

This course focuses on imparting the essential Employability skills for a public health graduate such as planning and conducting epidemiological studies, assessment of bias and confounding and calculate and interpret the measures of risk.

Teaching methods: This course will be delivered using a variety of teaching methods which include (but not limited to) classroom lectures, online classes, webinar's, assignments, field work and group work.

Units and Topics	Teaching Methods								Mandatory Readings
Unit-I: Introduction to epidemiology and public health									
	L	**FW**	**FV**	**CS**	**GW**	**SS**	**SP**	**P**	

1.1 Definitions, History, scope, and importance of epidemiology	**X**					**X**			Gordis, L. (2014). Epidemiology. 5th Ed. Philadelphia: WB Saunders Elsevier, 116-37
1.2 Basic concepts of health and disease prevention	**X**					**X**			
1.3 Iceberg theory of Disease, Natural history of diseases	**X**					**X**			
1.4 Epidemiological transition	**X**					**X**			
1.5 Disease transmission dynamics						**X**			
Unit-II: Measuring mortality and morbidity									
2.1. Introduction to tools used in measuring disease mortality and morbidity (Rates, Ratios ad Proportion)	**X**					**X**			Gianicolo, E., Riccetti, N., Blettner, M., & Karch, A. (2020). Epidemiological Measures in the Context of the COVID-19 Pandemic. Deutsches Ärzteblatt International, 117(19), 336. Vetter, T. R., & Jesser, C. A. (2017). Fundamental epidemiology terminology and measures: it really is all in the name. *Anesthesia & Analgesia*, *125*(6), 2146-2151. Gordis, L. (2014). Epidemiology. 5th Ed. Philadelphia: WB Saunders Elsevier, 116-37
2.2. Mortality Measures	**X**				**X**			**X**	
2.3. Morbidity Measures	**X**								
2.4 Disease transmission Measures	**X**								
Unit-III: Causation and association									
3.1. Causation, association and correlation	**X**			**X**					Gianicolo, E. A., Eichler, M., Muensterer, O., Strauch, K., & Blettner, M. (2020). Methods for Evaluating Causality in Observational Studies: Part 27 of a Series on Evaluation of Scientific Publications. Deutsches Ärzteblatt International, 117(7), 101. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7081045/ Sauerbrei, W., & Blettner, M. (2009). Interpreting results in 2× 2 tables: part 9 of a series on evaluation of scientific publications. Deutsches Ärzteblatt International, 106(48), 795. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2797398/
3.2. Criteria for establishing causation	**X**							**X**	
3.3. Measures used to determine causation	**X**							**X**	
Unit-IV: Epidemiological study designs									

4.1 Introduction to epidemiological study designs	**X**							**X**	Röhrig, B., Du Prel, J. B., & Blettner, M. (2009). Study design in medical research: part 2 of a series on the evaluation of scientific publications. *Deutsches Ärzteblatt International*, *106*(11), 184.
4.2 Descriptive study designs – Ecological study, Cross-sectional study	**X**					**X**			Gordis, L. (2014). Epidemiology. 5th Ed. Philadelphia: WB Saunders Elsevier, 116-37
4.3 Descriptive study designs – Longitudinal study	**X**					**X**			Gordis, L. (2014). Epidemiology. 5th Ed. Philadelphia: WB Saunders Elsevier, 116-37
4.4 Analytical study designs – Case-control study ad Cohort study	**X**					**X**			Ressing, M., Blettner, M., & Klug, S. J. (2010). Data analysis of epidemiological studies: part 11 of a series on evaluation of scientific publications. Deutsches Arzteblatt International, 107(11), 187.
4.5 Analytical study designs – Hybrid designs	**X**					**X**			
4.6 Experimental study designs – Randomized controlled trials	**X**					**X**			Begg, C., Cho, M., Eastwood, S., Horton, R., Moher, D., Olkin, I., ... & Stroup, D. F. (1996). Improving the quality of reporting of randomized controlled trials: the CONSORT statement. Jama, 276(8), 637-639. Kabisch, M., Ruckes, C., Seibert-Grafe, M., & Blettner, M. (2011). Randomized controlled trials: part 17 of a series on evaluation of scientific publications. *Deutsches Ärzteblatt International*, *108*(39), 663. Lange, S., Sauerland, S., Lauterberg, J., & Windeler, J. (2017). The range and scientific value of randomized trials: Part 24 of a series on evaluation of scientific publications. *Deutsches Ärzteblatt International*, *114*(38), 635.
Unit-V: Bias and cofounding in epidemiological studies									
5.1 Introduction to bias, cofounding ad effect measure modification.	**X**					**X**			Hammer, G. P., du Prel, J. B., & Blettner, M. (2009). Avoiding bias in observational studies: part 8 in a series of articles on evaluation of scientific publications. *Deutsches Ärzteblatt International*, *106*(41), 664.
5.2 Bias	**X**					**X**			
5.3 Cofounding	**X**					**X**			

5.4 Effect measure modification	**X**					**X**			Smith, G. D., & Phillips, A. N. (1992). Confounding in epidemiological studies: why" independent" effects may not be all they seem. *BMJ: British Medical Journal*, *305*(6856), 757. Gordis, L. (2014). Epidemiology. 5th Ed. Philadelphia: WB Saunders Elsevier, 116-37.
Unit-VI: Screening									
Screening of diseases and risk factors	**X**					**X**			Spix, C., & Blettner, M. (2012). Screening: part 19 of a series on evaluation of scientific publications. Deutsches Ärzteblatt International, 109(21), 385. Parikh, R., Mathai, A., Parikh, S., Sekhar, G. C., & Thomas, R. (2008). Understanding and using sensitivity, specificity and predictive values. *Indian Journal of Ophthalmology*, *56*(1), 45. Gordis, L. (2014). Epidemiology. 5th Ed. Philadelphia: WB Saunders Elsevier, 116-37

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation

As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks. The continuous assessment will be conducted using examinations, quiz, assignments and presentation.

Additional Readings

1. Du Prel, J. B., Röhrig, B., & Blettner, M. (2009). Critical appraisal of scientific articles: part 1 of a series on evaluation of scientific publications. *Deutsches Arzteblatt International*, *106*(7), 100. Available at https://www.aerzteblatt.de/int/archive/article/63438
2. Pearce, N. (2012). Classification of epidemiological study designs. *International journal of epidemiology*, *41*(2), 393-397. Available at https://academic.oup.com/ije/article/41/2/393/697874
3. Röhrig, B., du Prel, J. B., Wachtlin, D., Kwiecien, R., & Blettner, M. (2010). Sample size calculation in clinical trials: part 13 of a series on evaluation of scientific publications. Deutsches Ärzteblatt International, 107(31-32), 552. available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2933537/

4. Kwiecien, R., Kopp-Schneider, A., & Blettner, M. (2011). Concordance analysis: part 16 of a series on evaluation of scientific publications. Deutsches Ärzteblatt International, 108(30), 515. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3165924/
5. Zwiener, I., Blettner, M., & Hommel, G. (2011). Survival analysis: part 15 of a series on evaluation of scientific publications. *Deutsches Ärzteblatt International*, *108*(10), 163. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3071962/
6. Wellek, S., & Blettner, M. (2012). Establishing equivalence or non-inferiority in clinical trials: part 20 of a series on evaluation of scientific publications. Deutsches Ärzteblatt International, 109(41), 674. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3487152/
7. Wellek, S., & Blettner, M. (2012). On the proper use of the crossover design in clinical trials: part 18 of a series on evaluation of scientific publications. *Deutsches Ärzteblatt International*, *109*(15), 276. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3345345/

Semester: I
Core Course

3. Course Code & Title: MPC 51 03 & Demography, RMNCH+A and Family Planning
Credits: 3

Course objectives: This course intends to enable students understand the demographic principles and techniques, and equip them to apply these concepts in public health practice and research.

Course outcomes: On completion of the course, students will be able to

1. Define demography and understand its scope and importance in public health.
2. Describe population composition and characteristics using demographic theories and concepts
3. Apply demographic principles to explain population dynamics (fertility, mortality and migration)
4. Identify appropriate sources of demographic data, perform basic demographic techniques and ensure comparability across populations.
5. Describe population growth and projection, implications of rapid population growth and population control measures
6. Understand the importance of Reproductive, Maternal, Newborn, Child and Adolescent Health and describe the national programmes to promote RMNCH+A.

Teaching methods: This course will be delivered using a variety of methods and modalities such as classroom and online lectures, self-study, seminars, field visit and group work.

This course imparts essential employability skills focused towards collecting, analysing and interpreting demographic data.

Units and Topics	Teaching Methods								Mandatory Readings
Unit-I: Introduction to demography and population sciences									
	L	**FW**	**FV**	**CS**	**GW**	**SS**	**SP**	**P**	
1.1 Definition and history of demography, principles of demographic analysis, demographic transition and stages	**X**					**X**			Siegel Jacob, S., & Swanson David, A. (2004). The Methods and Materials of Demography. *Elsevier Academic Press, California, USA*.

									Weinstein, J., & Pillai, V. K. (2015). Demography: The science of population. Rowman & Littlefield.
Unit –II: Population composition									
2.1 **Population Composition-** Age, sex, race, ethnicity, nationality, religion, caste, language, marriages -Indicators 2.1.1 Age structure, Age-sex pyramid (population pyramid), demographic transition, demographic dividend, age-dependency ratios, child dependency ratio, old-aged dependency ratio	**X**		**X**			**X**			Siegel Jacob, S., & Swanson David, A. (2004). The Methods and Materials of Demography. *Elsevier Academic Press, California, USA*. Grundy, E (2002) Demography and public health. In: Oxford Textbook of Public Health. Oxford University Press, Oxford, pp. 807-828.
Unit-III: Demographic analysis									
3.1 Fertility - Child Women Ratio, Crude Birth Rate, General Fertility Rate, General Marital Fertility Rate (GMFR), Age-Specific Fertility Rate (ASFR), Total Fertility Rate (TFR), Gross Reproductive Rate (GRR), Net Reproduction Rate (NRR). **3.2 Mortality –** Crude death rate, specific death rate, case fatality rate, proportional mortality rate and ratio, adjusted or standardized rates, life table and survival analysis using life table. **3.3 Migration -** Types of migration (temporal, internal and international), theories of internal migration (Ravenstein theory, Lee's push and pull theory, Social network theory), measuring migration (in-	**X**	**X**				**X**		**X**	Grundy, E (2002) Demography and public health. In: Oxford Textbook of Public Health. Oxford University Press, Oxford, pp. 807-828. Siegel Jacob, S., & Swanson David, A. (2004). The Methods and Materials of Demography. *Elsevier Academic Press, California, USA*. Ravestein, E. (1885): The laws of migration, Journal of the Royal Statistical Society, 167-235. Hagen-Zanker, J. (2008). Why do people migrate? A review of the theoretical literature

Migration, out-migration, net migration and gross migration), effects of migration on population growth **3.4** Determinants of fertility, mortality and migration **3.5** Standardization and population comparison									Cutler, D., Deaton, A., and Lleras-Muney, A. (2006). The determinants of mortality. *Journal of Economic Perspectives*, 20(4), 97–120. Fernandes, A., Carballo, M., Malheiros, J., and Pereira Miguel, J. (eds.) (2007). *Challenges for Health in the Age of Migration*. Conference on Health and Migration in the EU, Lisbon, Portugal, 27–28.
Unit-IV: Sources of demographic data									
4.1 Primary sources of demographic data collection in India -Census, Civil Registration Systems, Sample Registration Systems-SRS, and Demographic Health Surveys – National family Health Surveys (NFHS) & District Level Household Surveys Secondary sources of demographic and health data collection in India.	**X**				**X**	**X**	**X**		Siegel Jacob, S., & Swanson David, A. (2004). The Methods and Materials of Demography. *Elsevier Academic Press, California, USA*. https://censusindia.gov.in/2011-common/censusdata2011.html http://rchiips.org/nfhs/ http://crsorgi.gov.in/web/index.php/auth/login Mahapatra, P. (2010, January). An overview of the sample registration system in India. In *Prince Mahidol award conference & global health information forum* (pp. 27-30).
Unit-V: Demography in application: population growth, projection and control									
4.1 Population growth, projection and control: implications of population growth,	**X**		**X**		**X**	**X**			Raulet, H. M. (1970). Family planning and population control in developing countries. *Demography*, *7*(2), 211-234.

significance of population control, evolution of contraception and family planning. **4.2 Population control and promotion of health in India** - National Population Policy of India, National Family Welfare Programme, Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A)									Alexandratos, N. (2005). Countries with rapid population growth and resource constraints: issues of food, agriculture and development. *Population and Development Review*, 31, 237– 258.
Unit-VI: Reproductive, Maternal, Newborn, Child and Adolescent Health									
6.1 Introduction to the RMNCH+A services – historical context, evolution, coverage and innovations **6.2 Components of service delivery under RMNCH+A** – Programmes by the Government of India	**X**		**X**		**X**	**X**			Taneja, G., Sridhar, V. S. R., Mohanty, J. S., Joshi, A., Bhushan, P., Jain, M., ... & Gera, R. (2019). India's RMNCH+ A Strategy: approach, learnings and limitations. *BMJ global health*, *4*(3), e001162. Chokshi, M., Patil, B., Khanna, R., Neogi, S. B., Sharma, J., Paul, V. K., & Zodpey, S. (2016). Health systems in India. *Journal of Perinatology*, *36*(3), S9-S12.

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation: As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks.

Additional Readings

1. Bhende, A., & Kanitkar, T. (1982). Principles of Population. Studies. Himalaya Publishing House, Bombay.
2. Weeks, J. R. (2020). Population: An introduction to concepts and issues. Cengage Learning.
3. P Singh, S. N. (1989). Population Transition in India (Vol. 1). BR Publishing Corporation.
4. James, K. S. (2011). India's demographic change: opportunities and challenges. Science, 333(6042), 576-580.
5. Pathak, K. B., & Ram, F. (1992). Techniques of demographic analysis. Himalaya Publishing House.

Semester: I
Core Course

4. Course Code & Title: MPC-51 04 & Basic Biostatistics
Credits: 4

Course objectives: The objectives of this course are:

1. To provide an introduction to the common concepts of Biostatistics applied in public health.
2. To introduce the MPH students to univariate, bivariate and multivariate statistical procedures
3. To provide hands on experience to MPH students in cleaning, preparing and analyzing statistical data
4. To develop the competencies among the students to make statistical inferences
5. To enable the MPH students use SPSS package to
    - Enter, clean and prepare statistical data for analysis
    - Conduct selected univariate, bivariate and multi-variate statistical procedures

Course outcomes: On successful completion of the course, students will be able to

1. Understand the numerical statistical data and develop a detailed data analysis plan.
2. Enter and clean the data and conduct statistical analysis using Statistical Package for Social Sciences (SPSS)
3. Draw inferences from the statistical results and discuss on their generalizability.

This is an employability-oriented skill development course. On successful completion of the course the student shall be able to manifest quantitative data analysis skills and ability to use univariate, bivariate and multivariate statistical procedure. The students shall also be skilled at using SPSS in statistical analysis. These skills could improve employability of MPH graduates.

Teaching methods: This course will be delivered using a variety of teaching methods which include (but not limited to) classroom lectures, online classes, webinar's, assignments, field work and group work. Additionally, practical training of SPSS will be provided for relevant modules.

Units and Topics	Teaching Methods								Mandatory Readings
Unit-I: Introduction to biostatistics ad its application in public health									
	L	FW	FV	CS	GW	SS	SP	P	

1.1 Scope and application of biostatistics in public health	**X**								Ahlbom, A. (1993). Biostatistics for epidemiologists. CRC Press.
1.2 Probability theory	**X**								
1.3 Commonly used distributions in biostatistics - normal distribution - binomial distribution - passion distribution	**X**								Greasley, P. (2007). *Quantitative data analysis using SPSS: an introduction for health & social science*. McGraw-Hill Education (UK).
1.4 Variable, variable types and its prominence in statistical analysis.	**X**							**X**	
Unit-II: Statistical inference ad hypothesis testing									
2.1 Statistical inference	**X**								Ahlbom, A. (1993). Biostatistics for epidemiologists. CRC Press.
2.2 p-value & statistical significance	**X**							**X**	
2.3. Confidence interval and confidence level	**X**							**X**	Du Prel, J. B., Hommel, G., Röhrig, B., & Blettner, M. (2009). Confidence interval or p-value? Part 4 of a series on evaluation of scientific publications. *Deutsches Ärzteblatt International*, *106*(19), 335.
2.4 Hypothesis testing	**X**								
Unit-III: Univariate statistics									
3.1 Measures of central tendency	**X**							**X**	Gertsman, B. B. (2015). Basic Biostatistics: Statistics for public health practice. Burlington, MA. Glasser, G. J. (1962). Variance formulas for the mean difference and coefficient of concentration. *Journal of the American Statistical Association*, *57*(299), 648-654.
3.1 Measures of dispersion	**X**							**X**	
3.3 Prevalence and incidence measures	**X**								Ahlbom, A. (1993). Biostatistics for epidemiologists. CRC Press.
3.4 Non-parametric tests for single sample	**X**								Gertsman, B. B. (2015). Basic Biostatistics: Statistics for public health practice. Burlington, MA.
Unit-IV: Bivariate statistics									
4.1 Measures ad methods commonly used in bivariate analysis	**X**								

4.3 t- test	**X**							**X**	Kim, T. K. (2015). T test as a parametric statistic. *Korean journal of anesthesiology*, *68*(6), 540.
4.4 Correlation analysis	**X**							**X**	Greasley, P. (2007). *Quantitative data analysis using SPSS: an introduction for health & social science*. McGraw-Hill Education (UK).
4.5 Chi-squared tests and Fischer's exact test	**X**				**X**			**X**	Gertsman, B. B. (2015). Basic Biostatistics: Statistics for public health practice. Burlington, MA.
4.6 Non-parametric tests for two sample	**X**							**X**	
UNIT-V: Multivariate statistics									
5.1 Introduction to multivariate statistical approaches	**X**								Gertsman, B. B. (2015). Basic Biostatistics: Statistics for public health practice. Burlington, MA. Schneider, A., Hommel, G., & Blettner, M. (2010). Linear regression analysis: part 14 of a series on evaluation of scientific publications. *Deutsches Ärzteblatt International*, *107*(44), 776. Gertsman, B. B. (2015). Basic Biostatistics: Statistics for public health practice. Burlington, MA
5.2 Analysis of Variance (ANOVA)	**X**								
5.3 Linear regression analysis	**X**					**X**		**X**	
5.4 Logistic regression	**X**					**X**		**X**	
5.5 Non-parametric tests for three/more sample	**X**							**X**	
Unit-VI: Sample size estimation									
6.1 Basic principles of sample size calculation	**X**								Devane, D., Begley, C. M., & Clarke, M. (2004). How many do I need? Basic principles of sample size estimation. *Journal of Advanced Nursing*, *47*(3), 297-302.
6.2 Sample size estimation in public health research	**X**								Charan, J., & Biswas, T. (2013). How to calculate sample size for different study designs in medical research? *Indian journal of psychological medicine*, *35*(2), 121. Röhrig, B., du Prel, J. B., Wachtlin, D., Kwiecien, R., & Blettner, M. (2010). Sample size calculation in clinical trials: part 13 of a series on evaluation of scientific publications. Deutsches Ärzteblatt International, 107(31-32).

									Hajian-Tilaki, Karimollah. "Sample size estimation in epidemiologic studies." *Caspian journal of internal medicine* 2, no. 4 (2011): 289.
6.3 Internet tools for sample size calculation (overview of OpenEpi)	X					X		X	Website: https://www.openepi.com/Menu/OE_Menu.htm
Unit-VII: Data preparation, data cleaning and data presentation									
7.1 Data preparation and data cleaning	X							X	
7.2 Presenting statistical data using tables and figures	X								Spriestersbach, A., Röhrig, B., Du Prel, J. B., Gerhold-Ay, A., & Blettner, M. (2009). Descriptive statistics: The specification of statistical measures and their presentation in tables and graphs. Part 7 of a series on evaluation of scientific publications. Deutsches Ärzteblatt International, 106(36), 578.

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation: As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks. CA would be conducted through Examinations, Assignments and Presentations.

Additional Readings

1) Landau, S. (2004). *A handbook of statistical analyses using SPSS*. CRC.
2) Blanca, M. J., Alarcón, R., Arnau, J., Bono, R., & Bendayan, R. (2017). Non-normal data: Is ANOVA still a valid option? Psicothema, 29(4), 552-557.
3) Barton, B., & Peat, J. (2014). Medical statistics: A guide to SPSS, data analysis and critical appraisal. John Wiley & Sons.
4) Starkweather, J., & Moske, A. K. (2011). Multinomial logistic regression. *Consulted page at September 10th: http://www. unt. edu/rss/class/Jon/Benchmarks/MLR_JDS_Aug2011. pdf*, *29*, 2825-2830.
5) Glasser, M. (1964). Linear regression analysis with missing observations among the independent variables. *Journal of the American Statistical Association*, *59*(307), 834-844.
6) Chao, Y. C. E., Zhao, Y., Kupper, L. L., & Nylander-French, L. A. (2008). Quantifying the relative importance of predictors in multiple linear regression analyses for public health studies. Journal of occupational and environmental hygiene, 5(8), 519-529.
7) Victor, A., Elsäßer, A., Hommel, G., & Blettner, M. (2010). Judging a plethora of p-values: how to contend with the problem of multiple testing-part 10 of a series on evaluation of scientific publications. Deutsches Arzteblatt International, 107(4).

