



# **AMRITA SCHOOL OF MEDICINE**

## **Centre for Allied Health Sciences**

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## **PROGRAM**

### **Master of Public Health (MPH)**

**(With effect from 2017-2018 onwards)**



**A Super Speciality Tertiary Care Hospital Accredited by ISO 9001-2008, NABL & NABH**

## Our Chancellor



### **SPIRITUAL PRINCIPLES IN EDUCATION**

**“In the gurukulas of ancient rishis, when the master spoke it was love that spoke; and at the receiving end disciple absorbed of nothing but love. Because of their love for their Master, the disciples’ hearts were like a fertile field, ready to receive the knowledge imparted by the Master. Love given and love received. Love made them open to each other. True giving and receiving take place where love is present. Real listening and ‘sradha’ is possible only where there is love, otherwise the listener will be closed. If you are closed you will be easily dominated by anger and resentment, and nothing can enter into you”.**

**“Satguru Mata Amritanandamayi Devi”**

## **Introducing AIMS**

India is the second most populous nation on earth. This means that India's health problems are the world's health problems. And by the numbers, these problems are staggering 71million cases of diabetes, nearly half the world's blind population, and 60% of the world's incidences of heart disease. But behind the numbers are human beings, and we believe that every human being has a right to high-quality healthcare.

Since opening its doors in 1998, AIMS, our 1,200 bed tertiary care hospital in Kochi, Kerala, has provided more than 4 billion rupees worth of charitable medical care; more than 3 million patients received completely free treatment. AIMS offers sophisticated and compassionate care in a serene and beautiful atmosphere, and is recognized as one of the premier hospitals in South Asia. Our commitment to serving the poor has attracted a dedicated team of highly qualified medical professionals from around the world.

The Amrita Institute of Medical Sciences is the adjunct to the term "New Universalism" coined by the World Health Organization. This massive healthcare infrastructure with over 3,330,000 sq. ft. of built-up area spread over 125 acres of land, supports a daily patient volume of about 3000 outpatients with 95 percent inpatient occupancy. Annual patient turnover touches an incredible figure of almost 800,000 outpatients and nearly 50,000 inpatients. There are 12 super specialty departments, 45 other departments, 4500 support staff and 670 faculty members.

With extensive facilities comprising 28 modern operating theatres, 223 equipped intensive-care beds, a fully computerized and networked Hospital Information System (HIS), a fully digital radiology department, 17 NABL accredited clinical laboratories and a 24/7 telemedicine service. The NABH accredited AIMS offers a total and comprehensive healthcare solution comparable to the best hospitals in the world. The AIMS team comprises physicians, surgeons and other healthcare professionals of the highest caliber and experience.

AIMS features one of the most advanced hospital computer networks in India. The network supports more than 2000 computers and has computerized nearly every aspect of patient care including all patient information, lab testing and radiological imaging. A PET (Positron Emitting Tomography) CT scanner, the first of its kind in the state of Kerala and which is extremely useful for early detection of cancer, has been installed in AIMS and was inaugurated in July 2009 by Dr. A. P. J. Abdul Kalam, former President of India. The most recent addition is a 3 Tesla Silent MRI, Cyber Knife RoboticRadioSurgery System.

The educational institutions of Amrita VishwaVidyaPeetham, a University established under section 3 of UGC Act 1956, has at its Health Sciences Campus in Kochi, the Amrita School of Medicine, the Amrita Centre for Nanosciences, the Amrita School of Dentistry, the Amrita College of Nursing, and the Amrita School of Pharmacy, committed to being centers of excellence providing value-based medical education, where the highest human qualities of compassion, dedication, purity and service are instilled in the youth. Amrita School of Ayurveda is located at Amritapuri, in the district of Kollam. Amrita University strives to help all students attain the competence and character to humbly serve humanity in accordance with the highest principles and standards of the healthcare profession.

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# Part I

## Rules and Regulations

### I. Post Graduate Programme: Master of Public Health (MPH)

<b>1. <u>Details of Post Graduate Course :-</u></b>			
<b>Sl. No.</b>	<b>Course</b>	<b>Duration</b>	<b>Conditions of Eligibility for Admission to the Course</b>
1	Master of public health	Two years	MBBS,BDS, MSc, BSc(Nursing), Masters in Pharmacy, Masters in Social Science, AYUSH, Masters in Physiotherapy. Experience in Health field desirable and is an added qualification which carries weight age

### **2. Medium of Instruction:**

English shall be the medium of instruction for all subjects of study and for examinations.