Semester: I
Core Course

5. Course Code & Title: MPC 51 05 & Introduction to Health Systems and Policy
Credits: 4

Course objectives: The objectives of this course are to provide students with basic understanding of a health system with respect to its evolution, levels, functions, types and building blocks. The objective is also to sensitize students with the nitty gritty of health policy making, its analyses and implications on health services delivery and health outcomes.

Course outcomes: On successful completion of the course, students will be able to:

1. Learn the WHO health system framework and its important building blocks.
2. Analyze important components of the Indian public and private healthcare systems and compare it with other emerging economies.
3. Understand the theories and concepts related to public policy.
4. Understand the political context of making policies and the role of government as policy maker
5. Compare the global and national health policies in the context of changing global health policy environment
6. Understand health policy making, analysis and actors involved in the process.
7. Identify the gaps and opportunities in health policies and systems in India.

On successful completion of the course the students will be able to gain essential employment oriented skills in health systems strengthening and health policy analysis.

Teaching methods: This course will be delivered using a variety of methods and modalities such as classroom and online lectures, self-study, seminars, field visit, group work.

Units and Topics	Teaching Methods								Mandatory Readings
	L	FW	FV	CS	GW	SS	SP	P	
Unit-I: Introduction to Health Systems									

1.1 Definitions, evolution, functions and types of health systems. 1.2 Health systems of developing and developed countries (Including Indian Health System)	**X**					**X**			Gilson L (2012). Health policy and systems research: a methodology reader. WHO (2010). Monitoring the building blocks of health system: a handbook of indicators and their measurement strategies. World Health Organization. (2007). Everybody's business--strengthening health systems to improve health outcomes: WHO's framework for action.
1.3 WHO building blocks of health systems and their linkages: (i) service delivery, (ii) health workforce, (iii) health information systems, (iv) access to essential medicines, (v) financing, and (vi) leadership/governance	**X**					**X**			
1.4 Micro (Individual interactions), meso (organizational structure and community) and macro (Policy) framework of a health systems.	**X**					**X**			
Unit-II: Global Health Initiatives and Health Programmes in India									
2.1 Alma Ata Declaration, MDGs, and SDGs 2.2 Universal Health Coverage (UHC) 2.3 National Health Programmes, NHM, NUHM and ICDS. 2.4 Role of NITI Ayog, and five-year plans.	**X**					**X**			
Unit-III: Introduction to Health Policy									
3.1 Introduction to core concepts and definitions - public and private policies, policy makers and actors, policy instruments, policy transfer, power in policy	**X**					**X**			Buse, K., Mays, N., Walt, G. (2005). Making Health Policy: Understanding Public Health. Open University Press.

3.2 Health Policy: Definition and importance, Evidence-based policy making, Role of government as policy maker and the political context of making health policies									Wildavsky, A. (1979). Doing better and feeling worse: the political pathology of health policy. In the *Art and Craft of Policy Analysis* (pp. 284-308). Palgrave Macmillan, London.
Unit-IV: Health policy making and analysis									
4.1 Policy making process: Theories – multiple-streams theory, punctuated equilibrium theory 4.2 Policy making cycle: Agenda setting, formulation of policy, adoption, implementation and evaluation. 4.3 Decision making - Linear/rational model, incrementalist model and mixed scanning model 4.4. Dichotomy between policy making and implementation: Bottom-up and top-down implementation, Street level bureaucracy 4.5 Health Policy analysis - Policy triangle framework (Walt and Gilson 1994), cost-benefit and cost-effective analysis	**X**		**X**	**X**	**X**	**X**			Buse, K., Mays, N., Walt, G. (2005). Making Health Policy: Understanding Public Health. Open University Press. Walt, G., & Gilson, L. (1994). Reforming the health sector in developing countries: the central role of policy analysis. *Health policy and planning*, *9*(4), 353-370. Walt, G., Shiffman, J., Schneider, H., Murray, S. F., Brugha, R., & Gilson, L. (2008). 'Doing'health policy analysis: methodological and conceptual reflections and challenges. *Health policy and planning*, *23*(5), 308-317.
Unit-V: Global and National Health Policies, Changing Global Health Policy Environment and Emerging Concepts									
5.1 Global Health Policies: Role of World health organization in setting norms and standards, e.g. International Health Regulations, Framework Convention on Tobacco Control (FCTC) 5.2 National health policies: Overview of health policies from developing and	**X**		**X**		**X**	**X**			Lee, K., Kamradt-Scott, A. (2014). The multiple meanings of global health governance: a call for conceptual clarity. *Globalization and Health*, 10:28. https://www.who.int/

developed countries. 5.3 Health policies of India – National and state health policies 5.4 Global health governance to global governance for health: Role of agencies such as World Trade Organization, International Monitory Fund, World Bank, Donors and philanthropic organizations 5.5 Global health security and diplomacy 5.6 Health in All Policies 5.7 Health and activism 5.8 Health Policy and Systems Research									Adams, V., Novotny, T. E., & Leslie, H. (2008). Global health diplomacy. *Medical anthropology*, *27*(4), 315-323. WHO. (2014). Health in All Policies (HiAP) framework for country action; 2014. Gilson L. Health policy and systems research: a methodology reader. WHO; 2012. ISBN 978 92 4 150313 6. Loewenson R (2013). Activism for health. *The Lancet*, 381(9884):2157.

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation - As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks.

Additional readings:

1. Ramani, K. V., & Mavalankar, D. (2006). Health system in India: opportunities and challenges for improvements. Journal of health organization and management.
2. De, P., Dhar, A., & Bhattacharya, B. N. (2012). Efficiency of health care system in India: an inter-state analysis using DEA approach. Social Work in Public Health, 27(5), 482-506.
3. Krupp, K., & Madhivanan, P. (2009). Leveraging human capital to reduce maternal mortality in India: enhanced public health system or public-private partnership? Human Resources for Health, 7(1), 1-8.
4. Lakshminarayanan, S. (2011). Role of government in public health: Current scenario in India and future scope. Journal of Family and Community Medicine, 18(1), 26.

Semester: I
Elective Course

1. Course Code & Title: MPC 50 01 & Public Health Nutrition
Credits: 3

Course objectives: The objective of this course is to enable students understand the inseparable association between health and nutrition, the food and nutrition security, malnutrition and its causes, and the theoretical and applied methods in public health nutrition research.

Course outcomes: On completion of the course, students will be able to

1. Learn the relationship between nutrition, health and disease
2. Understand the concept, purpose and scope of Public Health Nutrition
3. Evaluate nutritional status, and understand malnutrition and its determinants
4. Understand the life course nutrition approach to prevent disease and promote health
5. Describe food and nutrition security at the national, state and local levels.
6. Understand the inter-sectoral nature and implementation of nutrition and food policy
7. Apply epidemiological principles and methods in nutrition research

This is an employment focussed skill development course. On successful completion of the course the student will be able to develop the skills to plan nutritional interventions and give nutritional education.

Teaching methods: This course will be delivered using a variety of methods and modalities such as classroom and online lectures, self-study, seminars, field visit and group work.

Units and Topics	Teaching Methods								Mandatory Readings
Unit I: Nutrition health and disease									
	L	**FW**	**FV**	**CS**	**GW**	**SS**	**SP**	**P**	

1.1 Definition and concepts – Food, Food composition, nutrition, macronutrients and micronutrients, balanced diet, nutritional status and indicators, malnutrition, food security, dietary recommendations. 1.2 Definition, relevance and scope of public health nutrition in improving human health	**X**	**X**				**X**			Vir, S, C., (2015), Public health nutrition in developing countries (Part I and II), Woodhead Publishing India Pvt, Ltd. Deaton, A., & Drèze, J. (2009). Food and nutrition in India: facts and interpretations. *Economic and political weekly*, 42-65. Fieldhouse, P. (2013). Food and nutrition: customs and culture. *Springer.*
Unit-II: Nutrition epidemiology									
2.1 Definition, utility and applications of epidemiology in nutritional sciences 2.2 Assessment of nutritional status at the population level– anthropometry, physical and bio-chemical analysis	**X**	**X**				**X**		**X**	Willett, W. (2012). *Nutritional epidemiology*. Oxford university press. Gibson, R. S. (2005). *Principles of nutritional assessment*. Oxford university press, USA.
Unit-III: Nutritional challenges in the community									
3.1 Food security –availability, accessibility, quantity and quality 3.2 Malnutrition – definition, types, burden, causes and consequences 3.3 Life course nutrition – child, adolescents, women, nutritional transition, chronic and infectious diseases) 3.4 Nutrition of Marginalized population- Tribal, Dalits, Poor Patients with TB, HIV	**X**	**X**				**X**		**X**	Mitchell, P. J., Cooper, C., Dawson-Hughes, B., Gordon, C. M., & Rizzoli, R. (2015). Life-course approach to nutrition. *OsteoporosisInternational*, *26*(12),2723–2742. https://doi.org/10.1007/s00198-015-3288-6 Pangaribowo, E. H., Gerber, N., & Torero, M. (2013). Food and nutrition security indicators: a review.

3.5 Globalization, lift style transition and nutrition transition									
Unit –IV: Nutrition interventions									
4.1 Food safety and security – policies and actions 4.2 Recommended Dietary Allowances and Supplementary nutrition 4.3 Intersectoral actions – drinking water, sanitation, shelter, education, economics, policies 4.4 Overview of global and national nutritional interventions and food policies	**X**	**X**			**X**	**X**			Gwatkin, D. R., Rutstein, S., Johnson, K., Suliman, E., Wagstaff, A., & Amouzou, A. (2007). Socio-economic differences in health, nutrition, and population within developing countries: an overview. Alderman, H. (2005). Linkages between poverty reduction strategies and child nutrition: an Asian perspective. *Economic and Political Weekly*, 4837-4842. Caraher, M., & Coveney, J. (2004). Public health nutrition and food policy. *Public health nutrition*, *7*(5), 591-598. llen L, Gillespie S. What works? A review of the efficacy and effectiveness of nutrition interventions. ACC/SCN Nutrition Policy Paper no.19, ADB Nutrition and Development Series No. 5. Manila: Asian Development Bank, 2001.
Unit –V: Nutrition education									

5.1 Relevance, principles, target groups, steps of developing nutrition education programmes	**X**	**X**				**X**		**X**	McNulty, J. (2013). Challenges and issues in nutrition education. Rome: Nutrition Education and Consumer Awareness Group, Food and Agriculture Organization of the United Nations. Smith, B., & Smitasiri, S. (1997). A framework for nutrition education programmes. *FAO Food and Nutrition Paper*, 37-70. Pérez-Rodrigo, C., & Aranceta, J. (2001). School-based nutrition education: lessons learned and new perspectives. *Public Health Nutrition*, *4*(1a), 131-139.

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation - As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks.

Additional readings:

1. Grebmer, K. V., Bernstein, J., Patterson, F., Wiemers, M., Chéilleachair, R. N., & Foley, C. (2019). Global Hunger Index: The Challenge of Hunger and Climate Change. International Food Policy Research Institute, October.
2. Truswell, A. S. (2001). Levels and kinds of evidence for public-health nutrition. The Lancet, 357(9262), 1061-1062.
3. Egan, M. C. (1994). Public health nutrition: a historical perspective. Journal of the American Dietetic Association, 94(3), 298-304.
4. Worsley, A. (2002). Nutrition knowledge and food consumption: can nutrition knowledge change food behaviour?. Asia Pacific journal of clinical nutrition, 11, S579-S585.
5. Haddad, L., Kennedy, E., & Sullivan, J. (1994). Choice of indicators for food security and nutrition monitoring. Food Policy, 19(3), 329-343.

Semester: I
Elective Course

2. Course Code & Title: MPC 50 02 & Health Inequities
Credits: 3

Course objectives: The course 'Health Inequities' primarily intends to sensitize the students on 'how social inequalities interfere with health and health related events in people's life'. The course will discuss the social determinants of health and the differential health outcomes across social groups.

Course outcomes: On completion of this course, students will be able to:

1. Understand and critically appraise the social construction of inequalities; exclusion and marginalization.
2. Differentiate the concepts equality and equity; inequality and inequity (in health).
3. Be familiar with equity frameworks to analyse the pathways in which social class, caste, race, ethnicity, age, gender, sexuality, migration and other social forces interfere with people's health across the globe.
4. Understand the influence of the intersection of multiple deprivation on health
5. Have an understanding on effective health policies and health system interventions to bridge the health equity

Teaching methods: This course will be delivered using a variety of methods and modalities such as classroom and online lectures, self-study, seminars, field visit, and group work.

Units and Topics	Teaching Methods								Mandatory Readings
Unit I: Introduction to health inequities									
	L	**FW**	**FV**	**CS**	**GW**	**SS**	**SP**	**P**	
1.1 Human Rights 1.2 Social construction of inequalities: power distribution in the society, exclusion/ marginalization/discrimination. 1.3 Understand equality and equity; inequality and inequity	**X**		**X**			**X**			Mathieson, J., Popay, J., Enoch, E., Escorel, S., Hernandez, M., Johnston, H., & Rispel, L. (2008). Social Exclusion Meaning, measurement and experience and links to health inequalities. A review of literature. *WHO Social Exclusion Knowledge Network Background Paper*, *1*, 91.

									Michael, M. (2007). Health in an unequal world. On behalf of the Commission on Social Determinants of Health. *The Lancet*, 370(9593), 1153–1163.
Unit-II: Pathways to health inequities									
2.1 Theories: Social Production of Health and disease; Social determinants of health (Social selection, Social causation and Life course perspectives)	**X**					**X**			Commission on Social Determinants of Health (2007). A Conceptual Framework for Action on the Social Determinants of Health. Discussion paper.
Unit –III: Social determinants of health									
3.1 Conceptual framework of social determinants of health 3.2 Social position and health inequities: Gender differences in mortality, morbidity, health care access and health seeking behavior among men, women and third gender. 3.3 Social position and health inequities - Rural/urban, Race/ethnicity, religion, caste, class, occupation, migrants, PLHA, persons with disabilities, persons with mental disorders	**X**	**X**		**X**		**X**			World Health Organization. (2002). Gender and Health. Technical paper on Women's Health and Development, Family and Reproductive Health. UNDP India. Hijras/Transgender Women in India: HIV, Human Rights and Social Exclusion. Issue Brief; 2010. Anderson, I., Robson, B., Connolly, M., Al-Yaman, F., Bjertness, E., King, A., ... & Pesantes, M. A. (2016). Indigenous and tribal peoples' health (The Lancet–Lowitja Institute Global Collaboration): a population study. *The Lancet*, *388*(10040), 131-157. Mukherjee, S., Haddad, S., & Narayana, D. (2011). Social class related inequalities in household health expenditure and economic burden: evidence from Kerala, south

									India. *International Journal for Equity in Health*, *10*(1), 1. Dara, N. R., & Ramakrishna, R. (2016). Determinants of Income Inequalities and Multidimensional Poverty among SC/STs in Andhra Pradesh: Micro-level Evidence. *IOSR Journal of Economics and Finance*, *7*(3), 42-54.
Unit-IV: Measurement of health inequities									
4.1 Indicators and interpretations: Human Development Index, Inequality-adjusted Human Index, Multi-dimensional Poverty Index, Gini Coefficient, Lorenz curve, Concentration Index. 4.2 Gender Development Index, Gender Empowerment Index, Gender Inequality Index 4.3 Gender analysis framework and tools: Gender Responsiveness Assessment Scale, WHO Gender Analysis Matrix (GAM), World Health Organization's gender analysis checklist for policies and programmes	**X**				**X**	**X**	**X**		WHO (2015). Monitoring Health Inequality: An essential step for achieving health equity; 2015. WHO (2015). Health Equity Monitor Compendium of Indicator Definitions. Indicator Code Book. Health Equity Monitor; 2015. Measuring Health Inequalities: Gini Coefficient and Concentration Index. http://www1.paho.org/English/SHA/be_v22n1-Gini.htm WHO (2013). Handbook on health inequality monitoring: with a special focus on low- and middle-income countries. World Health Organization; 2013. ISBN 978 92 4 154863 2 Human Development Reports http://hdr.undp.org WHO (2002). Gender Analysis in Health: a review of selected tools. Department of Women and Gender Health.

									WHO (2003). Comparative Evaluation of Indicators for Gender Equity and Health. WHO/WKC/Tech. Ser./03.2. Centre for Development; pp.12-13, 23-26.
Unit-V: Intersectionality approach									
5.1 Intersection of social inequities and implications on health outcomes 5.2 Addressing intersectionality through policies	**X**		**X**			**X**			Dhamoon, R.K. and Hankivsky, O. (2011) Why the theory and practice of intersectionality matter to health research and policy. In: O. Hankivsky (ed.) Health Inequalities in Canada. Vancouver, Toronto, Canada: UBC Press. Yuval-Davis, N. (2011). Power, Intersectionality and the Politics of Belonging. Aalborg: Institute for Kultur of Globale Studier, Aalborg University.
Unit-VI: Bridging the health equity gap									
5.1 Role of health policies and health system in bridging the health equity gap.	**X**		**X**			**X**			Gopalan SS, Mohanty S, Das A, Challenges and opportunities for policy decisions to address health equity in developing health systems: case study of the policy processes in the Indian state of Orissa, 2011, International Journal for Equity in Health, Vol: 10, No: 55. Garg CC, Equity of Health sector financing and delivery in India, 1998, Takemi Fellow in International Health.

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation:
As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks.

Additional readings:
1. Carter-Pokras, O., & Baquet, C. (2002). What is a health disparity? *Public Health Reports*, *117*(5), 426.
2. Yinger, N., Peterson, A., Avni, M., Gay, J., Firestone, R., Hardee, K., ... & Johnson-Welch, C. (2002). A framework to identify gender indicators for reproductive health and nutrition programming. *Washington, DC: USAID, Interagency Gender Working Group Subcommittee on Research and Indicators*.
3. Derbyshire, H. (2002). *Gender manual: A practical guide for development policy makers and practitioners*. DFID (UK Department for International Development).
4. World/Human Development Reports (UN) –thematic reports (http://hdr.undp.org/en/media/HDR2013_EN_Statistics.pdf)
5. Ottersen, O. P., Dasgupta, J., Blouin, C., Buss, P., Chongsuvivatwong, V., Frenk, J., & Leaning, J. (2014). The political origins of health inequity: prospects for change. *The Lancet*, *383*(9917), 630-667.

15. Semester-II

SEMESTER-II (20 Credits)			
Sl.	**Course Code**	**Core Course**	**Credit**
6	MPC 52 01	Research Methodology in Health Sciences (Quantitative and Qualitative)	4
7.	MPC 52 02	Health Economics and Finance	3
8	MPC 52 03	Epidemiology of Communicable and Non-communicable Disease	4
9.	MPC 52 04	Health Technology and Informatics	3
Sl.		**Elective Course – Any two (Minimum 6 credit)**	
3.	MPC 50 03	Mixed-Methods in Health Sciences	3
4.	MPC 50 04	Medical Anthropology	3
5	MPC 50 05	Essentials of Global Health	3

Semester: II
Core Course

6. Course Code & Title: MPC 52 01 & Research Methodology in Health Sciences
Credits: 4

Course objectives: The objective of this course is to equip students in developing an understanding of different methodological approaches in undertaking a research in health sciences with focus on public health.

Course outcomes: On successful completion of this course, students will be able to:

1. Learn different paradigms and epistemological stands of conducting empirical research.
2. Identify an appropriate topic for research and develop research questions, objectives and hypotheses.
3. Learn how to undertake a systematic literature review in general and for the MPH dissertation in particular.
4. Apply the concepts of research methods in developing data collection tools and techniques.
5. Develop a research proposal employing quantitative and qualitative approaches.

This is an employment focussed skill development course. On successful completion of course, the students shall be skilled in quantitative and qualitative research methods and will be able to use NVivo for qualitative analysis.

Teaching methods: This course will be delivered using a variety of methods and modalities such as interactive classroom and online lectures, self-study, case studies, written assignment, class room exercises using computers/software, quiz, field visit, group work, field survey, class room presentations in groups etc.

Units and Topics	Teaching Methods								Mandatory Readings
Unit-I: Quantitative Research Methods									
	L	**FW**	**FV**	**CS**	**GW**	**SS**	**SP**	**P**	

Objectives of the course and the need for undertaking an independent research project for the MPH programme	**X**					**X**			
Literature review including various style of referencing, method of reviewing literature and how this has to be reproduced in the dissertation or a research paper with appropriate citation	**X**					**X**			Suresh, N., & Thankappan, K.R, (2019). Gender differences and barriers women face in relation to accessing type 2 diabetes care - A Systematic Review. *Indian Journal of Public Health*, *63*, 65–72. https://doi.org/10.4103/ijph.IJPH_26_18.
Choosing a research topic in general and specifically for the MPH dissertation Framing research questions and objectives of the study	**X**					**X**			Hall, N., & Kothari, R. (1999). Research Fundamentals: IV. Choosing a Research Design *Acad Emerg Med*, *6*(1), 67–74. https://doi.org/10.1111/j.1553-2712.1999.tb00097.x
Identification of variables, defining each variable and operationalizing them	**X**					**X**		**X**	Mini, G., Sarma, P., & Thankappan, K.,R. (2019). Cluster Randomised Controlled Trial of Behavioural Intervention Program: A Study Protocol for Control of Hypertension Among Teachers in Schools in Kerala (CHATS-K), India. *BMC Public Health*, *19*(1), 1718. https://doi.org/10.1186/s12889-019-8082-5
Various study designs including cross sectional, case control, cohort and randomized controlled trials	**X**					**X**			Riddell, M. A., Joshi, R., & Oldenburg, B et al (2016). Cluster Randomised Feasibility Trial to Improve the Control of Hypertension In Rural India (CHIRI): A Study Protocol . *BMJ Open*, *6*(10), e012404. https://doi.org/10.1136/bmjopen-2016-012404.
Different methods of data collection, Questionnaire method, interview schedules, and some physical measurements like weight, height, and waist circumference.	**X**					**X**		**X**	Patra, L., Mini, G. K., Mathews, E., & Thankappan, K.,R. (2015). Doctors' Self-Reported Physical Activity, Their Counselling Practices and Their Correlates in Urban Trivandrum, South India: Should a Full-Service Doctor Be a Physically Active Doctor? . *British Journal of Sports Medicine*, *49*(6), 413–416. https://doi.org/10.1136/bjsports-2012-091995

Organizational aspects of field survey, logistics of field survey organization, training of staff transportation etc.	**X**					**X**			Thankappan, K. R., Sivasankaran, S., Mini, G. K., Daivadanam, M., Sarma, P. S., & Khader, S. A. (2013). Impact of a Community Based Intervention Program on Awareness, Treatment and Control of Hypertension in a Rural Panchayat, Kerala, India. *Indian Heart Journal*, *65*(5), 504–509. https://doi.org/10.1016/j.ihj.2013.08.023
Estimating sample size for different study designs	**X**					**X**		**X**	Vishnu, N., Mini, G. K., & Thankappan, K. R. (2017). Complementary and Alternative Medicine Use by Diabetes Patients in Kerala, India. *Global Health Epidemiology and Genomics*, *15*(2), e6. https://doi.org/10.1017/gheg.2017.6
Sample selection procedure and sample frame	**X**					**X**		**X**	As above
Development of a questionnaire and interview schedule and the difference between the two, translation and back translation of the schedule/questionnaire	**X**					**X**		**X**	Sailesh, M., Pradeepkumar, A. S., Thresia, C. U., & Thankappan, K. R et al. (2006). Tobacco Use Among Medical Professionals in Kerala, India: The Need for Enhanced Tobacco Cessation and Control Efforts. *Addictive Behaviours*, *31*(12), 2313–2318.
Pilot testing of instrument/tool for the study	**X**					**X**			
Scales of measurement, reliability and validity and the difference between the two. Organization of data sheets, manual checking of data sheets, grouping them, storage and transportation,	**X**					**X**			Mathews, E., Salvo, D., Sarma, P., Thankappan, K., & Pratt, M. (2016). Adapting and Validating the Global Physical Activity Questionnaire (GPAQ) for Trivandrum, India, 2013. *Preventing Chronic Diseases*, *13*, E53.
Data entry using excel and SPSS, data cleaning	**X**					**X**		**X**	
Univariate, bivariate, and multivariate analysis	**X**					**X**		**X**	
Writing a research report with executive summary and a research article of scientific journal with an abstract.	**X**					**X**			Aziz, Z., Mathews, E., Absetz, P., & Sathish, T et al. (2018). A Group-Based Lifestyle Intervention for Diabetes Prevention in Low- And Middle-Income Country: Implementation Evaluation of the Kerala Diabetes Prevention Program. *Implementation Science*, *13*(1), 97.

Unit-II: Qualitative Research Methods									
Type of research approaches – Induction and deduction approaches, elements of research paradigm – Ontology, epistemology, axiology and ethics and research paradigm – Positivist, post-positivist and pragmatism.	**X**					**X**			Al-Saadi, H. (2014). Demystifying Ontology and Epistemology in research methods. *Research Gate*, *1*(1), 1-10. Noble, H., & Smith, J. (2014). Qualitative data analysis: a practical example. *Evidence-Based Nursing*, *17*(1), 2-3. Devers, K., & Frankel, R. (2000). Study design in qualitative research: Sampling and data collection strategies. Education for Health, 13(2), 263-271. Giddings, L. (2003). Rigour and trustworthiness in qualitative research. Qualitative Research Methods course, Auckland University of Technology, Auckland. Östlund, U., Kidd, L., Wengström, Y., & Rowa-Dewar, N. (2011). Combining qualitative and quantitative research within mixed method research designs: a methodological review. International Journal of Nursing Studies, 48(3), 369-383. Kitzinger, J. (1995). Qualitative research: introducing focus groups. BMJ, 311(7000), 299-302. Caracelli, V. J., & Greene, J. C. (1993). Data analysis strategies for mixed-method evaluation designs. Educational evaluation and policy analysis, 15(2), 195-207. Clarke, V., Braun, V., & Hayfield, N. (2015). Thematic analysis. Qualitative psychology: A practical guide to research methods, 222-248.
Qualitative design: Case-study, ethnography, participant's observation, and phenomenology Qualitative data collection techniques: In-depth interviews and focus group discussions. Qualitative data collection tools: In-depth interview and focus discussion guides Sampling techniques and sample size in Qualitative research.	**X**	**X**				**X**			
Mixed-method design: Sequential and concurrent designs and data triangulation.						**X**			
Type of qualitative data analysis approaches: Framework approach (thematic analysis), quasi-statistical (content analysis), Interpretative approach (phenomenological analysis and grounded theory) and Socio-linguistic approach (discourse analysis). Rigour and trustworthiness of qualitative research – Four techniques 1.) Credibility, transferability, dependability and confirmability.	**X** **X**			**X**		**X** **X**		**X**	
Demonstration of textual data analysis using Nvivo-7.5 including coding, generative patterns and developing sub-themes and sub-themes.	**X**					**X**		**X**	

									Saldaña, J. (2015). The coding manual for qualitative researchers. Sage Publications.

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation:
As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks.

Additional readings:

1. Bryman, A. (2016). *Social research methods*. Oxford university press.
2. Maxwell, J. A. (2008). Designing a qualitative study. The SAGE handbook of applied social research methods, 2, 214-253.
3. Rehman, A. A., & Alharthi, K. (2016). An introduction to research paradigms. International Journal of Educational Investigations, 3(8), 51-59.
4. Sandelowski, M. (1995). Qualitative analysis: What it is and how to begin. *Research in Nursing & Health*, *18*(4), 371-375.
5. Liamputtong, P. (2009). Qualitative data analysis: conceptual and practical considerations. Health Promotion Journal of Australia, 20(2), 133-139.
6. Higginbottom, G. M. A. (2004). Sampling issues in qualitative research. Nurse Researcher (through 2013), 12(1), 7.
7. Maxwell, J. A. (2010). Using numbers in qualitative research. Qualitative inquiry, 16(6), 475-482.
8. Minichiello, V., Aroni, R., & Hays, T. N. (2008). In-depth interviewing: Principles, techniques, analysis. Pearson Education Australia.

Semester: II
Core Course

7. Course Code & Title: MPC 52 02 & Health Economics and Finance
Credits: 3

Course objectives:

1. To provide students with a basic understanding of Health economics and Health Care financing.
2. Enable students understand health care markets, and demand and supply of medical care within them.
3. To orient students to various health financing mechanisms and enable them appreciate the characteristics of each of them.
4. To sensitize students on health insurance and its role in influencing the demand and access to health care.
5. To enable students', identify the role of various stakeholders (Governments, Patients, Providers and Private Players) in impacting the supply and demand of health care.

Course outcomes: On successful completion of this course, students will be able to

1. Understand health care markets and health care financing systems.
2. Understand health insurance and its role in universal health coverage.
3. Develop competence to conduct economic evaluation of health interventions.

This is an employment focussed skill development course. On successful completion of the course, the students shall be able to manifest skills in Assessing the demand for health care, conduct economic evaluation of health interventions and understand functioning of health insurance and health care financing mechanisms.

Teaching Methods: This course will be delivered using a variety of teaching methods which include (but not limited to) classroom lectures, online classes, webinar's, assignments, field work and group work.

Units and Topics	Teaching Methods								Mandatory Readings
Unit I: Introduction to health economics									
	L	FW	FV	CS	GW	SS	SP	P	

1.1 Introduction	X								Santerre, R. E., & Neun, S. P. (2012). Health economics: Theory, insights, and industry studies. Cengage Learning.
1.1 Common terminologies used in health economics	X					X			
1.2 Demand, Supply and Market Equilibrium	X					X			
1.3 Utility and demand	X					X			
1.4 Health as an economic good	X					X			
Unit-II: Demand for health									
2.1 Demand for health capital-Grossman's model	X					X			Grossman, M. (2000). The human capital model. In Handbook of health economics (Vol. 1, pp. 347-408). Elsevier. Available at http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.455.9173&rep=rep1&type=pdf Santerre, R. E., & Neun, S. P. (2012). Health economics: Theory, insights, and industry studies. Cengage Learning. Cuyler, A., & Newhouse, J. 2000. Handbook of health economics.
2.3 Demand for medical care	X					X			
2.3 Utility maximization and demand for medical care.	X					X			
2.4 Economic and non-economic determinants of demand for medical care.	X					X			Santerre, R. E., & Neun, S. P. (2012). Health economics: Theory, insights, and industry studies. Cengage Learning.
2.5 Demand for medical care in the context of health insurance	X					X			Besley, T. (1989). The demand for health care and health insurance. Oxford Review of Economic Policy, 5(1), 21-33.
Unit III: Health care markets									
3.1 Structure, conduct and performance paradigm	X				X	X			Santerre, R. E., & Neun, S. P. (2012). Health economics: Theory, insights, and industry studies. Cengage Learning.
3.2 Market power and market types	X					X			
3.3 Market competition	X					X			

3.4 Medical care production & costs in Health care markets	**X**					**X**			
Unit-IV: Health Insurance									
4.1 The anatomy of health insurance	**X**								Cutler, D. M., & Zeckhauser, R. J. (2000). The anatomy of health insurance. In Handbook of health economics (Vol. 1, pp. 563-643). Elsevier.
4.2 Types of health insurance	**X**					**X**			
4.3 Theory of demand for health insurance	**X**					**X**			Nyman, J. A. (2008). Health insurance theory: the case of the missing welfare gain. The European Journal of Health Economics, 9(4), 369-380. Nyman, J. A. (2004). Is 'moral hazard inefficient? The policy implications of a new theory. *Health Affairs*, *23*(5)
4.4 Private health insurance industry	**X**					**X**			Robinson, J. C. (2006). The commercial health insurance industry in an era of eroding employer coverage. Health Affairs, 25(6), 1475-1486.
4.5 Provider Insurer Relationships TPAs and HMOs.	**X**								
4.6 National Health Protection Scheme (Ayushman Bharat)	**X**					**X**			Lahariya, C. (2018). 'Ayushman Bharat' program and Universal Health Coverage in India. Indian Pediatrics, 55(6), 495-506.
4.7 Issues and challenges in insurance	**X**					**X**			
Unit-V: Role of Government in Health care									
5.1 Government interventions in health care	**X**					**X**			Santerre, R. E., & Neun, S. P. (2012). Health economics: Theory, insights, and industry studies. Cengage Learning.
5.2 Government as Health Insurer	**X**				**X**	**X**			
Unit-VI: Economic Evaluation									
6.1 Introduction	**X**								Cuyler, A., & Newhouse, J. 2000. Handbook of health economics.
6.2 Cost-effectiveness analysis	**X**				**X**	**X**			Quade, E. S. (1966). Cost-effectiveness: an introduction and overview. Transportation Journal, 5-13.

6.3 Cost-utility analysis	**X**				**X**	**X**			
6.4 Cost-benefit analysis	**X**				**X**	**X**			Johannesson, M. (1995). The relationship between cost-effectiveness analysis and cost-benefit analysis. Social science & medicine, 41(4), 483-489. Bartlett, E. E. (1995). Cost-benefit analysis of patient education. Patient education and counseling, 26(1-3), 87-91.
Unit-VII: Health care financing									
7.1 Concept and Functions of Health Financing and Universal Health Coverage	**X**					**X**			Evans, D. B., Hsu, J., & Boerma, T. (2013). Universal health coverage and universal access. Available at https://www.scielosp.org/article/bwho/2013.v91n8/546-546A/
7.2 Models of health care financing	**X**					**X**			
7.3 Modes of Health Financing - Tax and revenue - Social security/social insurance - Private/voluntary Insurance - International (donor) Funding - Out of Pocket Expenditure (OOPE)	**X**					**X**			World Health Organization. (2005). *Designing health financing systems to reduce catastrophic health expenditure* (No. WHO/EIP/HSF/PB/05.02). World Health Organization.

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation:
As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks. CA would be conducted through Examinations, Assignments and Presentations.

Additional readings:

1. Kutzin, J. (2001). A descriptive framework for country-level analysis of health care financing arrangements. *Health policy*, *56*(3), 171-204. Available at https://apps.who.int/iris/bitstream/handle/10665/45367/WHF_1994_15%284%29_p323-328.pdf

2. Neumann, P. J. (2004). Using cost-effectiveness analysis to improve health care: opportunities and barriers. Oxford University Press. Available at http://respati.ac.id/Gberita/ebook/D-EBK-000000000000001015-%200-19-517186-1%20-full-text.pdf
3. Glied, S. A. (2008). *Health care financing, efficiency, and equity* (No. w13881). National Bureau of economic research. Available at https://www.nber.org/papers/w13881.pdf

Semester: II
Core Course

8. Course Code & Title: MPC 52 03 & Epidemiology of Communicable & Non-Communicable Diseases
Credits: 4

Course objectives: The objective of this course is to make students understand the major non-communicable diseases, their risk factors, strategies for prevention, risk factor surveillance as per the World Health Organization STEPS protocol, case studies on major interventions to reduce risk factors in India and a few other developing countries and the national program for prevention and control of Cancer, Cardiovascular diseases, Diabetes and Stroke in India.

Course outcomes: On successful completion of this course, students will be able to:

1) Understand the key concepts pertaining to communicable/infectious diseases, their transmission mechanisms, communicable disease surveillance and infectious disease outbreak response systems.
2) Develop conceptual understanding of epidemiology of communicable and non-communicable diseases.
3) Conduct outbreak investigation and suggest infectious disease containment strategies
4) Identify etiology and risk factors and develop strategies to prevent and control communicable and non-communicable diseases.
5) Apply multi-disciplinary methods (such as mathematical modelling, digital health technologies etc.,) in addressing the challenges of communicable and non-communicable diseases.

This is an employment focussed skill development course. On successful completion of the course the students shall develop skills in Non-communicable disease surveillance, out-break investigation of infectious diseases, communicable and non-communicable disease prevention and manifest understanding of vaccine development process.

Teaching methods: This course will be delivered using a variety of methods and modalities such as interactive classroom and online lectures, self-study, case studies, written assignment, class room exercises using computers, quiz, field visit, group work, field survey, class room presentations in groups etc.

Units and Topics	Teaching Methods	Mandatory Readings
Unit-I: Non-Communicable Diseases		

	L	FW	FV	CS	GW	SS	SP	P	
Objectives of the course	X								
Epidemiological Transition	X					X			Omran., A, R. The epidemiologic transition: a theory of the epidemiology of population change. 1971. *Milbank Q*. 2005;83(4):731-757.
NCD Risk factor Surveillance	X					X			Riley, L., Guthold, R., Cowan, M., Savin, S., Bhatti, L., Armstrong, T., & Bonita, R. (2016). The World Health Organization STEP-WISE Approach to Noncommunicable Disease Risk-Factor Surveillance: Methods, Challenges, and Opportunities. *American Journal of Public Health*, *106*(1), 74–78. https://doi.org/10.2105/AJPH.2015.302962
NCD Risk factor Surveillance STEP 1	X					X		X	Sarma, P. S., Sadanandan, R., & Thulaseedharan , J. V. et al (2019). Prevalence of Risk Factors of Non-Communicable Diseases in Kerala, India: Results of a Cross-Sectional Study. *BMJ Open*, *9*(11), e027880. https://doi.org/10.1136/bmjopen-2018-027880
NCD Risk factor Surveillance STEP 2 and 3	X					X		X	
Risk factor Modification	X					X			Puska, P., Laatikainen, T., Korpelainen, V., & Vartiainen, E. (2016). Contribution of the North Karelia Project to International Work in CVD and NCD Prevention and Health Promotion. *Global Heart*, *11*(2), 243–246. https://doi.org/10.1016/j.gheart.2016.04.009
Strategies of Prevention.	X					X			Rose, G. (2001). Sick Individuals and sick populations. *International Journal of Epidemiology*, *30*(3), 427–432. https://doi.org/10.1093/ije/30.3.427
Risk factors of NCDs: Tobacco, overall	X					X			WHO Tobacco: fact sheet. Geneva: World Health Organization, 2018. https://www.who.int/en/news-room/fact-sheets/detail/tobacco
Risk factors of NCDs: Tobacco, FCTC	X					X			Mohan, S., Mini, G. K., & Thankappan, K. R. (2013). High Knowledge of Framework Convention on Tobacco Control Provisions Among Local Government Representatives Does Not Translate into Effective Implementation: Findings from Kerala, India. *Public Health*, *127*(2), 178. https://doi.org/10.1016/j.puhe.2012.11.018
Risk factors of NCDs: Physical inactivity & Public Health	X					X			Mathews, E., Pratt, M., Jissa, V. T., & Thankappan, K. R. (2015). Self-reported Physical Activity and Its Correlates Among Adult Women in the

									Expanded Part of Thiruvananthapuram City, India. *Indian Journal of Public Health*, *59*(2), 136–140. https://doi.org/10.4103/0019-557X.157535
Risk factors of NCDs: Physical inactivity, methodology for measurements	**X**					**X**			Mathews, E., Salvo, D., Sarma, P., Thankappan, K., & Pratt, M. (2016). Adapting and Validating the Global Physical Activity Questionnaire (GPAQ) for Trivandrum, India, 2013. *Preventing Chronic Diseases*, *13*, E53. https://doi.org/10.5888/pcd13.150528.
Risk factors of NCDs: Unhealthy Diet	**X**					**X**			GBD 2017 Diet Collaborators. (2019). Health Effects of Dietary Risks in 195 Countries, 1990-2017: A Systematic Analysis for the Global Burden of Disease Study 2017. *Lancet*, *393*(10184), 1958. https://doi.org/10.1016/S0140-6736(19)30041-8
Risk Factors of NCDs: Alcohol use	**X**					**X**			GBD 2016 Alcohol Collaborators. (2018). Alcohol Use and Burden for 195 Countries and Territories, 1990-2016: A Systematic Analysis for the Global Burden of Disease Study 2016. *Lancet*, *392*(10152), 1015. https://doi.org/10.1016/S0140-6736(18)31310-2
Case studies on interventions for NCD risk reduction 1. Quit Tobacco International	**X**					**X**			Yamini , T. R., Nichter, M., Nichter, M. et al. (2015). Developing a Fully Integrated Tobacco Curriculum in Medical Colleges in India. *BMC Medical Education*, *15*, 15. https://doi.org/10.1186/s12909-015-0369-3.
Case Study 2. Dietary intervention	**X**					**X**			Daivadanam, M., Wahlstrom, R., Ravindran , T. K. S., Sarma, P. S., Sivasankaran, S., & Thankappan, K. R. (2018). Changing Household Dietary Behaviours Through Community-Based Networks: A Pragmatic Cluster Randomized Controlled Trial in Rural Kerala, India. *PloS One*, *13*(8), e0201877. https://doi.org/10.1371/journal.pone.0201877
Case Study 3. Kerala Diabetes Prevention Program	**X**					**X**			Thankappan, K. R., Sathish, T., & Tapp, R. J. (2018). A Peer-Support Lifestyle Intervention for Preventing Type 2 Diabetes in India: A Cluster-Randomized Controlled Trial of the Kerala Diabetes Prevention Program. *PLOS Medicine*, *15*(6), e1002575. https://doi.org/10.1371/journal.pmed.1002575
Case study 4. Community Interventions for Health	**X**					**X**			Dyson, P. A., Anthony, D., Fenton, B. et al. (2015). Successful Up-Scaled Population Interventions to Reduce Risk Factors for Non-Communicable Disease in Adults: Results From the International Community Interventions for Health (CIH) Project in China, India and Mexico . *PloS One* , *10*(4), e0120941. https://doi.org/10.1371/journal.pone.0120941

National program for the prevention and control of Cancer, cardiovascular diseases, diabetes and stroke	**X**				**X**	**X**	**X**		Krishnan, A., Gupta, V., Ritvik, Nongkynrih, B., & Thakur, J. S. (2011). How to Effectively Monitor and Evaluate NCD Programmes in India . *Indian Journal of Community Medicine* , *36*, S57-62.
Unit-II: Communicable Diseases									
2.1. Introduction to Infectious Disease Epidemiology (IDE) - Principles of IDE - Key Terminologies used in IDE - Burden of Infectious Diseases - Transmission of infectious diseases - Classification of infectious diseases - Notifiable diseases	**X**			**X**	**X**		**X**	**X**	Nelson, K. E., & Williams, C. M. (Eds.). (2014). Infectious disease epidemiology: theory and practice. Jones & Bartlett Publishers. Stein, R. A. (2011). Super-spreaders in infectious diseases. *International Journal of Infectious Diseases*, *15*(8), e510-e513.Available at https://www.sciencedirect.com/science/article/pii/S1201971211000245
2.2. Prevention and management of Infectious diseases - Immunity (Active immunity, passive immunity, heard immunity) - Vaccine development and deployment (phases of vaccine development, vaccine efficacy and effectiveness, vaccination strategies, critical vaccination coverage)	**X**				**X**		**X**		Altmann, D. M., Douek, D. C., & Boyton, R. J. (2020). What policy makers need to know about COVID-19 protective immunity. *The Lancet*, *395*(10236), 1527-1529.available at https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30985-5/fulltext Randolph, H. E., & Barreiro, L. B. (2020). Herd Immunity: Understanding COVID-19. *Immunity*, *52*(5), 737-741. Available at https://www.sciencedirect.com/science/article/pii/S1074761320301709 Doherty, M., Buchy, P., Standaert, B., Giaquinto, C., & Prado-Cohrs, D. (2016). Vaccine impact: benefits for human health. *Vaccine*, *34*(52), 6707-6714. Available at https://www.sciencedirect.com/science/article/pii/S0264410X16309434 Anderson, R. M., & May, R. M. (1985). Vaccination and herd immunity to infectious diseases. *Nature*, *318*(6044), 323-329. Available at https://www.nature.com/articles/318323a0.pdf Leroux-Roels, G., Bonanni, P., Tantawichien, T., & Zepp, F. (2011). Vaccine development. *Perspectives in Vaccinology*, *1*(1), 115-150. Available at https://www.researchgate.net/profile/Terapong_Tantawichien/publication/257740127_Vaccine_development/links/00b7d53a6f1e3c5748000000.pdf

2.3. Infectious disease outbreaks - Types of infectious disease outbreak - Outbreak investigation	**X**			**X**		**X**			Arunkumar, G., Chandni, R., Mourya, D. T., Singh, S. K., Sadanandan, R., Sudan, P., & Bhargava, B. (2019). Outbreak investigation of Nipah virus disease in Kerala, India, 2018. *The Journal of infectious diseases*, *219*(12), 1867-1878. Available at https://academic.oup.com/jid/article/219/12/1867/5144922
2.4 Infectious disease surveillance	**X**			**X**			**X**		Thurmond, M. C. (2003). Conceptual foundations for infectious disease surveillance. Journal of veterinary diagnostic investigation, 15(6), 501-514. Hashimoto, S., Murakami, Y., Taniguchi, K., & Nagai, M. (2000). Detection of epidemics in their early stage through infectious disease surveillance. International journal of epidemiology, 29(5), 905-910. Gianicolo, E., Riccetti, N., Blettner, M., & Karch, A. (2020). Epidemiological Measures in the Context of the COVID-19 Pandemic. Deutsches Ärzteblatt International, 117(19), 336. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7207201/
2.5 Mathematical modelling of infectious diseases - Basic reproductive number (R_0) - Types of mathematical models used for modelling infectious diseases - SIR, SEIR and SEIRS models - Dynamics in SIR models (influence of birth, death and migration)	**X**					**X**		**X**	Heffernan, J. M., Smith, R. J., & Wahl, L. M. (2005). Perspectives on the basic reproductive ratio. *Journal of the Royal Society Interface*, *2*(4), 281-293. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1578275/ Shrestha, S., & Lloyd-Smith, J. O. (2010). Introduction to mathematical modeling of infectious diseases. *Modeling Paradigms and Analysis of Disease Transmission Models*, *75*, 1. Available at http://www.academia.edu/download/38600599/Shrestha2010.pdf
2.6 Climate change and social determinants as risk factors for infectious diseases	**X**			**X**		**X**			Patz, J. A., Githeko, A. K., McCarty, J. P., Hussein, S., Confalonieri, U., & De Wet, N. (2003). Climate change and infectious diseases. Climate change and human health: risks and responses, 2, 103-32. Available at http://www.debok.net/pdf/9191819274.pdf Semenza, J. C., Suk, J. E., & Tsolova, S. (2010). Social determinants of infectious diseases: a public health priority. *Eurosurveillance*, *15*(27), 19608.

									Bishwajit, G., Ide, S., & Ghosh, S. (2014). Social determinants of infectious diseases in South Asia. *International scholarly research notices*, *2014*. https://downloads.hindawi.com/archive/2014/135243.pdf
2.7 Emerging and reemerging infectious diseases	**X**			**X**		**X**			Morens, D. M., Folkers, G. K., & Fauci, A. S. (2004). The challenge of emerging and re-emerging infectious diseases. Nature, 430(6996), 242-249. Available at https://www.nature.com/articles/nature02759
2.8 Laws and regulations concerning communicable diseases	**X**			**X**		**X**			Fidler, D. P. (1996). Globalization, international law, and emerging infectious diseases. Emerging infectious diseases, 2(2), 77. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2639823/pdf/8903206.pdf Aginam, O. (2002). International law and communicable diseases. *Bulletin of the World Health Organization*, *80*, 946-951. Available at https://www.scielosp.org/article/bwho/2002.v80n12/946-951/pt/ Bahurupi, Y., Mehta, A., Singh, M., Aggarwal, P., & Kishore, S. (2020). Epidemic diseases act 1897 to public health bill 2017: Addressing the epidemic challenges. *Indian Journal of Public Health*, *64*(6), 253-255. Draft PHPCM of Epidemics, Bio-Terrorism and Disasters Bill (2017). Available from: https://www.prsindia.org/uploads/media/draft/Draft%20PHPCM%20of%20Epidemics,%20Bio-Terrorism%20and%20Disasters%20Bill,%202017.pdf
2.9 Digital health technologies in Infectious disease prevention and control.	**X**			**X**		**X**			Hay, S. I., George, D. B., Moyes, C. L., & Brownstein, J. S. (2013). Big data opportunities for global infectious disease surveillance. PLoS med, 10(4). Robertson, C., Sawford, K., Daniel, S. L., Nelson, T. A., & Stephen, C. (2010). Mobile phone–based infectious disease surveillance system, Sri Lanka. Emerging infectious diseases, 16(10), 1524. Choi, J., Cho, Y., Shim, E., & Woo, H. (2016). Web-based infectious disease surveillance systems and public health perspectives: a systematic review. *BMC public health*, *16*(1), 1238.

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation
As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks.

Additional readings
Nelson, K. E., & Williams, C. M. (Eds.). (2014). Infectious disease epidemiology: theory and practice. Jones & Bartlett Publishers.

Semester: II
Core Course

9. Course Code & Title: MPC 52 04 & Health Technology and Informatics
Credit: 3

Course objective: The objective of this course is to develop basic understanding of health technology and informatics tools among the post-graduate public health students. The course is designed to equip students with the knowledge and application of information, communication and technology (ICT) in the field of public health.

Course outcomes: On completion of this course, students will be able to:
1. Learn the importance of ICT in revolutionizing healthcare delivery, administration, education, and research.
2. Understand the importance of data and information in healthcare decision making process.
3. Evaluate policies pertaining to ICT and its implications on population health
4. Apply tools of health technology in the prevention, promotion, control, treatment and management of diseases in communities.

This is an employment focussed skill development course. On successful completion of the course the students shall be skilled at health information standards, and application of health technologies for prevention and control of diseases.

Teaching methods: The delivery of this course will take place using a variety of methods and modalities. Classroom lectures using power point presentations, demonstration using YouTube videos, self-study, case studies analysis, Group work, seminar presentation, organizational visit to understand a telemedicine centre etc., be utilized to deliver this course.

Units and Topics	Teaching Methods								Mandatory Readings
Unit-I: Overview of Health Technology and Public Health Informatics									
	L	FW	FV	CS	GW	SS	SP	P	
Definitions, scope, importance and limitations of health technology and public health informatics.	X					X			Athavale, A. V., & Zodpey, S. P. (2010). Public health informatics in India: the potential and the

Concept of data, data sources, information, knowledge, insight and decision-making process.	**X**					**X**			challenges. Indian journal of public health, 54(3), 131. Hovenga E, Kidd M, Cesnik B (1996). Health Informatics: An Overview. Churchill Livingstone, Australia. Jamal, A., McKenzie, K., & Clark, M. (2009). The impact of health information technology on the quality of medical and health care: a systematic review. *Health Information Management Journal*, *38*(3), 26-37. Electronic Health Record Standards-2016, Govt. of India. Available at: https://www.nhp.gov.in/ehr_standards_mtl_mtl
Health information standards and types of standards like systems, vocabulary, messaging, and security standards and EHR Standards in India (ISO, DICOM, ICD-11, and SNOMED).	**X**				**X**	**X**			
Interoperability and levels of interoperability (basic, technical and semantic interoperability).	**X**					**X**			Iroju, O., Soriyan, A., Gambo, I., & Olaleke, J. (2013). Interoperability in healthcare: benefits, challenges and resolutions. International Journal of Innovation and Applied Studies, 3(1), 262-270.
Unit-II: Building Blocks of Health Informatics									
Health data security, privacy and confidentiality	**X**					**X**			Barrows Jr, R. C., & Clayton, P. D. (1996). Privacy, confidentiality, and electronic medical records. Journal of the American Medical Informatics Association, 3(2), 139-148.
Health Registry, Types of registries (Hospital and Population based registries) and disease specific registries such as Cancer registry and diabetes registries in India.	**X**					**X**			Cancer Registry in India: Kishore Chaudhry & Usha K. Luthra. Published in MoHFW, website Govt. of India. Behera, P., & Patro, B. K. (2018). Population Based Cancer Registry of India – the Challenges and Opportunities. *Asian Pacific Journal of Cancer Prevention: APJCP*, *19*(10), 2885–2889.

Concept of Knowledge Management (KM), Knowledge management in Public Health, and Role of Health Informatics in KM.	**X**					**X**			Dobbins, M., DeCorby, K., Robeson, P., Husson, H., Tirilis, D., & Greco, L. (2010). A knowledge management tool for public health: health-evidence. BMC public health, 10(1), 1-16.
Unit-III: Tools of Health Technology and Informatics									
EHR and EMR, m-Health and apps, health trackers, wearables and home health devices, Tele-medicine and virtual consultation, Social media and public health, GIS and its role in disease surveillance and other public health interventions.	**X**		**X**		**X**	**X**	**X**		Mishra, S. K., Kapoor, L., & Singh, I. P. (2009). Telemedicine in India: current scenario and the future. Telemedicine and e-Health, 15(6), 568-575. Ganapathy, K., & Ravindra, A. (2009). Telemedicine in India: the Apollo story. Telemedicine and e-Health, 15(6), 576-585. Srivastava, S. K. (2016). Adoption of electronic health records: a roadmap for India. Healthcare informatics research, 22(4), 261-269. Thackeray, R., Neiger, B. L., Smith, A. K., & Van Wagenen, S. B. (2012). Adoption and use of social media among public health departments. *BMC public health*, *12*(1), 1-6. Cromley, E. K., & McLafferty, S. L. (2011). GIS and public health. Guilford Press.
Unit-IV: eHealth Policy, Organizations and Regulations									
Digital India initiative by Govt. of India, National Digital Health Blue-Print, Tele-medicine Guidelines, and Role of National e-Health Authority (NeHA) in India.	**X**			**X**		**X**			*Ranganathan, Sheetal (2020). Towards a Holistic Digital Health Ecosystem in India. Observer Research Foundation.*

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation: As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks.

Additional Readings

1. Singh, A. K., Kohli, M., Trell, E., Kohli, S., & Wigertz, O. (1997). Primary care informatics: Bhorugram, India: revisited. Studies in health technology and informatics, 43, 884-888.
2. Prinja, S., Downey, L. E., Gauba, V. K., & Swaminathan, S. (2018). Health technology assessment for policy making in India: current scenario and way forward.
3. Koo, S. H. (2017). Consumer differences in the United States and India on wearable trackers. Family and Consumer Sciences Research Journal, 46(1), 40-56.
4. Kalpa, S. (2012). Health IT in Indian healthcare system: A new initiative. Research Journal of Recent Sciences, 2277, 2502.
5. Sarbadhikari, S. N. (2018). Will health informatics gain its rightful place for ushering in digital India? Indian Journal of Community Medicine, 43(2), 126.
6. Croner, C. M. (2003). Public health, GIS, and the Internet. Annual Review of Public Health, 24(1), 57-82.
7. Thrall, G. I. (1999). The future of GIS in public health management and practice. Journal of Public Health Management and Practice, 5(4), 82.

Semester-II
Elective Course
3. Course Code & Title: MPC 50 03: Mixed-Methods in Health Sciences
Credit: 3

Course objectives: This course will provide an overview of mixed-methods research mainly in the domain of public health. It will introduce students to the epistemological/philosophical underpinnings of mixed-methods approach, and examine the ways in which quantitative and qualitative research designs interact in the context of addressing a research question.

Course outcomes: On completion of this course, students will be able to
1. Understand the epistemological/philosophical underpinnings of mixed-methods approach.
2. Learn the strengths and weaknesses of using mixed methods in order to address research problems and answers research questions.
3. Develop a research proposal employing mixed-methods approach,
4. Apply mixed-methods approach in conducting a research of public health importance.

This is an employment focussed skill development course. On successful completion of the course the students shall be skilled at designing and conducting mixed methods research, triangulating quantitative and qualitative methods and writing for publications in mixed methods studies.

Teaching methods: This course will have an applied focus and delivered using a variety of methods and modalities. Such as interactive classroom and online lectures, self-study, case studies, written assignment, class room exercises using computers/software, quiz, field visit, group work, field survey, class room presentations in groups etc.

Units and Topics	Teaching Methods								Mandatory Readings
Unit-I: Introduction to mixed-methods research	**L**	**FW**	**FV**	**CS**	**GW**	**SS**	**SP**	**P**	
i. Definition and important features of mixed-methods designs and when to use a mixed them in public health; ii. Advantages and disadvantages of mixed method designs;	**x**				**x**	**x**			Creswell JW, Klassen AC, Plano Clark VL, Smith KC. Best Practices for Mixed Methods Research in the Health Sciences. Office of Behavioral and Social Sciences Research (OBSSR) National Institutes of Health. 2011.

iii. Historical development of mixed method designs; iv. Philosophical underpinnings of mixed method research and pragmatism; v. Steps in designing mixed methods study; vi. Skills needed to conduct mixed methods study.									Creswell JW. A concise introduction to mixed methods research. SAGE publications; 2014 Mar 31. (Chapter-1: Basic Features of Mixed Methods Research) Creswell JW. A concise introduction to mixed methods research. SAGE publications; 2014 Mar 31. (Chapter-2: The Development and Advancement of Mixed Methods).
Unit-II: Mixed-methods Designs	**L**	**FW**	**FV**	**CS**	**GW**	**SS**	**SP**	**P**	
Selecting the appropriate mixed method design in health research; i. Basic design: Convergent parallel designs; explanatory and exploratory sequential designs; and Convergent parallel mixed methods ii. Advanced designs: Embedded mixed method designs; transformative designs; and multi-phase designs.	**X**			**X**		**X**		**X**	Tariq S, Woodman J. Using mixed methods in health research. JRSM short reports. 2013 May 7;4(6):2042533313479197. Creswell JW. A concise introduction to mixed methods research. SAGE publications; 2014 Mar 31. Chapter 5. Basic and Advanced Mixed Methods Designs. Creswell, John W. 2008. Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. Sage Publications, Inc.; 3rd edition. ISBN-10: 1412965578 Creswell JW. A concise introduction to mixed methods research. SAGE publications; 2014 Mar 31. Chapter 5. Basic and Advanced Mixed Methods Designs.

Unit-III: Integrating Quantitative and Qualitative Designs									
i. Sampling and data collection in mixed method research; ii. Strategies of integration in mixed-methods research; iii. Analyzing and interpreting data in mixed method research; iv. Quality in mixed-methods: Reliability and validity in mixed-methods research;	**L** **X**	**FW**	**FV**	**CS** **X**	**GW** **X**	**SS** **X**	**SP**	**P** **X**	Teddlie, Charles, and Fen Yu. "Mixed methods sampling: A typology with examples." Journal of mixed methods research 1.1 (2007): 77-100. Onwuegbuzie JA, Johnson RB. The Validity Issue in Mixed Research. Research in the Schools. Spring 2006;13(1):48-63. Caracelli, V. J., & Greene, J. C. (1993). Data analysis strategies for mixed-method evaluation designs. Educational Evaluation and Policy Analysis, 15(2), 195- 207. Leahey, E. (2007). Convergence and confidentiality? Limits to the implementation of mixed methodology. Social Science Research, 36(1), 149-158.
Unit-III: Writing a mixed-method study for publications	**L**	**FW**	**FV**	**CS**	**GW**	**SS**	**SP**	**P**	
i. Guidelines for writing research reports in mixed method designs in public health. ii. Important consideration of writing a proposal employing mixed-methods design in public health. iii. Important journals in mixed-methods publishing studies of public health importance. iv. Mixed-methods research in scientific papers (Notable papers employing mixed-methods designs in public health)	**X**					**X**			Leech NL, Onwuegbuzie AJ, Combs JP. Writing publishable mixed research articles: Guidelines for emerging scholars in the health sciences and beyond. International Journal of Multiple Research Approaches. 2011 Apr 1;5(1):7-24. Creswell JW, Tashakkori A. Developing publishable mixed methods manuscripts. Park, E., et al. "A qualitative study of lung cancer risk perceptions and smoking beliefs among national lung screening trial participants."

									Brault, M., et al. "Multilevel Perspectives on Female Sterilization in Low-Income Communities in Mumbai, India."

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation

As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks.

Additional Readings

1. Bryman, A. (2016). *Social research methods*. Oxford university press.
2. Teddlie C, Yu F. Mixed Methods Sampling A Typology with Examples. J Mix Method Res. Jan 2007;1(1):77-100. DOI: 10.1177/2345678906292430
3. Moffatt S, White M, Mackintosh J, Howel D. Using quantitative and qualitative data in health services research - what happens when mixed method findings conflict? [ISRCTN61522618]. BMC Health Services Research. Mar 8 2006;6. PMID: 16524479
4. Bazeley P. Editorial: Integrating Data Analyses in Mixed Methods Research Journal of Mixed Methods Research 2009; 3; 203 DOI: 10.1177/1558689809334443.
5. Onwuegbuzie AJ, Collins KM. The Role of Sampling in Mixed Methods-Research. KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie. 2017 Oct 1;69(2):133-56.
6. Newman I, Newman D, Newman C. Writing research articles using mixed methods: Methodological considerations to help you get published. The handbook of scholarly writing and publishing. 2011:191-208.

1.

Semester: II
Elective Course
4. Course Code & Title: MPC-50 04 Medical Anthropology
Credit: 3

Course objectives:
To introduce students to the basic terminology, concepts and theories of Anthropology and their application in Health Sciences.
To enable students to understand the links between culture, human behaviour and health.
To enable students, appreciate the application of Medical Anthropology concepts in the domain of Public Health
To equip students with the essential skill-sets and equip them analyse medical systems from the perspective of Medical Anthropology

Course outcomes: On successful completion of this course, students will be able to

1) Understand the health, disease and health behaviors through cultural and anthropological lens.
2) Develop a basic understanding of key theoretical perspectives in medical anthropology and skill apply them in public health discourse.
3) Know how culture and acculturation influences health and illness behavior of individuals/communities

Teaching methods: This course will be delivered using a variety of teaching methods which include (but not limited to) classroom lectures, online classes, webinar's, assignments, field work and group work.

Unit 1: Introduction to Medical Anthropology									
	L	**FW**	**FV**	**CS**	**GW**	**SS**	**SP**	**P**	**Mandatory Readings**
Anthropology, Culture and Medicine	X								Pool, R., & Geissler, W. (2005). *Medical anthropology*. McGraw-Hill Education (UK).
Illness and Sickness	X			X					
Self, Embodiment and Agency	X								

Social Models of Health and Illness	X								Singer, M., Baer, H., Long, D., & Pavlotski, A. (2019). *Introducing medical anthropology: a discipline in action*. Rowman & Littlefield. Wainwright, D. (Ed.). (2008). *A sociology of health*. Sage
Unit 2: Theoretical Foundations to Medical Anthropology									
Ecological Approach to Medical Anthropology	X								Wellin, Edward. 1977. "Theoretical Orientations in Medical Anthropology: Continuity and Change over the Past Half-Century." In Culture, Disease, and Healing: Studies in Medical Anthropology. David Landy, ed. Pp. 47-58. New York: Macmillan Publishing Company, Inc. Young, Allan. 1982. "Anthropologies of Illness and Sickness." Annual Review of Anthropology 11:257-285. Grønseth, Anne Sigfrid. "Three approaches to the study of health." Available at https://www.fhi.no/globalassets/dokumenterfiler/rapporter/2009-og-eldre/three-approches-to-the-study-of-health-nakmi-skriftserie-2-2009.pdf Amzat, J., & Razum, O. (2014). Functionalist Perspective on Health. In *Medical Sociology in Africa* (pp. 83-106). Springer, Cham. Leatherman, T., & Goodman, A. H. (2011). Critical biocultural approaches in medical anthropology. *A companion to medical anthropology*, 29-48. Damian E M Milton (Undated). Talcott Parsons and the Theory of the Sick Role. Available at https://kar.kent.ac.uk/62743/55/Talcott%20Parsons%20and%20the%20theory%20of%20the%20%27Sick%20Role%27%202004.pdf Benner, Patricia, ed. 1994. Interpretive Phenomenology: Embodiment, Caring, and Ethics in Health and Illness. Sage. Wainwright, D. (Ed.). (2008). *A sociology of health*. Sage.
The Interpretative Medical Anthropology Approach	X								
Functionalist Perspective on Health	X								
The Theory of Sick Role	X								
Health, Gender and Feminism	X								
Unit 3: Health and Human Behaviour									
Risk, Risk factors and Human Behvaiour	X			X					Buckingham, A. (2008). Doing better, feeling scared: health statistics and the culture of fear. *A sociology of health*, 19-37. Burgess, A. (2008). Health scares and risk awareness. *A sociology of health*, 56-76.
Illness Behaviour and Discourse in Health	X								

Interpreting and Explaining sickness	X								Wainwright, D. (Ed.). (2008). *A sociology of health*. Sage. Gabe, J. (1995). Health, medicine and risk: the need for a sociological approach. *Medicine, health and risk: sociological approaches*, 1-17. Lupton, D. (1992). Discourse analysis: A new methodology for understanding the ideologies of health and illness. *Australian journal of public health*, *16*(2), 145-150. Wainwright, D. (2008). Illness behaviour and the discourse of health. *A sociology of health*, 76-96. Weiss, M. G., Ramakrishna, J., & Somma, D. (2006). Health-related stigma: rethinking concepts and interventions. *Psychology, health & medicine*, *11*(3), 277-287. Churcher, S. (2013). Stigma related to HIV and AIDS as a barrier to accessing health care in Thailand: a review of recent literature. *WHO South-East Asia journal of public health*, *2*(1), 12-22. Singer, M. (1994). AIDS and the health crisis of the US urban poor; the perspective of critical medical anthropology. *Social science & medicine*, *39*(7), 931-948. Inhorn, M. C., & Brown, P. J. (1990). The anthropology of infectious disease. *Annual review of Anthropology*, *19*(1), 89-117.
Stigma, Health and Behaviour	X								
Epidemics and Human Behaviour	X			X					
Unit 4: Medical Systems and Anthropology									
Healers and Healing Professions	X								Egnew, T. R. (2005). The meaning of healing: transcending suffering. *The Annals of Family Medicine*, *3*(3), 255-262.
Ethnomedicine	X			X					Singer, M., Baer, H., Long, D., & Pavlotski, A. (2019). *Introducing medical anthropology: a discipline in action*. Rowman & Littlefield.
Medical Pluralism and Medical Syncretism	X								Baer, H. A. (2011). Medical pluralism: an evolving and contested concept in medical anthropology. *A companion to medical anthropology*, 405-423. Egnew, T. R. (2009). Suffering, meaning, and healing: challenges of contemporary medicine. *The Annals of Family Medicine*, *7*(2), 170-175.

									Pool, R., & Geissler, W. (2005). *Medical anthropology*. McGraw-Hill Education (UK).
Social Medicine and Social Immunity	X								Pool, R., & Geissler, W. (2005). *Medical anthropology*. McGraw-Hill Education (UK).
Health interventions as a field of social practice	X								
Medical technologies and human interactions	X								Escobar, A. (1995). Anthropology and the future: new technologies and the reinvention of culture. *Futures*, *27*(4), 409-421. Jackson, M. (2002). Familiar and foreign bodies: a phenomenological exploration of the human-technology interface. *Journal of the Royal Anthropological Institute*, *8*(2), 333-346.
Medicalization of Life	X								Illich, I. (1975). The medicalization of life. *Journal of medical ethics*, *1*(2), 73-77. Available at https://jme.bmj.com/content/medethics/1/2/73.full.pdf
Unit 5: Anthropology for Public Health									
Medical Anthropology and Public Policy	X			X					Eisenberg, M. (2011). Medical anthropology and public policy. *A companion to medical anthropology*, 93-116. Wedel, J. R., Shore, C., Feldman, G., & Lathrop, S. (2005). Toward an anthropology of public policy. *The ANNALS of the American Academy of Political and Social Science*, *600*(1), 30-51. Trostle, J. A. (2005). *Epidemiology and culture* (Vol. 13). Cambridge University Press. Manderson, L. (1998). Applying medical anthropology in the control of infectious disease. *Tropical Medicine & International Health*, *3*(12), 1020-1027. Zlatanović, L. (2016). Self-efficacy and health behaviour: Some implications for medical anthropology. *Glasnik Antropološkog društva Srbije*, *51*(1-2), 17-25. Stellmach, D., Beshar, I., Bedford, J., Du Cros, P., & Stringer, B. (2018). Anthropology in public health emergencies: what is anthropology good for? *BMJ global health*, *3*(2).
Anthropology and Infectious Diseases	X			X					
Anthropology in understanding health behaviours	X			X					
Anthropology at the end-of-life care	X								

									Barrett, R. (2011). Anthropology at the end of life. *A Companion to Medical Anthropology*, 477-490.

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation:

As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks. The continuous assessment will be conducted using examinations, quiz, assignments and presentation.

Reading materials:

1. Wainwright, D. (Ed.). (2008). *A sociology of health*. Sage.
2. White, K. (2016). *An introduction to the sociology of health and illness*. Sage.
3. Pool, R., & Geissler, W. (2005). *Medical anthropology*. McGraw-Hill Education (UK).
4. Singer, M., Baer, H., Long, D., & Pavlotski, A. (2019). *Introducing medical anthropology: a discipline in action*. Rowman & Littlefield.
5. Singer, M., & Erickson, P. I. (Eds.). (2015). *A companion to medical anthropology*. John Wiley & Sons.

Semester: II
Elective Course
5. Course Code & Title: MPC 50 05 Essentials of Global Health
Credit - 3

Course objectives: The objective of this course is to enable the students to explore the current issues in the global health landscape and the political economy in which the health is delivered and challenged. It provides the students with a grounding on global health system, governance, and diplomacy to address health in the rapidly changing developmental sphere. The course helps to view the major public health issues from a global perspective.

Course outcomes: On completing this course, students will be able to:

1. Understand the elements of global health system with respect to key players, interests and forces
2. Learn global health governance
3. Explain the political economy of global health including global health diplomacy
4. Explore the public health issues – infectious diseases, chronic diseases, nutrition, health system and service delivery and environmental health - from a global perspective.
5. Understand the position of health in conflicts, natural and humanitarian disasters

Teaching methods: This course will be delivered using a variety of methods and modalities such as classroom and online lectures, self-study, seminar presentations, and group work

Units and Topics	Teaching Methods								Mandatory Readings
Unit-I: Introduction to global health									
	L	**FW**	**FV**	**CS**	**GW**	**SS**	**SP**	**P**	
1.1 Evolution of global health – from quarantine to global health 1.2 Health for All to Health in All 1.3 Globalization and Sustainable development Goals	X				X	X			De Cock, K. M., Simone, P. M., Davison, V., & Slutsker, L. (2013). The new global health. *Emerging infectious diseases*, *19*(8), 1192. Koplan, J. P., Bond, T. C., Merson, M. H., Reddy, K. S., Rodriguez, M. H., Sewankambo, N. K., & Wasserheit, J. N. (2009). Towards a common

									definition of global health. *The Lancet*, *373*(9679), 1993-1995.
Unit-II: Global Health System									
2.1 Elements of Global Health System 2.2 Key players of Global Health System: forces and interests 2.3 Vertical and horizontal approaches to global health 2.4 Current and future priorities of Global Health System – Who sets? For whom? 2.5 Public private partnerships at the global spehere	X				X	X			Schäferhoff, M., Hoffman, S. J., Suzuki, E., & Angelides, P. K. (2015). *Rethinking the global health system*. Chatham House for the Royal Institute of International Affairs. Kirwan D. (2009). Global health: current issues, future trends and foreign policy. *Clinical medicine (London, England)*, *9*(3), 247–253. https://doi.org/10.7861/clinmedicine.9-3-247 Ollila, E. (2005). Global health priorities–priorities of the wealthy?. *Globalization and health*, *1*(1), 1-5. Koop, E. C., Pearson, C. E., & Schwarz, R. M. (2002). Critical issues in global health. *The Journal for Healthcare Quality (JHQ)*, *24*(3), 47-51. Glassman, A., & Chalkidou, K. (2012). Priority-setting in health: building institutions for smarter public spending. *Washington, DC: Center for Global Development*. Ruckert, A., & Labonté, R. (2014). Public–private partnerships (PPPs) in global health: the good, the bad and the ugly. *Third World Quarterly*, *35*(9), 1598-1614
Unit-III: Global Health Governance									
3.1 Intersection of political economy and global health 3.2 Positioning health in the Bretton Woods System of global governance 3.3 Global health financing –trends 3.4 Technology and global health	X				X	X			Lisk, F., & Šehović, A. B. (2020). Rethinking Global Health Governance in a Changing World Order for Achieving Sustainable Development: The Role and Potential of the 'Rising Powers'. *Fudan Journal of the Humanities and Social Sciences*, *13*(1), 45-65.

3.5 Health at the local level									Chang, A. Y., Cowling, K., Micah, A. E., Chapin, A., Chen, C. S., Ikilezi, G., ... & Qorbani, M. (2019). Past, present, and future of global health financing: a review of development assistance, government, out-of-pocket, and other private spending on health for 195 countries, 1995–2050. *The Lancet*, *393*(10187), 2233-2260. Chalkidou, K., Li, R., Culyer, A. J., Glassman, A., Hofman, K. J., & Teerawattananon, Y. (2017). Health technology assessment: Global advocacy and local realities: comment on" priority setting for universal health coverage: We need evidence-informed deliberative processes, not just more evidence on cost-effectiveness". *International journal of health policy and management*, *6*(4), 233.
Unit-IV: Global issues and health									
4.1 Infectious diseases 4.2 Chronic diseases 4.3 Poverty, hunger, food security and nutrition 4.4 Water, sanitation and hygiene 4.5 Urbanization 4.6 Climate change and bio-diversity 4.7 Global Health Security: Pandemics, Health in conflict affected regions, Bioterrorism, Natural and manmade disasters 4.8 Inequalities and humanitarianism					X	X	X		De Cock, K. M., Simone, P. M., Davison, V., & Slutsker, L. (2013). The new global health. *Emerging infectious diseases*, *19*(8), 1192. White, P. J., & Brown, P. H. (2010). Plant nutrition for sustainable development and global health. *Annals of botany*, *105*(7), 1073-1080. Quinn, S. C., & Kumar, S. (2014). Health inequalities and infectious disease epidemics: a challenge for global health security. *Biosecurity and bioterrorism: biodefense strategy, practice, and science*, *12*(5), 263-273. Strong, K., Mathers, C., Epping-Jordan, J., & Beaglehole, R. (2006). Preventing chronic disease: a priority for global health. *International Journal of Epidemiology*, *35*(2), 492-494.

									Ney, S. (2012). Making sense of the global health crisis: policy narratives, conflict, and global health governance. *Journal of health politics, policy and law*, *37*(2), 253-295. Michaud, J., Moss, K., Licina, D., Waldman, R., Kamradt-Scott, A., Bartee, M., ... & Lillywhite, L. (2019). Militaries and global health: peace, conflict, and disaster response. *The Lancet*, *393*(10168), 276-286. Singh, S., Orbinski, J. J., & Mills, E. J. (2007). Conflict and health: a paradigm shift in global health and human rights. Ruger, J. P. (2006). Ethics and governance of global health inequalities. *Journal of Epidemiology & Community Health*, *60*(11), 998-1002. Quinn, S. C., & Kumar, S. (2014). Health inequalities and infectious disease epidemics: a challenge for global health security. *Biosecurity and bioterrorism: biodefense strategy, practice, and science*, *12*(5), 263-273. Rushton, S. (2011). Global health security: security for whom? Security from what?. *Political Studies*, *59*(4), 779-796. Heymann, D. L., Chen, L., Takemi, K., Fidler, D. P., Tappero, J. W., Thomas, M. J., ... & Rannan-Eliya, R. P. (2015). Global health security: the wider lessons from the west African Ebola virus disease epidemic. *The Lancet*, *385*(9980), 1884-1901.
UNIT-V Global Health Diplomacy	X				X	X			

a. Diplomacy – concept and definition b. Diplomacy during global health crises									Chattu, V. K., & Chami, G. (2020). Global Health Diplomacy Amid the COVID-19 Pandemic: A Strategic Opportunity for Improving Health, Peace, and Well-Being in the CARICOM Region—A Systematic Review. Social Sciences, 9(5), 88. Brown, T. M., & Ladwig, S. (2020). COVID-19, China, the World Health Organization, and the limits of international health diplomacy.

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation

As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks.

Additional Readings

1. Braithwaite, J., Mannion, R., Matsuyama, Y., Shekelle, P. G., Whittaker, S., Al-Adawi, S., ... & Hughes, C. F. (2018). The future of health systems to 2030: a roadmap for global progress and sustainability. *International Journal for Quality in Health Care*, *30*(10), 823-831.
2. Piot, P. (2008). *Nutrition and health in developing countries*. Springer Science & Business Media.
3. Ruger, J. P., & Kim, H. J. (2006). Global health inequalities: an international comparison. *Journal of epidemiology & community health*, *60*(11), 928-936.
4. Cash-Gibson, L., Rojas-Gualdrón, D. F., Pericàs, J. M., & Benach, J. (2018). Inequalities in global health inequalities research: A 50-year bibliometric analysis (1966-2015). *PLoS One*, *13*(1), e0191901.
5. Kapczynski, A. (2005). Addressing global health inequalities: An open licensing approach for university innovations. *Berkeley Tech. LJ*, *20*, 1031.
6. Hoffman, S. J. (2010). The evolution, etiology and eventualities of the global health security regime. *Health Policy and Planning*, *25*(6), 510-522.
7. Lakoff, A. (2010). Two regimes of global health. *Humanity: An International Journal of Human Rights, Humanitarianism, and Development*, *1*(1), 59-79.
8. Ng, N. Y., & Ruger, J. P. (2011). Global health governance at a crossroads. *Global health governance: the scholarly journal for the new health security paradigm*, *3*(2), 1.

16. Semester - III

SEMESTER -III (17 Credits)			
Sl.	**Course Code**	**Core Course**	**Credit**
10.	MPC 53 01	Law and Ethics in Public Health Practice and Research	3
11.	MPC 53 02	Principles of Health Management & Health Programme Design, Implementation and Evaluation	4
12.	MPC 53 03	Health Promotion Methods and Approaches	3
13	MPC 53 04	Environmental and Occupational Health	4
Sl.		**Elective Course – Minimum 3 Credit**	
6.	MPC 50 06	Data Analytics in Health Sciences (R and NVivo-12)	3

Semester: III
Core Course

10. Course Code & Title: MPC 53 01 & Law and Ethics in Public Health Practice and Research
Credits: 3

Course objectives: This course intends students to appreciate the legal and ethical concerns in public health practice and research. Specifically, it addresses the role of laws in managing health of people and pertinent public health laws in the context of India.

Course outcomes: On completion of this course, students will be able to: -

1. Understand the role of laws in public health and governments in managing health of people
2. Appreciate the human rights in public health and importance of information and privacy
3. Describe public health laws and regulations at the global, national and state levels
4. Understand the public health regulations during emergencies and outbreaks
5. Understand the newer challenges in public health (bio-terrorism, conflicts and emerging infectious diseases) and legal preparedness.
6. Discuss concepts and principles of bioethics: Principles, Informed consent, privacy and confidentiality
7. Critically evaluate ethics of clinical trials and intervention, Conflict of interest and integrity in research
8. Participate in ethical review processes: Ethical review committees-roles and responsibilities, managing conflict of interest in review processes and evaluation of risk and benefit in a research.

Teaching methods: This course will be delivered using a variety of methods and modalities such as classroom and online lectures, self-study, seminars, field visit, and group work.

Units and Topics	Teaching Methods								Mandatory Readings
Unit-I: Introduction to public health laws									
	L	**FW**	**FV**	**CS**	**GW**	**SS**	**SP**	**P**	

1.1 Introduction to law and legal terminology: Law, offense, Act, Ordinance, Bill, Regulation, Rules. 1.2 Human Rights and role of government to affirm the rights of citizens 1.3 Medical laws and public health laws 1.4 The potentials and challenges of laws in improving people's health.	**X**				**X**	**X**			Gostin, L. O. (Ed.). (2010). *Public health law and ethics: a reader* (Vol. 4). Univ of California Press. Taylor, A. L. (2017). Global Health Law: International Law and Public Health Policy. *International Encyclopedia of Public Health*, 268
Unit-II: Public health laws and regulations at the global, national and state levels									
2.1 International health law – legal norms and instruments – e.g. International Health Regulations, Framework Convention on Tobacco Control (FCTC), Trade Related Intellectual Property Rights Agreement 2.2 Indian legislative system and the process of making laws 2.2 Public health in Indian legislative system – Constitution, Union list, state list and concurrent list 2.3 Major public health legislations in India*	**X**	**X**		**X**		**X**			Fidler, D. P. (1999). International law and global public health. *U. Kan. L. Rev.*, *48*, 1. World Health Organization, Regional Office for South-East Asia. International public health hazards: Indian legislative provisions. (NLM classification: W 32 . WHO. International Health Regulations https://www.who.int/health-topics/international-health-regulations#tab=tab_3 Fidler, D. P. (1998). The future of the World Health Organization: what role for international law. *Vand. J. Transnat'l L.*, *31*, 1079. Rao, S. J. (2009). Medical negligence liability under the consumer protection act: A review of judicial perspective. *Indian*

									journal of urology: IJU: journal of the Urological Society of India, *25*(3), 361.
Unit-III: Cross border public health and legal challenges									
3.1 Bio-terrorism, conflicts and emerging infectious diseases. 3.2 Policy and legal response of India to cross border public health challenges	**X**				**X**	**X**			Fidler, D. P. (2003). Public health and national security in the global age: infectious diseases, bioterrorism, and realpolitik. *Geo. Wash. Int'l L. Rev.*, *35*, 787. Hagmann, M. (2001). WHO helps countries prepare for bioterror attacks? *Bulletin of the World Health Organization*, *79*(11), 1089. Leaning, J., & Guha-Sapir, D. (2013). Natural disasters, armed conflict, and public health. *New England journal of medicine*, *369*(19), 1836-1842.
Unit-IV Principles of Bio-ethics									
4.1 Morality, Ethics, Human rights and Law	**X**								Macklin R. Applying the four principles. J Med Ethics 2003; 29:275–280 Gillon R. Ethics needs principles—four can encompass the rest—and respect for autonomy should be "first among equals" .J Med Ethics 2003;29:307–312
4.2 Principles of bioethics	**X**								Beauchamp TL. Methods and Principles in biomedical ethics. J Med Ethics 2003; 29:269–274

4.3 Informed consent	**X**			**X**					Joffe.S, Cook EF, Cleary PD, Clark JW, Weeks JC. Quality of informed consent in cancer clinical trials-a cross sectional survey. Lancet 2001; 358:1772-77 Cassel A, Young J. Why we should not seek individual informed consent for participation in health services research. J Med Ethics 2002; 28:313–317
4.4. Good Clinical Practice	**X**								WHO GCP guidelines
4.5 Research ethics in clinical trials	**X**			**X**					Emmanuel EJ, Wendler D, Grady C. What makes clinical research ethical?.JAMA 2000; 283: 20 Nundy S, Chir M, Gulhati GM. A new Colonialism? -Conducting Clinical Trials in India. NEJM 2005; 352:1633-1635 Steinbrook R. Improving protection for research subjects. N Engl J Med 2001; 346:1425-1429
4.6 Evaluation of risks and benefits	**X**			**X**					
4.7 Ethical Review Committee's roles and responsibilities	**X**								
4.8 Integrity, misconduct, conflict of interest, publication and authorship	**X**			**X**					
4.9 Conflict of interest and IEC review process	**X**								
4.10 Privacy and confidentiality	**X**			**X**					

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation: As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks.

*Clinical Establishment Act, Epidemic Diseases Act, 1897, Pre-natal Diagnostic Techniques (Regulation & Prevention of Misuse) Amendment Act, Medical Council of India Regulations, Contract Labour Regulation and Abolition Act, 1970, Ethics and Patients' Rights: Consumer protection Act, Drugs and Cosmetics (inclusion of Sterile Devices), 2005, Hazardous Wastes (Management and Handling) Rules, 2002, Occupational Health and Accident Prevention: Factories Act 1948 (Amendment), 1987, Mental Health Act, Cigarettes and other Tobacco Products (Prohibition of Sale on Cigarettes and other Tobacco Products Around Educational Institutions) Rules, 2004, Insurance Regulatory and Development Authority Act, 1999, Food Safety and Standards Act, 2006, Infant Milk Substitutes, Feeding Bottles and Infant Foods (Regulation of Production, Supply and Distribution) Amendment Act, 2003, Collection of Statistics Act, 1953, Patents (Amendment) Act, 2005, Protection of Human Rights Act, 1993

Additional readings

1. Mappes TA, DeGrazia D. Biomedical Ethics. 5th Edition. McGraw-Hill, New York2002
2. Hamric AB. Moral distress in every day ethics. *Nursing Outlook.* 2000; 48: 199-201
3. MacPhail S. Recognizing moral distress and moral residue in practice. *Health Ethics Today.* 2003; 13: 5-8. Available at: http://www.ualberta.ca/BIOETHICS/HET/Vol13No2-2003.pdf
4. Hebert PC. Doing Right: A Practical Guide to Ethics for Medical Trainees and Physicians. Oxford University Press, 1996
5. Oken D. What to tell cancer patients: a study of medical attitudes. *JAMA.* 1961; 175: 1120-1128
6. Agapito J, Tyrell Dueck. Ethical implications for radiation therapists. *Canadian Journal of Medical Radiation Technology.* 2000; 31: 45-48

Semester: III
Core Course

11. Course Code & Title: MPC 53 02 & Principles of Health Management & Health Programme Design, Implementation and Evaluation
Credits: 4

Course objective: The objective of this course is to develop competencies and skills perform important management functions (such as planning, organizing, staffing, coordinating, organizing and directing) necessary to run a health organization engaged in public health. Its objective is also to acquire understanding of conceptualizing, designing, implementing, controlling and managing health programmes and projects in a dynamic healthcare ecosystem.

Course outcomes: On completion of this course, students will be able to:

1. Understand the key management concepts, its theories, tools, principles, techniques and functions in context to health care organizations.
2. Demonstrate and practice leadership and managerial skills that will improve efficiencies and effectiveness of health programmes and teams.
3. Design, develop, implement, monitor and evaluate health programmes in the Indian context.
4. Apply the project and programme management tools and techniques in managing health programmes.

Teaching methods: The delivery of this course will take place using a variety of methods and modalities. Classroom lectures using power point presentations, demonstration using YouTube videos, role plays, self-study, case studies analysis, Group work, seminar presentation, etc., be utilized to deliver this course.

Units and Topics	Teaching Methods								Mandatory Readings
Unit-I: Introduction to Management and Management Principles									
- Meaning, theories, definition, levels and importance of management with a special focus on healthcare.	L	FW	FV	CS	GW	SS	SP	P	Bhalwar, R., & Vaidya, R. (Eds.). (2009). *Text book of public health and community medicine*. Department of Community Medicine Armed Forces Medical
	X					X			

- Some key terms used in management (aim, objectives, targets, indicators, mission and vision statements and Management by Objectives.	**X**					**X**			College. (Chapter-3: Health Policy and Healthcare System; Management Process in Healthcare).
- 14-Principles of Management by Henri Fayol and its application to healthcare organizations.	**X**					**X**			
- Role of a health manager and skills set of today's healthcare manage.	**X**					**X**			
Unit-II: Management functions - POSDCORB									
- Planning as a management function and types of planning in general and planning in the healthcare system - The planning process in general and planning in Indian healthcare system. - Planning process in the Indian health sector - Steps in planning a health programmes	**X**				**X**	**X**			Bhalwar, R., & Vaidya, R. (Eds.). (2009). *Text book of public health and community medicine*. Department of Community Medicine Armed Forces Medical College. (Chapter-3: Health Policy and Healthcare System; Management Process in Healthcare). Palmiere, D. (1972). Types of planning in the health care system. *American Journal of Public Health*, *62*(8), 1112-1115.
- Organizing health programmes in India	**X**				**X**	**X**			
- Staffing of human resources for health in India	**X**				**X**	**X**			
- Directing, coordination, reporting and budgeting	**X**				**X**	**X**			
Unit-III: Organizational Behaviour in Healthcare Settings									
Concept of organization, types of organization and organization structure, organization culture and climate.	**X**					**X**			Rovithis, M., Linardakis, M., Rikos, N., Merkouris, A., Patiraki, E., & Philalithis, A. (2016). Organizational culture among nurses working in the public health sector on the island of Crete-Greece. *Health Science Journal*. Warrick, D. D. (1981). Leadership styles and their consequences. Journal of Experiential Learning and Simulation, 3(4), 155-172.
Leadership and leadership styles: Managerial grid model, Production and perish style, Improvised style, Country club style, Team style, and Middle of the road.	**X**			**X**		**X**		**X**	
Motivation and theories of motivation: Maslow's need hierarchy theory, Herzberg's two-factor theory	**X**			**X**	**X**	**X**			

Douglas Mc Gregor's Theory X and Y Team and team dynamics									Warrick, D. D. (1981). Leadership styles and their consequences. Journal of Experiential Learning and Simulation, 3(4), 155-172. Leggat, S. G. (2007). Effective healthcare teams require effective team members: defining teamwork competencies. BMC health services research, 7(1).
Unit-IV: Health Programme and Project Management: Identification, Design, Implementation, Monitoring & Evaluation									
Concept of programme, project, programme life cycle in healthcare settings.	**X**					**X**			Roy, SM (2002). *Project Planning and Management. CHAI Publication, Hyderabad (India)* – (Chapter -6 & 7) Crawford, P., & Bryce, P. (2003). Project monitoring and evaluation: a method for enhancing the efficiency and effectiveness of aid project implementation. *International Journal of project Management*, *21*(5), 363-373. Chang, H. (2015). Evaluation framework for telemedicine using the logical framework approach and a fishbone diagram. Healthcare informatics research, 21(4), 230-238. Reynolds, H. W., & Sutherland, E. G. (2013). A systematic approach to the planning, implementation, monitoring, and evaluation of integrated health services. BMC health services research, 13(1), 168.
Project identification: Concept of project identification, approaches to project identification (top down and bottom-up approaches), and situation analysis for project identification,	**X**					**X**			
Project design: Concept of project design, logical framework, developing project goals and objectives, activity planning, budgeting and project sustainability.	**X**				**X**	**X**			
Project appraisal: Appraisal techniques – Technical, socio-cultural, environmental, management and financial.	**X**					**X**			
Implementation: Activity plan and GANTT chart, advantages and disadvantages of GANTT chart, Network analysis- PERT, CPM techniques.	**X**					**X**			
Monitoring and Evaluation: Concepts of monitoring and evaluation, needs for monitoring and evaluation, steps in monitoring, levels of monitoring –input, process, output and outcome, types of evaluation: concurrent, terminal, longitudinal.	**X**					**X**	**X**		
Unit-V: Management of National Health Programme in India									
• Reproductive, Maternal, Neonatal, Child & Adolescent Health Programme	**X**					**X**			https://www.nhp.gov.in/healthprogramme/national-health-programmes

• National Nutritional Programmes • Communicable diseases related programmes • Non-communicable diseases related programmes • Health system strengthening programmes									Maurya, D., & Ramesh, M. (2019). Program design, implementation and performance: the case of social health insurance in India. Health Economics, Policy and Law, 14(4), 487-508. Thomas, A., Kumar, V., Bhandari, M., Ahuja, R. C., Singh, P., Baqui, A. H., ... & for the Saksham Study Group. (2009). Neonatal health program management in a resource-constrained setting in rural Uttar Pradesh, India. The International journal of health planning and management, 24(2), 173-184. https://www.who.int/management/programme/en/

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical (Role Play)

Evaluation

As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks.

Additional readings

1. Powell-Jackson, T., Purohit, B., Saxena, D., Golechha, M., Fabbri, C., Ganguly, P. S., & Hanson, K. (2018). Measuring management practices in India's district public health bureaucracy. Social Science & Medicine.
2. Galer, J. B., Vriesendorp, S., & Ellis, A. (2005). Managers who lead: A Handbook for Improving Health Services.
3. A paper in open source by Ravi Duggal on Health Planning in India. Can be downloaded from: http://www.cehat.org/cehat/uploads/files/a168.pdf
4. Health Policy and Planning in India by Prof. P.K Shajahan. Can be downloaded from http://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000032SW/P001728/M021621/ET/1501583220modulenumber-1-text.pdf
5. Willis-Shattuck, M., Bidwell, P., Thomas, S., Wyness, L., Blaauw, D., & Ditlopo, P. (2008). Motivation and retention of health workers in developing countries: a systematic review. *BMC health services research*, *8*(1), 247Yphantides, N., Escoboza, S., & Macchione, N. (2015). Leadership in public health: new competencies for the future. *Frontiers in public health*, *3*.

Semester: III
Core Course

12. Course Code & Title: MPC 53 03 & Health Promotion Methods and Approaches
Credits: 3

Course objectives: The objective of this course is to gain an understanding of concepts and theories of health education and promotion, explain human behaviours and how to drive changes at the individual, small group, community and societal levels.

Course outcomes: On successful completion of the course, students will be able to:

1. Develop and implement health interventions for individual and community
2. Develop skills to facilitate inter sectorial coordination and program planning

Teaching methods: This course will be delivered through classroom and online lectures, self-study, case studies, written assignment, quiz, field visit and group work.

Units and Topics	Teaching Methods								Mandatory Readings
Unit-I: Introduction to Health Promotion									
	L	FW	FV	CS	GW	SS	SP	P	
1.1.Health promotion: Definition and aims	X					X			Kumar, S., & Preetha, G. (2012). Health promotion: an effective tool for global health. Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine, 37(1), 5–12. https://doi.org/10.4103/0970-0218.94009
1.2.Approaches of Health Promotion: Medical and Preventive, behavioural, Educational, Empowerment and Social Change	X		X						
1.3.Methods of health promotion:	X					X			
Unit-II: Models of health promotion									
2.1. Tannahill, 2.2. Beattie	X					X			The Rural Health Promotion and Disease Prevention Toolkit supported by the

2.3. Tones - health promotion - Health education healthy public policy, 2.4. Stages of change model 2.5. Health belief 2.6. Social cognitive									Federal Office of Rural Health Policy (FORHP), Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services Department (HHS) under contract #HHSH250201300021I/HHSH25034002T. https://www.ruralhealthinfo.org/toolkits/health-promotion/1/introduction
Unit-III: Health behavior change models and theories									
3.1. Health belief model 3.2. Theory of reasoned action and planned behavior 3.4. Diffusion of innovation theory 3.5. Social Cognitive theory 3.6. Trans theoretical model of behavior change 3.7. Social norms theory 3.8. Socio-ecological model of behavior change	**X**			X		X			Redding, Colleen & Rossi, Joseph & Rossi, S & Susan, Phd & Rossi, R & Velicer, Wayne & James, Phd & Prochaska, O. (2000). Health Behavior Models. Special Issue. 3. 180193.
Unit-IV: Social marketing									
4.1. Definition of marketing, service and social marketing 7P's- Product, price, place, promotion, people, process and physical evidences. 4.2. Steps in social marketing programs 4.3. Strengths, weakness and limitations	**X**					**X**			Rebecca Firestone, Cassandra J Rowe, Shilpa N Modi, Dana Sievers, The effectiveness of social marketing in global health: a systematic review, Health Policy and Planning, Volume 32, Issue 1, February 2017, Pages 110–124, https://doi.org/10.1093/heapol/czw088
Unit-V: Health promotion Interventions									
5.1. Communication activities 5.2. Educational activities 5.3. Behaviour modification activities 5.4. Environmental change activities 5.5. Regulatory activities 5.6. Community advocacy activities 5.7. Organizational culture activities 5.8. Incentives and disincentives 5.9. Health status evaluation activities	X					X			Walker, L. O., Kim, S., Sterling, B. S., & Latimer, L. (2010). Developing health promotion interventions: a Multisource Method applied to weight loss among low-income postpartum women. Public health nursing (Boston, Mass.), 27(2), 188–195. https://doi.org/10.1111/j.1525-1446.2010.00841.x

5.10. Social activities 5.11. Technology-delivered activities									
Unit V1: Evaluation of health promotion programmes									
6.1. Formative evaluation	**X**					**X**			World Health Organization. (1981). Health programme evaluation: guiding principles for its application in the managerial process for national health development. World Health Organization. https://apps.who.int/iris/handle/10665/40674
6.2. Process evaluation									
6.3. Outcome evaluation									
6.4. Impact evaluation									
Unit-VII: Health promotion in decentralised health systems									
7.1.Community engagement- principles and intervention approaches	**X**					**X**			Alan R. Community development in health promotion: empowerment or regulation? Panda, B., & Thakur, H. P. (2016). Decentralization and health system performance - a focused review of dimensions, difficulties, and derivatives in India. *BMC health services research*, *16*(Suppl 6), 561. https://doi.org/10.1186/s12913-016-1784-9 Sarah Atkinson, Amélia Cohn, Maria Elena Ducci, Jasmine Gideon, Implementation of promotion and prevention activities in decentralized health systems: comparative case studies from Chile and Brazil, *Health Promotion International*, Volume 20, Issue 2, June 2005, Pages 167–175.

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation

As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks.

Additional readings

1. Bandura A (1986) Social Foundations of Thought and Action – A Social Cognitive Theory. Prentice-Hall Inc, Englewood Cliffs, NJ
2. Glanz K, Rimer BK, Lewis FM (eds) (2002) Health Behavior and Health Education – Theory, Research, and Practice, 3rd edn. Jossey-Bass Publishers, San Francisco
3. Green LW, Kreuter MW (2004) Health Promotion Planning, 4th edn. Mayfield Publishing, Mountain View, CA
4. Institute of Medicine, Board on Health Promotion and Disease Prevention (2003) The Future of the Public's Health in the 21st Century. The National Academics Press, Washington DC

Semester: III
Core Course

13. Course Code & Title: MPC 53 04 & Environmental and Occupational Health
Credits: 4

Course objectives – The objective of this course is to enable students understand the environmental and occupational factors that affect health and cause illness, and the methods to assess the risk and conduct health and environment impact assessment of policies and programmes to protect health and prevent illness.

Course outcomes: After completing of the course, the students will be able to: -
1. Understand how environment impacts human life and health
2. Classify and describe potential environmental health hazards and their sources
3. Understand environmental degradation, causes and consequences on living species
5. Describe major occupational health hazards
6. Assess environmental and occupational health risks applying techniques of environmental and occupational epidemiology
7. Illustrate the global implications of environmental and occupational health
8. Conduct environmental and health impact assessments of policies and programmes.

Teaching methods: This course will be delivered using a variety of methods and modalities such as classroom and online lectures, self-study, seminars, field visit, and group work.

Units and Topics	Teaching Methods								Mandatory Readings
Unit I – Introduction to environmental and occupational health									
	L	**FW**	**FV**	**CS**	**GW**	**SS**	**SP**	**P**	
1.1 Introduction to environmental and occupational health: definitions, history, importance and scope.	**X**		**X**			**X**	**X**		Levy B, S., Wegman, D, H., Baron, S, L., Sokas, R, K. (2011). Occupational and environmental health: Recognizing and preventing disease and injury. 6th Edition. Oxford University Press.

1.2 Environment and health: air, water, food, sanitation, shelter, work, built environment, neighborhood, recreation									Dade, W, M (2005). Environmental health. Harvard University Press, Cambridge.
Unit-II Environmental health hazards and outcomes									
2.1 Classification of environmental health hazards –Physical, chemical, biological, mechanical and psycho-social	**X**		**X**		**X**	**X**			Levy B, S., Wegman, D, H., Baron, S, L., Sokas, R, K. (2011). Occupational and environmental health: Recognizing and preventing disease and injury. 6th Edition. Oxford University Press. Dade, W, M (2005). Environmental health. Harvard University Press, Cambridge.
Unit –III Environmental degradation									
3.1 Pollution: Air, water, soil 3.2 Food safety 3.3 Waste management 3.4 Climate change and global warming, urbanization, disasters, e-waste	**X**		**X**		**X**		**X**		Levy B, S., Wegman, D, H., Baron, S, L., Sokas, R, K. (2011). Occupational and environmental health: Recognizing and preventing disease and injury. 6th Edition. Oxford University Press. Dade, W, M (2005). Environmental health. Harvard University Press, Cambridge. CPCB. Epidemiological Study on Effect of Air Pollution on Human Health (Adults) in Delhi: Environmental Health Management Series; 2012. Government of India. National Air quality index. Central Pollution Control Board. Government of India. “National Hazardous Waste Management Strategy”.

									Bhutta, M, K, S., Omar, A., and Yang, X. (2011). Electronic waste: a growing concern in today's environment. *Economics Research International*.
Unit-IV: Occupational health									
4.1 Introduction to occupational health: major health hazards at the work place and their outcomes	**X**		**X**		**X**	**X**			Levy B, S., Wegman, D, H., Baron, S, L., Sokas, R, K. (2011). Occupational and environmental health: Recognizing and preventing disease and injury. 6th Edition. Oxford University Press. Dade, W, M (2005). Environmental health. Harvard University Press, Cambridge.
Unit-V Assessment and communication of environmental and occupational health risks									
5.1 Hazard identification and risk assessment 5.2 Introduction to the principles and methods of environmental epidemiology and toxicology- hazard identification, risk assessment, dose-response relationship, source receptor model, risk communication	**X**					**X**			Levy B, S., Wegman, D, H., Baron, S, L., Sokas, R, K. (2011). Occupational and environmental health: Recognizing and preventing disease and injury. 6th Edition. Oxford University Press. Dade, W, M (2005). Environmental health. Harvard University Press, Cambridge.
Unit-VI: Environmental and occupational health in the global arena									
6.1 International conventions and Agreements-Sustainable Development Goals, Stockholm convention, Kyoto Protocol, Global Earth Summit, Paris Agreement, Basel Convention, Bamako	**X**		**X**			**X**	**X**		World Health Organization. (2013). Health and environment: communicating the risks. Geneva.

Convention, Rio declaration, International Standards on Occupational Safety and Health. 6.2 International agencies: International Labor organization, United Nations Environment Programme, 6.3 India's environmental policies and implementing agencies									
Unit-VII: Environmental Management and Promotion of Health									
7.1 Environmental and health impact assessment of development of policies and programmes	**X**	**X**				**X**			Principles of Environmental Impact Assessment: Best practice. International association for impact assessment *In cooperation with* Institute of Environmental Assessment, UK. National Research Council. Improving health in the United States: The role of health impact assessment. The National Academic Press, Washington DC.

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation - As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks.

Additional readings

1. Smith, K. (2013). Environmental hazards: assessing risk and reducing disaster. Routledge.
2. Cutter, S. L. (1996). Vulnerability to environmental hazards. Progress in human geography, 20(4), 529-539.
3. Lemos, M. C., & Agrawal, A. (2006). Environmental governance. Annual review of environment and resources, 31.
4. Team, S., & Reporting, A. (2019). Environmental Policy. Health, 5, 0.

Semester: III
Elective Course

6. Course Code & Title: MPC 50 06 & Data Analytics in Health Sciences
Credit - 3

Course objective: The objective of this course is to enable research students understand the basics of both quantitative and qualitative analytics in health sciences using different techniques and tools of data analyses.

Course outcomes: On completion of this course, students will be able to:

1. Learn the basics of data sciences, big data, predictive analytics and regression.
2. Perform analysis of numerical and textual data using R and Nvivo-12 software respectively.
3. Learn approaches to qualitative data analysis such as framework and thematic analysis, content analysis and socio-linguistic approaches.
4. Perform coding, developing patterns, categories and themes from textual data collected as a result of in-depth interviews, key informants' interviews, or focus group discussion.

Teaching methods: This course will be delivered using a variety of methods and modalities such as classroom and online lectures, self-study, seminar presentations, group work and hands-on training with both R and NVivo software.

Units and Topics	Teaching Methods								Mandatory Readings
Unit-I: Review of basic concepts in Epidemiology and Bio-statistics									
	L	**FW**	**FV**	**CS**	**GW**	**SS**	**SP**	**P**	
1.1 Review of basic concepts in epidemiology and descriptive and inferential statistics					X	X	X		Arag ´on T J. Applied Epidemiology using R. University of California, Berkeley School of Public Health, and the San Francisco Department of Public Health; 2013.
Unit-II: Introduction to R-software and getting data into R Studio									

2.1 Installing R and R Studio 2.2 R console and Command Prompt 2.3 Introduction to Packages in R and installation 2.4 Importing data into R 2.5 Viewing data in R 2.6 Modifying variables in a Data set - Modifying variables in a data set, merging data, sorting data, recoding and renaming of variables	X					X		X	Arag ´on T J. Applied Epidemiology using R. University of California, Berkeley School of Public Health, and the San Francisco Department of Public Health; 2013. Kamath A, Meleth A, Sathiakumar N. R Manual for Health Science Researchers. Manipal University Press; 2012.
Unit-III: Data Analysis using R									
3.1 Univariate analysis: Mean, median, frequency 3.2 Data visualization - histogram, box plot, bar diagram, scatter plot 3.3 Bivariate analysis: t-test, chi-square test, 3.4 Introduction to multivariate analysis using R – ANOVA, linear and logistic regression	X					X		X	Arag ´on T J. Applied Epidemiology using R. University of California, Berkeley School of Public Health, and the San Francisco Department of Public Health; 2013. Kamath A, Meleth A, Sathiakumar N. R Manual for Health Science Researchers. Manipal University Press; 2012.
Unit-IV: Introduction to data science and Big data in health research									
4.1 Definition and scope of data science in health science research 4.2 Introduction to big data and sources of big data in health sciences 4.3 Introduction to algorithms in big data analytics 4.4 Application of predictive and prescriptive analysis in health sector	X					X			Stanton. J (2012). Introduction to Data Science. Syracuse University. Das, S, R., & Das, S. (2016). Data science: theories, models, algorithms, and analytics. *Learning*, *143*, 145.
Unit-V: Understanding textual data and its analyses									

5.1 Concepts and sources of qualitative data in health sciences 5.2 Data formats such as texts, diagram, symbols and artifacts. 5.3 Approaches to qualitative data analyses: Quasi-statistical approach (Content analysis), Thematic and framework approaches, Interpretative approach (interpretative phenomenological analysis and grounded, theory), and Sociolinguistic approaches (discourse analysis and conversation analysis)	**X**					**X**			Lacity, M. C., & Janson, M. A. (1994). Understanding qualitative data: A framework of text analysis methods. *Journal of Management Information Systems*, *11*(2), 137-155. Ulin, P. R., Robinson, E. T., & Tolley, E. E. (2005). Qualitative methods in public health. *Med Sci Sports Exercise*, *37*(7), 1249. Noble, H., & Smith, J. (2014). Qualitative data analysis: a practical example. Evidence-based nursing, 17(1), 2-3. Braun, V., Clarke, V., & Terry, G. (2014). Thematic analysis. Qualitative Res Clinical Health Psychological, 24, 95-114
Unit-VI: Hands-on training with Nvivo-12									
6.1 Understand type(s) of data collected its unit of analysis, coding approach, types of codes, and choice of analytic method. 6.2 Set up an NVivo project and organize textual data. 6.3 Code data manually as well as using Nvivo software. 6.4 Develop patterns, identify relationships across data and generating categories, themes and sub-themes. 6.5 Present findings using graphic displays and visualization methods.	**X**							**X**	Saldaña, J., & Omasta, M. (2016). Qualitative research: Analyzing life. Sage Publications. Bazeley, P., & Jackson, K. (Eds.). (2013). Qualitative data analysis with NVivo. Sage Publications Limited. Wong, L. P. (2008). Data analysis in qualitative research: A brief guide to using NVivo. Malaysian family physician: the official journal of the Academy of Family Physicians of Malaysia, 3(1), 14.

L- Lecture; FW- Field work; FV - Field Visit; CS - Case study; GW- Group work; SS- Self-study; SP- Seminar presentation; P-Practical

Evaluation

As per CBCS guidelines, this course will be evaluated for 100 marks with a Continuous Evaluation (CA) component of 40 marks and End-Semester Evaluation (ESA) component of 60 marks.

Additional readings:

9. Zamawe, F. C. (2015). The implication of using NVivo software in qualitative data analysis: Evidence-based reflections. Malawi Medical Journal, 27(1), 13-15.
10. Welsh, E. (2002). Dealing with data: Using NVivo in the qualitative data analysis process. In Forum qualitative social forum: qualitative social research (Vol. 3, No. 2).
11. Richards, L. (1999). Data alive! The thinking behind NVivo. Qualitative health research, 9(3), 412-428.
12. Richards, L. (1999). Using NVivo in qualitative research. Sage.
13. Ryan, G. W., & Bernard, H. R. (2000). Techniques to identify themes in qualitative data. Handbook of Qualitative Research. 2nd ed. Thousand Oaks, CA: Sage Publications.
14. Bazeley, P. (2009). Analysing qualitative data: More than 'identifying themes'. Malaysian Journal of Qualitative Research, 2(2), 6-22.

17. Semester – IV

SEMESTER – IV (14 Credits)			
Sl.	**Course Code**	**Core Course**	**Credit**
14.	MPC 54 90	Dissertation	8
15.	MPC 54 92	Internship	6

Semester- IV
Core Course

14. Course Title and Code: MPC 54 90 & Dissertation
Credit: 8

About Dissertation

This core course is offered in Semester-IV to MPH students. As part of this course students are required to undertake a research work (using primary data) of public health importance under the supervision of a faculty within the department. The main purpose of this course is to enable the students obtain first-hand experience of conducting a public health research and gain insights into the processes involved, including (but not limited to) research proposal development, seeking necessary approvals (Technical Advisory Committee and Ethics), data collection, data analysis and report writing. The dissertation is expected to provide students with an opportunity to apply and learn the research skills learnt during the course of MPH programme.

Course outcomes

Upon successful completion of the course the students shall be able to

i. Understand the steps involved in the research process.

ii. Design and conduct original research project to answer research question in the disciplines of public health.

iii. Develop research question specific methodology to answer the specific research questions.

iv. Perform analysis of both quantitative and qualitative data using SPSS, R, NVivo

v. Develop scientific writing skills

This is an employment focussed skill development course. On completion of the course the student shall be able to develop skill to design and conduct an original research in disciplines of public health, manifest skills in applying research methodology and using data analysis software such as SPSS, R and NVivo etc., develop scientific writing skills

Evaluation: This course will be evaluated for 100 marks involving both internal and external evaluations. An evaluation of 60 marks will be done by an external examiner, by evaluating the dissertation report and viva voce. The internal evaluation of 40 marks will be done by the respective supervisor/research guide of the individual student.

Process of dissertation: The process of dissertation commences with the identification of research problem, development of research questions and objectives and presentation of research proposal at the departmental level by the students during Semester-III. Once the research questions and objectives are finalized and approved by the faculty council, the students are assigned research supervisor/guide from within the department. Under the supervision of research supervisor, the students are required to develop the research proposal, submit it to the Technical Advisory Committee (TAC) of the department for TAC clearance certificate. After obtaining TAC clearance, the students are required to obtain the ethics approval from the Institutional Human Ethics Committee (IHEC), Central University of Kerala. The student will undertake data collection after seeking the approval of IHEC. The data analysis and report writing will be undertaken by the student under the supervision of the assigned research supervisor. The stages of research proposal development, TAC clearance and IHEC approval will be undertaken in Semester-III. The process of data collection, analysis, report writing and dissertation viva voce will take place during Semester -IV.

Semester- IV
Core Course

15. Course Code & Title: MPC 54 92 & Internship
Credit: 6

About the Internship: This core course is offered in Semester-IV who have successfully completed all the required course work and undertaken a supervised dissertation involving a primary research work. As part of this course, students are required to undergo a minimum of four weeks internship training (either in an online/offline mode considering the COVID-19 pandemic) in a reputed health organization engaged in public health within India. The main purpose of this course is to expose the students with the functioning of a health organization serving public health. During this training the students are expected to acquaint with various departments and functioning of a health organization and involve in projects as well as assignments entrusted by the host organizations. The training is expected to substantiate classroom teaching with practical exposure in reputed health organizations.

Course objectives: The objectives of this course are:

i. To provide students with an overall understanding of a health organization in terms of human resource, planning and implementation of programmes, research projects, linkages and synergies between departments.

ii. To expose the students with the practicalities of understanding and addressing current issues and ground realities in the health sector.

iii. Collaborate and learn through assisting experienced health professionals in a formal organizational setup engaged in public health activities.

iv. Assist the health organization, study and address some identified issues/ problems associated in specific operational areas /programmes.

Course outcomes: On completion of this course students will be able to

1. Understand the functioning of a healthcare organization serving public health.
2. Apply the knowledge gained in classroom-settings into practice.
3. Develop necessary skills technical and soft skills for a full-time employment in a healthcare organization.
4. Apply the important public health concepts, tools and techniques in serving community and population health.

This is an employment focussed skill development course. On successful completion of the course the students shall be able to develop the skills such as interpersonal communication, professional etiquette, soft skills, networking etc., which can contribute to employability.

Evaluation: This course will be evaluated for 100 marks involving both internal and external evaluations. An evaluation of 60 marks will be done at the host organization level by the external supervisor and 40 marks of internal evaluation through a 30 minutes PPT presentation in a class room setting at the Department level in the University. The Department will send (e-mail/post) an evaluation form **(Annexure-I)** to the external supervisor at the host organization which will be completed by the host organization supervisor and returned to the Department in a sealed envelope or e-mail to the HoD-Department of Public Health & Community Medicine, CUK.

Process and duration of the internship: The students are required to identify a host organization and discuss it with the H.O.D. Upon confirmation, a request letter from the H.O.D may be issued to the student for submission to the host organization. On completion of the internship, students are required to meet requirements (if any) recommended by the host organization as well as obtain a compulsory 4-week internship completion certificate from the host organization, addressed to the HOD.

Selection of host organization for internship: The students are required to identify a reputed health organization in India under the auspice of Government (State and Central), Public, Private (for profit), Trust or Not-for profit sectors. These organizations may include: registered research and educational institutions, central, state and district health agencies, international and regional NGOs and funding bodies, UN bodies working

in healthcare, reputed pharmaceutical companies, clinical research organizations, registered aged care homes, foundation of corporate bodies engaged in corporate social responsibility with focus on healthcare, standalone hospitals (not less than 100 beds), aged care homes, medical college and hospitals, health insurance agencies, IT companies working in healthcare domain etc. A tentative list of organizations where internship can be undertaken is given in (**Annexure-II).**

ANNEXURE-I – EVALUATION SHEET

Department of Public Health & Community Medicine
Central University of Kerala
Tejaswini Hills, Post Periye, District Kasaragod- (Kerala)

Assessment form for MPH Interns

To be completed by the Intern Supervisor in the Host Institution
Please do not handover this completed form to the student
E-mail this completed form to the HOD (i/c) : *******@cukerala.ac.in on or before *****

Full name of the student:
Period of Internship: dd/mm/yyyy to dd/mm/yyyy
Mode of Internship: Online/Offline/ Blended (online+Offline)
The purpose of this form is to provide the intern with feedback about the intern's work and professional skills and competencies. **The assessment ratings ranges from 0 to 2 are as follows (circle/tick the appropriate number):**

0 - Unsatisfactory (Does not meet expectations)
1 - Fair (Sometimes meets expectations)
2 - Good (Exceed expectations)
N/A = Not Applicable (Not applicable to this internship experience)

1. Ability to Learn

i. Observes and pays attention to details. 0 1 2 N/A

ii.	Asks pertinent and purposeful questions.	0	1	2	N/A
iii.	Seeks out and utilizes appropriate resources.	0	1	2	N/A
iv.	Accepts responsibility for mistakes and learns from experiences.	0	1	2	N/A
v.	Open to new experiences and takes appropriate risks.	0	1	2	N/A

Comments (if any): ----------

2. Public health and analytical skills

i. Ability to apply basic concepts of public health including bio-statistics, research methodology, epidemiology, health economics, health management, demography, etc. in practice 0 1 2 N/A

ii.	Possesses necessary analytical skills to undertake research of public health importance	0	1	2	N/A
iii.	Ability to use software (like SPSS, R, NVivo and MS-Excel etc.) for data analysis.	0	1	2	N/A
iv.	Ability to provide technical inputs in programs/projects/activities/task entrusted with.	0	1	2	N/A
v.	Demonstrate the ability to critically analyse scientific information/policy document/research paper etc.	0	1	2	N/A

Comments (if any): ----------

3. Creative thinking and problem-solving skills

i.	Seeks to comprehend and understand a “big picture” of an issue.	0	1	2	N/A
ii.	Brainstorms/develops options and ideas.	0	1	2	N/A
iii.	Respects input and ideas from other sources and people.	0	1	2	N/A
iv.	Demonstrates an analytical capacity to perform a task.	0	1	2	N/A
v.	Breaks down complex task/problems into manageable pieces	0	1	2	N/A

Comments (if any): ----------

4. Interpersonal and teamwork skills

i.	Relates to peers’/team members effectively.	0	1	2	N/A
ii.	Manages and resolves conflicts in an effective manner.	0	1	2	N/A
iii.	Supports and contributes to a team atmosphere.	0	1	2	N/A
iv.	Controls emotions in a manner appropriate for work.	0	1	2	N/A

v.	Demonstrates assertive but appropriate behaviour.	0	1	2	N/A

Comments (if any): ----------

5. Basic work-related skills

i.	Reports to work as scheduled and timely.	0	1	2	N/A
ii.	Is prompt in submitting deliverables.	0	1	2	N/A
iii.	Exhibits a positive and constructive attitude.	0	1	2	N/A
iv.	Brings a sense of values and integrity to the work.	0	1	2	N/A
v.	Behaves in an ethical and professional manner.	0	1	2	N/A

Comments (if any): ----------

6. Organizational effectiveness skills

i.	Seeks to understand and support the organization's mission/vision.	0	1	2	N/A
ii.	Fits in with the norms and expectations of the organization.	0	1	2	N/A
iii.	Works within appropriate authority and decision-making channels.	0	1	2	N/A
iv.	Demonstrates a sense of responsibility and confidentiality.	0	1	2	N/A
v.	Interacts effectively and appropriately with supervisor.	0	1	2	N/A

Comments (if any): ----------

Total Marks Obtained (Out of 60) =----------

Intern supervisor Name: ----------

Designation : ----------

Organization name: ----------

Date of Assessment: ----------

Signature of the Intern supervisor: ----------

Please e-mail the completed assessment form to the HOD (I/c): *@cukerala.ac.in on or before *****

Please do not handover this completed form to the student

Thank you for your kind cooperation and support.

ANNEXURE-II (LIST OF ORGANIZATIONS FOR INTERNSHIP OF MPH STUDENTS)

List of Institutions/Organizations/Prospective Employers for MPH Students (Last updated on 12 Dec 2019)					
Sl.no	**Name of the Organization**	**Website**	**Domain**	**Location/Head Office in India**	**State**
1	**Action Aid**	www.actionaidindia.org	NGO International	New Delhi	New Delhi
2	**Aga Khan Foundation**	www.akdn.org/our-agencies/aga-khan-foundation	NGOs and International Funding Agencies		Pan India
3	**Alzheimer's and Related Disorders Society of India**	www.ardsi.org	National level NGO - Health Research	Thrissur	Kerala
4	**Amnesty International**	www.amnesty.org.in	NGOs and International Funding Agencies	New Delhi	New Delhi
5	**Amrita Institute of Medical Sciences**	www.amritahospital.org	Academic, Research and Private Hospital	Kochi	Kerala
6	**Apollo Hospitals Educational and Research Foundations**	www.aherf.org	Academic and Research	Hyderabad	Telangana
7	**Bill & Melinda Gates Foundation**	www.gatesfoundation.org	NGOs and International Funding Agencies	New Delhi	New Delhi
8	**CARE foundation**	www.carefoundation.org.in	Academic and Research	Hyderabad	Telangana
9	**CEHAT**	www.cehat.org	NGO and Research Organization	Mumbai	Maharashtra
10	**Center for Public Policy Research**	www.cppr.in	State level NGO - Health Research	Ernakulam	Kerala
11	**CHAI**	www.chai-india.org	National Level NGO	Secunderabad	Telangana

12	**Child in Need Institute**	www.cini-india.org	National level NGO	Kolkata	West Bengal
13	**Clinton Foundation**	www.clintonfoundation.org	NGOs and International Funding Agencies	New Delhi	New Delhi
14	**District Hospital, Kanhangad**	No website	Government Hospital	Kanhangad	Kerala
15	**District Hospital, Kasaragod**	No website	Government Hospital	Kasaragod	Kerala
16	**General Hospital, Ernakulam**	www.generalhospitalernakulam.com	Academic, Research and Government Hospital	Ernakulam	Kerala
17	**George Institute for Global Health**	www.georgeinstitute.org.in	Academic and Research	New Delhi	Pan India
18	**Government Medical College, Ernakulam**	www.cmccochin.org	Academic, Research and Government Hospital	Ernakulam	Kerala
19	**HCL Foundation**	www.hcl.com/hcl-foundation	Corporate Research Foundation	New Delhi	New Delhi
20	**Help Age India**	www.helpageindia.org	National level NGO	New Delhi	Pan India
21	**IMS Health**	www.imshealth.com	Health care Research and Data Analytics	Gurgaon	Haryana
22	**Infosys Foundation**	www.infosys.com/infosys-foundation	Corporate Research Foundation	Bangaluru	Karnataka
23	**Institute of Health Management Research, Bengaluru**	www.iihmr.org	Academic and Research	Bangaluru	Karnataka
24	**Institute of Public Health**	www.iphindia.org	Academic and Research	Bangaluru	Karnataka
25	**Jhpiego**	www.jhpiego.org	NGO International	New Delhi	New Delhi
26	**Karnataka Health Promotion Trust**	www.khpt.org	NGO and Research Organization	Bangaluru	Karnataka
27	**LEPRA India**	www.leprasociety.org	National level NGO - Health Research	Secunderabad	Telangana
28	**LVPEI**	http://www.lvpei.org	Academic and Research	Hyderabad	Telangana

29	**Medecins sans frontieres**	www.msfindia.in	NGOs and International Funding Agencies	New Delhi	New Delhi
30	**Micro nutrient Initiative**	www.micronutrient.org	NGO International	New Delhi	New Delhi
31	**MOH&FW**	www.mohfw.gov.in	National Health Agency	New Delhi	New Delhi
32	**MSG Consulting Group Pvt. Ltd.**	www.msg-global.com	National level NGO	New Delhi	New Delhi
33	**NACO**	www.naco.gov.in	National Health Agency	New Delhi	New Delhi
34	**Narayan Hrudalaya**	www.narayanahealth.org	Academic and Research	Bangaluru	Pan India
35	**National Health Mission, Kerala**	www.arogyakeralam.gov.in	State Health Agency	Thiruvananthapuram	Kerala
36	**National Health Systems Resource Center**	www.nhsrcindia.org	National Health Agency	New Delhi	New Delhi
37	**Novartis Pharmaceuticals. Pvt. Ltd.**	www.novartis.in	Health care Research and Data Analytics	Hyderabad	Telangana
38	**ORBIS International**	www.orbis.org/country/india	NGO International - Eye Care	Gurgaon	Haryana
39	**Oxfam International**	www.oxfamindia.org	International NGO	New Delhi	Pan India
40	**Pallium India**	www.palliumindia.org	State level NGO - Health Research	Thiruvananthapuram	Kerala
41	**Piramal Swasthya Foundation**	www.piramal.com/our-businesses/piramal-foundation	National level NGO	Mumbai	Maharashtra
42	**Population Service International**	www.psi.org/country/india	NGO International	New Delhi	New Delhi
43	**Public Health Foundation of India**	www.phfi.org	Academic and Research	New Delhi	New Delhi
44	**Public Health Management Institute**	www.phmi.org	State level NGO	Secunderabad	Telangana
45	**Reliance Foundation**	www.reliancefoundation.org	Corporate Research Foundation	Mumbai	Maharashtra
46	**Rotary Foundation**	www.rotaryfoundationindia.org	NGO International	New Delhi	New Delhi

47	**SAATHI**	www.saathii.org	National level NGO - Health Research	Chennai	Tamilnadu
48	**Save the Children**	www.savethechildren.in	International NGO	New Delhi	Pan India
49	**Sight Savers**	www.sightsaversindia.in	NGO International	New Delhi	New Delhi
50	**Smile Foundation**	www.smilefoundationindia.org	National Level NGO	New Delhi	New Delhi
51	**St. John's Research Institute**	https://www.sjri.res.in	Academic and Research	Bangaluru	Karnataka
52	**State Health Systems Resource Centre - Kerala**	www.shsrckerala.org	State Health Agency	Thiruvananthapuram	Kerala
53	**UNAIDS**	www.unaids.org	WHO and United Nations Organizations	New Delhi	New Delhi
54	**UNDP**	www.in.undp.org	WHO and United Nations Organizations	New Delhi	Pan India
55	**UNFPA**	www.india.unfpa.org	WHO and United Nations Organizations	New Delhi	New Delhi
56	**UNICEF**	WWW.unicef.in	International NGO	New Delhi	Pan India
57	**Voluntary Health Association of India**	www.vhai.org	NGO and Research Organization	New Delhi	New Delhi
58	**WHO Regional and Country Office**	www.searo.who.int/india/about/en	WHO and United Nations Organizations	New Delhi	New Delhi
59	**Wipro Foundation**	www.azimpremjifoundation.org	Corporate Research Foundation	Bangaluru	Karnataka
60	**World Vision India**	www.worldvision.in	International NGO	Chennai	Pan India
61	**Sahayog, Uttar Pradesh**		State Level NGO	Lucknow	UP
62	**Indegene**	http://www.indegene.com/	Healthcare Pvt. Sector, Data Analytics, HEOR	Bangaluru	MNC
63	**Truven Health Analytics-IBM Watson**	http://truvenhealth.com/	Healthcare Pvt. Sector, Data Analytics, HEOR	Hyderabad and Chennai	MNC
64	**Quintiles IMS**	https://www.quintilesims.com/	Healthcare Pvt. Sector, Data Analytics, HEOR	Bangaluru	PAN India
65	**National Health Agency**	https://www.pmjay.gov.in/	National Health Agency	New Delhi	New Delhi

END OF THE DOCUMENT

service in a scale of pay is required for counting for promotions to next higher stage.

The Deans' Committee Meeting (18.07.2017) has also expressed their views favoring PDF experience only for Direct Recruitment.

Finally, it was decided to write to UGC for clarification on counting PDF experience equivalent to that of teaching experience with regard to CAS promotions.

The Academic Council members congratulated the IQAC for their commendable work on CAS & Direct Recruitment aspect finalization in tune with the UGC regulations. The AC has approved the formats and all guidelines and recommended for further approval of Executive Council.

The IQAC team requested for an Administrative approval for publishing the CAS & Direct Recruitment formats.

The Vice Chancellor informed that, the administrative approval will be given after obtaining approval from the Executive Council.

3:02:04	***Starting of Open and Distance Learning (ODL) at Central University of Kerala-reg:-***

The Academic Council appreciated the initiative of the University for starting Open Distance Learning Programmes (ODL) at the Central University of Kerala and offered its best wishes to Dr. Mohamedunni Alias Musthafa, the designated Nodal Officer to launch the ODL Programmes.

A crucial decision in launching of ODL may be required with regard to fund position. Even though, ODL Programmes are entitled for loan and grant facility, some amount of initial investment is required from the part of University. The Vice Chancellor requested the co-operation of all faculty in designing Courses in this regard.

It was also decided by the Academic Council to start Diploma and Certificate Courses for the ongoing students to begin with the ODL Programmes. The Proposal to setup ODL will be submitted to Executive Council for approval.

3:02:05	***Approval of BoS Meeting Minutes and Syllabus for the Academic year 2017- 18 - reg:-***

The Academic Council approved the BoS and Minutes concerning of the following Departments:

- *Dept. of Linguistics:* The BoS of the Department met on 13th October 2016 and revised the syllabus of PG programme in Linguistics and Language Technology. This has the effect from June 2017-18 admissions.
- *Dept. of Education* The BoS met on 2nd June 2017and resolved to approve;
  - The Scheme, Regulations and Syllabi for the three year Integrated B.Ed.-M.Ed. and four year Integrated BSc-B.Ed. programmes.
  - To start a Centre for Life Skill Education under the School of Education.
  - Approve the Scheme, Regulations and Syllabi for the Certificate Course in Life Skills and Post Graduate Diploma programme in Life Skill Education.
- Master of Public Health: The first BoS met on 16th and 17th of May 2017 has recommended for some modifications in the eligibility criteria for MPH admissions. A sub-committee for reviewing the added qualifications of Master of Public Health (MPH) has been constituted with Director of Research (DoR) , Dean, School of Medicine and Public Health (SMPH) and the Dean School of Biological Sciences (SBS). Other members will be chosen soon by the Vice Chancellor.
- Dept. of Geology: The first meeting of BoS met on 27th July 2017 has approved and ratified the MSc Geology curriculum prepared by the Consultative committee.
- Hindi and Comparative Literature: The first meeting of BoS met on 8th July 2017 and streamlined syllabus with additional courses. The total credits for successful completion of 4 Semester Course have been modified from 64 to 72 credits as per CBCS regulations.
- *Dept. of Environmental Science:* The BoS which met on 7th July 2017 has approved the modified Syllabus of MSc Environmental Science after a thorough discussions on the contents of the Core and Elective papers.

MPH - BOS - 2

Central University of Kerala
Department of Public Health and Community Medicine

Board of Studies (BoS) - 16/05/2017 & 17/05/2017
Meeting Minutes

The Department of Public Health and Community Medicine, Central University of Kerala conducted the Board of Studies (BoS) meeting on 16th and 17th May 2017. It was the first BoS meeting since the establishment of the department in 2016. The venue was Conference Hall, Central University of Kerala, Main Campus, Periya. The meeting started at 9.45 am and ended at 2.00 pm on both days. The panel members included invited subject experts, Dean, School of Medicine and Public Health, Assistant Registrar (Academic), Central University of Kerala, Head of the Department and other faculty members of the Department of Public Health and Community Medicine. The attendees of the meeting were as follows: -

BoS Attendees:
Invited subject experts

- **Prof. (Dr.) K R Thankappan,** Professor Emeritus, Achutha Menon Centre for Health Science Studies (AMCHSS), Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), Thiruvananthapuram.
- **Prof.(Dr.) Vijayakumar. K,** Consultant, State Health Systems Resource Centre(SHSRC), Thiruvananthapuram.
- **Prof.(Dr.) B. Unnikrishnan,** Associate Dean and Professor, Department of Community Medicine, Kasturba Medical College(KMC), Mangalore.

Representatives from the Central University of Kerala (CUK)

- **Dr. Rajendra Pilankatta,** Dean, School of Medicine and Public Health and Associate Professor, Department of Biochemistry, Central University of Kerala.

HOD In-charge and the Faculty Members

Dr. Madhu Unnikrishnan, Assistant Professor and HOD In-charge

- **Dr. Elezebeth Mathews,** Assistant Professor
- **Dr. Sibasis Hense,** Assistant Professor
- **Ms. Jayalakshmi Rajeev,** Assistant Professor
- **Mr. Prakash Babu Kodali,** Assistant Professor

*Absentees: Prof(Dr.) V. RamanKutty, Shri. Sureshan Kandathil

The first day of BoS meeting (16/05/2017) started with the welcome address by Dr Madhu Unnikrishnan, Head of the Department (i/c). Dr Madhu gave a brief introduction of the Central University of Kerala, the Department of Public Health and Community Medicine as well as the objectives of the BoS. Thereafter, he welcomed all experts and faculty to the meeting, and briefed the agenda for two days of BoS meeting.

The agenda for discussion in the BoS meeting was proposed by the Department with approval from the Dean, School of Medicine and Public Health and Assistant Registrar (Academic), CUK. The main items discussed in the BoS are given below.

1) Discussion on 'Name of the Department, Title of the Programme and Objectives of the MPH Programme.
2) Decision to be taken on the minimum "Eligibility criteria with respect to educational qualifications for MPH admission"
3) Discussion on the "MPH programme structure for all the semesters"
4) Discussion on the "Evaluation pattern for all courses in the MPH programme"
5) Discussion on recruiting an Associate Professor with specialization in Bio-statistics

The MPH programme structure was discussed semester wise. Semesters I and II were discussed on the first day and Semesters III and IV on the second day of the BoS meeting. However, revisit of the first day's discussion was required in some cases.

The details of agenda-wise discussion and the final recommendation by the BoS are given below.

Agenda: 1 Name of the Department, Title of the Programme, Objectives of the Programme:

Dr Madhu Unnikrishnan presented the items before the BoS members.

i. Name of the Department

The first item presented before the BoS was re-naming the department from 'Department of Public Health and Community Medicine' to 'Department of Public Health'. Dr Madhu opened the issue for discussion mentioning the following crucial points: -

a) Currently the department offers only one programme i.e. Master of Public Health (MPH)
b) Community Medicine is a medical speciality which requires Medical Council of India

guidelines to be followed.

c) The CUK follows University Grants Commission and Ministry of Human Resource Development guidelines.

d) There may be a Community Medicine Department upon the University starts a medical college in the future.

Recommendation: All the expert members in the panel agreed to propose the new name for the department i.e. *Department of Public Health.*

ii. Title of the programme

The name of the programme offered by the department is 'Master of Public Health'. Since all members consented with the title, *no change was proposed in the BoS meeting.*

iii. Objectives of the MPH programme

The current MPH programme did not have any specific objective. Therefore, the following objectives were proposed for discussion

- Train young, experienced and cross-cultural graduates across multiple disciplines to undertake challenging responsibilities in the contemporary and dynamic healthcare eco-systems.
- Develop core, desirable and exemplary competencies among the graduates for practice, training and research in public health.
- Build capacities of graduates for leadership and innovative roles in the health and allied sectors.

These three objectives were accepted with consent from all panel members.

Agenda 2: Minimum eligibility criteria for admission into the MPH programme

Mr Prakash Kodali introduced the existing eligibility criteria and the proposed criteria to the BoS members with the rationale and called for a discussion. Two categories of eligibility criteria were proposed (one with all Bachelor's degree in Health Sciences and Masters in Social Sciences discipline being eligible to apply for MPH, and second with all the Bachelors in Health Sciences and all the Bachelors in Social Sciences with 2year experience in the health sector. Of these options, the later was rejected and former was accepted with changes.

Discussion: With regard to second criteria, Dr Thankappan opined that usually students go for masters after a bachelor's degree. Dr Vijayakumar viewed that there should be stringent criteria of selection at the beginning itself in order to improve the standards of the programme and increase the likelihood of employability among the students. Therefore, there are chances that two years of experience after the bachelor's degree might dilute the quality of the MPH programme since it may be difficult to secure exceptional candidates, to which Dr Rajendra Pilankatta agreed.

Dr Madhu inquired (to Dr Rajendra Pilankatta) if it is possible to include interview in the screening procedures for the intake of MPH students. However, Dr Pilankatta said that it may not be possible to conduct interview for one department considering logistic reasons. Dr Thankappan mentioned that Tata Institute of Social Sciences is also admitting students with a bachelor's degree however they have a stringent screening process such as interview in addition to the written examination. He also pointed out that when the eligibility criteria are broad, it will invite more diverse pool of applicants. Dr Unnikrishnan inquired whether the Central Universities have a common curriculum for MPH? Dr Madhu answered him that there is no such common curriculum as of now. After the discussion, it was decided to remove the criteria "bachelor's degree with experience in the health sector". In addition to the educational qualifications proposed by the Department it was also decided that Masters in Life Sciences discipline, Statistics, Allied Health Sciences and bachelor's in professional courses such as Engineering, Law and Agriculture can also be included. The discussion on eligibility criteria extended to the second day to clarify certain doubts raised after the first day of the discussion. A summary of the discussion is given below:

- The first one was with respect to engineering streams. Are all Bachelors in engineering eligible was the question. For this, experts recommended to keep it open for Bachelors in all the streams of engineering to be eligible to apply for MPH admission.
- Dialogue about M.Sc. in Clinical Research being eligible was also brought in to discussion. The panel believed that M.Sc. in Clinical Research could be made eligible.
- However, given that several universities offer the course even in distance means, it was decided that UGC approved programme may be considered eligible.
- **Additionally, it was decided to add the condition, "All courses as approved by UGC" to the title above the list of eligibility criteria for educational qualifications.**

- Disciplines such as Political Science and Geography were added in to the Social Sciences group
- With respect to MBAs, panel members agreed that all MBAs can be considered eligible to apply for MPH.
- Dr.Vijayakumar pointed out that Masters in Humanities disciplines could be included to make the course more inclusive and hence the course "Master's in Philosophy" was also added in to the eligibility criteria.

Recommendation: Following a detailed discussion on the eligibility criteria with respect to minimum educational qualification for MPH admission, BoS members recommended the following categories of educational qualifications: -

- Bachelor's Degree in Health Sciences (MBBS, BDS, AYUSH, Nursing, Veterinary Science)
- Bachelor's Degree in Allied Health Sciences (Optometry, Audiology, Physiotherapy, Pharmacy and Medical Lab Technology).
- Bachelor's Degree in Engineering disciplines, Agriculture and Law.
- Master's degree in Life Science disciplines (Botany, Zoology, Biochemistry, Microbiology, Biotechnology, Nutrition, Anatomy, Clinical Research and Physiology)
- Master's Degree in Social Science disciplines (Economics, Sociology, Social Work, Public Policy, Public Administration, Anthropology, Demography, Psychology, Philosophy, Political Science and Geography)
- Master's Degree in Management - MBA (all specializations), Health Management/ Administration, Hospital Management/Administration.
- Master's Degree in Statistics

Agenda 3: Discussion on MPH Programme Structure for all semesters

There was an elaborate discussion on this item and many times it was required to go 'back and forth' in the whole semester plan to came to consensus.

i. Discussion on MPH Programme Structure for Semester-I and Semester-II

Dr Elezebeth Mathews presented the current and proposed courses for semester I and II of the MPH programme. She also explained the rationale for making the changes in the current syllabus. One of the rationales was to streamline the courses to impart the knowledge in a sequential manner. Additionally, the faculty also wanted to incorporate some new areas of relevance in contemporary public health and equalize the number of credits in each semester to reduce the burden for the students.

Discussion: Dr Vijayakumar and Dr Unnikrishanan expressed that there is an overlap between Epidemiology and Biostatistics when coming to measuring events and it has to be taken into account when teaching these courses. Dr Vijayakumar pointed that these courses should be planned in such a way that the students may not lag behind graduates from other states and also advised to include more field activities while teaching epidemiology. All expert members emphasized on teaching systematic review and meta-analysis since these are used widely. Therefore, it was decided to segregate the Epidemiology course into basics and advanced.

Dr Thankappan viewed that Semester-I had more quantitative courses to which Dr Elezebeth answered that the Qualitative Research Methodology course is also taught in Semester-I. She also added that the students would get a good grasp over research methodology if it is delivered in Semester-I.

Dr Vijayakumar indicated that the course 'Public Health Legislation' may be included as a separate course since it is a weakly addressed, but an important area in public health. It was also discussed that the resources of the Department of Legal Studies, CUK could be utilized to deliver the course. There was also some discussion on emerging courses such as Molecular Epidemiology, Human Resources for Health and it was agreed to include them as electives.

Dr Vijayakumar expressed his view that social causes of illness like poverty etc. may be captured along with the marginalized sections of the society. In the discussion, it was decided to include a new course 'Health Inequities' as suggested by Dr. Elezebeth Mathews and later agreed by the BoS members since it is an important and contemporary to the discipline of public health.

ii. Discussion on MPH Programme Structure for Semester-I and Semester-II

Dr.Sibasis presented the current course structure of Semesters III and IV, and the proposed changes in it with the rationales.

Discussion: In the current course structure, all the electives are offered in Semester-I along with two core courses. However, the experts suggested that the electives may be spread across Semesters I, II and III. In addition, BoS members consensually proposed following changes also to the complete course structure.

- The course 'Public Health Legislations' was added to core courses in Semester-III (As per Day 1 Discussion).
- The courses 'Health Technology and Informatics', 'Advanced Biostatistics' and 'Health Inequities' will be transferred from Semester II to Semester III.

- With respect to Semester IV, all experts agreed to the proposal of adding 'Internship' in place of 'Integration and Wrapping up' in the present curriculum along with Dissertation.
- With respect to credits distribution, given that Semester IV is for 6 months; and a duration of 4 and 2 months are exclusively devoted for Dissertation and Internship respectively, experts suggested to allocate 12 credits to dissertation and 6 credits to internship, which was agreed upon by all the members of BoS.
- In addition, it was also decided to develop 'evaluation guidelines' for internship in order to ensure more objectivity for giving credits.
- The experts insisted to have the relevant tie-ups and MOU's with institutions for the students to secure internship at various health organizations.
- It was agreed upon that there should be an empaneled list of organizations where the students could go for internships.
- Since it has been decided to add 'Advanced Epidemiology' as an elective; the experts proposed to change the name of the course "Epidemiology" in Semester I to "Basic Epidemiology". All the members of BoS consented to this suggestion.
- The suggested changes were done by the faculty members during the break and were presented to experts which were agreed upon.

The other conclusive points in the discussion were as follows: -

- All members agreed to the equal distribution of credits across semesters and all the courses were rearranged so that each semester constitutes a total of 18 credits.
- The new relevant areas identified during the discussion were incorporated into the syllabus appropriately.

The final course distribution in each semester is shown below: -

Semester- I			
	Course Title	**Credit**	**Total**
Core Courses	Introduction to Public Health Practice, Training and Research	3	**15**
	Basic Epidemiology	4	
	Basic Biostatistics	4	
	Research Methodology (Quantitative, Qualitative and Research Ethics)	4	

Elective Courses (Any 1 out of 3)	Pedagogy	3	3
	Disaster Management in Public Health	3	
	Demography	3	
		Total	18

Semester- II			
	Course Title	Credit	Total
Core Courses	Health Management	2	12
	Environment and Occupational Health	3	
	Infectious Disease Epidemiology	2	
	Chronic Disease Epidemiology	2	
	Health Policy and Systems Research (HPSR)	3	
Electives Courses (Any 2 out of 5)	Minor Research Project	3	6
	Project Management	3	
	Human Resources for Health	3	
	Sexual and Reproductive Health	3	
	Geriatric Health	3	
		Total	18

Semester- III			
	Course Title	Credit	Total
Core Courses	Data ~~Analysis~~ Analytics in Health Sciences	3	15
	Advanced Biostatistics	2	
	Health Economics	3	
	Health Technology and Informatics	2	
	Health Inequities	3	
	Public Health Legislations	2	

Elective Courses (Any 1 out of 3)	Advanced Epidemiology	3	3
	Molecular Epidemiology	3	
	Nutritional Epidemiology	3	
		Total	18

Semester- IV			
	Course Title	Credit	Total
Core Courses	Dissertation	12	18
	Internship	6	
	Total		18

Agenda 4. Evaluation of MPH Programme

Ms. Jayalakshmi presented the evaluation method (Choice Based Credit System- CBCS) followed in the university. No change was proposed by the faculty members, and it was made open for the discussion.

Discussion: The experts felt that since the CBCS guidelines constitute the UGC norm, no change could be advocated to it. However, discussion happened about the external examiners for question papers setting and evaluation.

- Dr.Unnikrishnan voiced that in order to ensure the standards of the University, it is better to go with external examiners. Supporting the same, the Dean clarified on the Vice Chancellor's standpoint of having external examiners for the initial few years.
  - Even the Head of the Department (Dr Madhu) opined that since the university follows the method involving external examiners, it is better to go with the existing approach.
  - However, there was a discussion about the question paper setting. ***It was decided that the question paper setting could be done at internal level and the evaluation should be done by the external. This was decided owing to the previous experiences where the questions which were given in an externally set question paper being different or totally out of syllabus from what was taught.***
  - Additionally, it was decided that answer key should be developed for transparent external evaluation.

Agenda 5. Need for a Biostatistician

The need for an additional faculty with the specialization in Biostatistics was presented by Dr Madhu to the members of BoS. It was informed that since the department has at least 2 batches of MPH students at any given point of time, and with the prospect of having PhD scholars and Public Health Projects in future, it was deemed important that the department needs a dedicated biostatistician.

- The experts said that it is difficult to run a public health department without a biostatistician and said that the recruitment should focus on recruiting a bio-statistician.
- The same was voiced by all the members of the BoS. Overall, ***the BoS strongly recommended the recruitment of an Associate Professor with specialization in Biostatistics as soon as possible.***
- *However, given that recruitment takes time and taking into consideration of the current need,* ***the experts insisted to recruit faculty on adhoc basis as immediate measure. This was agreed by all the members of BoS.***

Post BoS:

After the discussion on the need for an Associate Professor in Biostatistics, the overall agenda discussed in the BoS were summarized. Thereafter, Dr Sibasis offered the vote of thanks, which concluded the BoS meeting.

Post BoS, the members of the BoS met the Vice Chancellor, CUK when ***Dr. Vijayakumar stressed on placing the MPH students in National Health Programmes (during field placements) so as to get a handson experience on National Health Programme functioning***. It was also decided to appoint a Community Medicine Expert(MD,Community Medicine) at the position of Associate Professor to strengthen the human resource of the Department and also to strengthen the primary and secondary prevention activities to the public.

5/6/2017

Dr.Madhu Unnikrishnan

Semester wise Courses and Credits					
	Core Courses	**Course Code (OLD)**	**Course Code (NEW)**	Credits	Remarks
SEMESTER I					
Core Courses (15 Credits)					
1	Introduction to Public Health Practice, Training and Research	MPC-51 1	MPC- 51 01	3	
2	Basic Epidemiology	MPC-51 2	MPC- 51 02	4	
3	Basic Biostatistics	MPC-51 3	MPC- 51 03	4	
4	Research Methodology (Quantitative, Qualitative and Research Ethics)	MPC-51 4	MPC- 51 04	4	
Electives (1 to be chosen) 3 Credits					
1	Pedagogy	MPC-50 1	MPC-50 01	3	
2	Demography	MPC-50 2	MPC-50 02	3	
3	Disaster Management in Public Health	MPC-50 3	MPC-50 03	3	
	Total			18	
SEMESTER II					
	Core Courses (12 credits)				
1	Health Management	MPC-52 1	MPC-52 05	2	
2	Environment and Occupational Health	MPC-52 2	MPC-52 06	3	
3	Infectious Disease Epidemiology	MPC-52 3	MPC-52 07	2	

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4	Chronic Disease Epidemiology	MPC-52 4	MPC-52 08	2	
5	Health Policy and Systems Research (HPSR)	MPC-52 5	MPC-52 09	3	
Electives (2 to be chosen from 5) 6 credits					
1	Minor Research Project	MPC-50 4	MPC-50 91	3	Practical course
2	Project Management	MPC-50 5	MPC-50 04	3	
3	Human Resources for Health	MPC-50 6	MPC-50 05	3	
4	Sexual and Reproductive Health	MPC-50 7	MPC-50 06	3	
5	Geriatric Health	MPC-50 8	MPC-50 07	3	
	Total			18	
SEMESTER III					
Core Courses (15 credits)					
1	Data Analytics in Health Sciences	MPC-53 1	MPC-53 10	3	
2	Health Economics	MPC-53 2	MPC-53 11	3	
3	Advanced Biostatistics	MPC-53 3	MPC-53 12	2	
4	Health Technology and Informatics	MPC-53 4	MPC-53 13	2	
5	Health Inequities	MPC-53 5	MPC-53 14	3	
6	Public Health Legislations	MPC-53 6	MPC-53 15	2	
Electives (1 to be chosen) 3 Credits					
1	Advanced Epidemiology	MPC-50 9	MPC-50 08	3	
2	Molecular Epidemiology	MPC-50 10	MPC-50 09	3	
3	Nutritional Epidemiology	MPC-50 11	MPC-50 10	3	
	Total			18	

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Medicine

	Semester IV				
	Core Courses (18 credits)				
1	Dissertation	MPC-54 1	MPC 54 90	12	Dissertation
2	Internship	MPC-54 2	MPC 54 92	6	Practical
	Total			18	

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Semester wise Courses and Credits — Batch 2016-2017

No	Core Courses	Course Code	Credits (1/1hr lecture/week+1/4 practical hrs/ self study/supervised group work/week)					
	Topics	MPC-51	Theory Hrs / week	Practical Hours / week	Total Hrs / week	Total Course duration (days)	Total classroom Hours	Credits
	Semester I March 7th-September 6th							
1	Introduction to Public Health	MPC-51-1	2	4–8	8		60	4
2	Introduction to Epidemiology & Biostatistics	MPC-51-2	2	4–8	8		64	4
3	Demography	MPC-51-3	2	4–8	8		64	4
4	Medical Anthropology	MPC-51-4	1	4–6	7		30	2
5	Infectious & Chronic Disease Epidemiology	MPC-51-5	1	4–8	10		64	4
6	Environmental Health	MPC-51-6	1	2–4	6		30	2
	Total					**90**	**310**	**20**
	Semester II September 1- January 30th 2017							
1	Health Communication	MPC-52-1	1	2–4	6–7		30	2
2	Intermediate Biostatistics	MPC-52-2	2	8	10		60	4
3	Research Methodology (quantitative, qualitative methods, Research Ethics)	MPC-52-3	2	8	10		64	4

4	Health Policy & Ethics in Public Health	MPC-52-4	1	4–6	6–7		45	3
5	Health Systems & Public Health Technology	MPC-52-5	2	8	10		60	4
6	Primary Health care	MPC-52-6	1	4–6	6–7		45	3
7	Gender Issues in Health	MPC-52-7	1	2–4	6–7		30	2
	Total					**90**	**334**	**22**
	Semester III 1st February- June 30th							
1	Case study/ Pedagogy/Project	MPC-53-1	2	80–10	10/12/2016		60-80	4
2	Health Economics	MPC-53-2	1	4–6	4–6		30	2
	Elective Courses	**MPC-50**	**Any 4 may be chosen**					
1	Reproductive & Child Health	MPC-50-1	1	4–6	6–7		45	3
2	Occupational Health	MPC-50-2	1	4–6	6–7		45	3
3	Health Informatics	MPC-50-3	1	4–6	6–7		45	3
4	Health Management	MPC-50-4	1	4–6	6–7		45	3
5	Global Health & Comparative Health System	MPC-50-5	1	4–6	6–7		45	3
6	Public Health Nutrition	MPC-50-6	1	2–4	3–4		30	2
7	Advanced Epidemiology	MPC 50-7	1	4–6	6–7		45	3
8	Advanced Health Communication	MPC-50-8	1	4–6	6–7		45	3
9	First Aid	MPC-50-9	1	4–6	6–7		45	3
10	Adolescent & School Health	MPC-50-10	1	4–6	6–7		45	3
	Total					**90**	**300**	4+2+12 = 18

	Semester IV July 1st - December 30th 2017							
19	Dissertation	MPC-54-1		30	30	80	330	8
20	Integration & wrapping up	MPC-54-2	2	4–6	8	10	80	4
	Total					**90**	**410**	**12**