### **3. Eligibility:**

#### **a) Indian Students**

Candidates for admission to the **MASTER OF PUBLIC HEALTH COURSE under Institute of Public Health** should have passed M.B.B.S.,B.D.S, M Sc, BSc (Nursing), Masters in Pharmacy, Masters in Social Science, AYUSH, and Masters in Physiotherapy from a recognized University. Experience in the health field is desirable and is an added qualification and carries weightage.

#### **b) The International Students**

International students will also be considered for admission. The international students should have reasonable score for TOFEL and IELTS. Admission would be governed by Amrita University norms for international admissions.

**c) Sponsored Students (Government of Kerala, Govt. of India & Non – government organizations)**

One seat each will be earmarked for all the above categories.

**d) Age:**

The age limit is 40 and for government sponsored candidates it will be as per government norms.

**e) Selection Procedure**

Total intake of maximum 25 students per year.

**i). Indian candidates**

Prospective candidates will be evaluated on the basis of educational qualifications, professional

Experience relevant to the field of public health, written test and interview.

**ii) International Candidates**

Selection will be based on educational qualifications, professional experience, assessments made

by the sponsoring organizations and a interview. International candidates have to provide certification for proficiency in English . They should also have the certificate of equivalence from national board. The international students should have reasonable score for TOFEL and IELTS. Admission will be governed by Amrita University norms for international admissions.

**II. General Rules:**

Admissions to the courses will be governed by the conditions laid down by the University from time to time and as published in the Regulations for admissions each year.

**1. Duration of the Course**

Duration of the course is two years and in four semesters. The course commences in July every year.

**2. Discontinuation of Studies**

Rules for discontinuation of studies during the course period will be those decided by the Medical director /Admissions, institute of public health, and Published in the “Terms and Conditions” of the institute every year.

**3. Educational Methodology**

Learning occurs by attending didactic lectures, as part of regular work, from co-workers and senior faculty, through training offered in the workplace, through reading or other forms of self-study, online resources and

international websites, seminars, webinars, group discussions, journal clubs, paper presentation, community projects etc. AUMS will be the platform for teaching methodology, assessment of students for assignment and class attendance.

#### 4. Academic Calendar :-

##### Annual Scheme

Sl.No	Item	No.'s/ Description
	Total core credits	70
	Other credits	20
	Duration	2 years in 4 semesters & 90 credits
	Minimum duration of credit in hours	1credit hour = 15 Hours
	Mini Project	2 in number , each lasting for 2 to 3 weeks duration
	Capstone project	1 in the 4 <sup>th</sup> semester
	Examinations	Two annual university examination covering four core suits in first year and two core suites in the second year. Internal assessment for each core suite.
	No of Faculty Full time	3-4
	No of Adjunct faculty	35
	No of visiting faculty/ consultant	25
	No of administration staff	5
	No of support staff	2
	Infrastructure	2 Class Room , 2 - Practical Room, 1 - Library ,1-Computer Room 1-Admin Suit,4 -Faculty Rooms, 1 - Refreshment Room, 1-SeminarRoom,1 - Conference Room, 2 - Visiting Faculty Room, Toilets, Wash Area, Store Room, and a Reception Area, Visitor's Launch
	No of students	15-25
	Last date of application	31 <sup>st</sup> May

	Interview & Admission process	5 <sup>th</sup> June
	Publication of rank list	15 <sup>th</sup> June
	1 <sup>st</sup> Semester Begins	01 <sup>st</sup> August
	Mini Project -I	December
	1 <sup>st</sup> Semester Ends	December
	2 <sup>nd</sup> Semester begins	January
	Mini Project-II	June
	2 <sup>nd</sup> Semester ends	June
	First annual University Examination	June
	3 <sup>rd</sup> Semester Begins	July
	Protocol submission for Capstone Project	July
	Capstone Project	July- December
	3 <sup>rd</sup> Semester Ends	December
	4 <sup>th</sup> Semester Begins	January
	Capstone Project submission	31 <sup>st</sup> January
	4 <sup>th</sup> Semester Ends	June
	Second annual university examination	July
	Result Publication	August

Students will be informed of changes in the schedule, such as additions, cancellations, rescheduling of classes as they occur, either in class or through email.

Some courses demand extensive reading and most of the course materials/readings may be provided in the electronic format to avoid wastage of resources. Print copies will be provided only for certain relevant readings. It is the students' responsibility to make sure that she/he is aware of the class schedules, assignments and has the required readings and other course materials. Distribution of the power point slides (soft or hard copy) is left to the discretion of the concerned faculty.

## 5. **Credit system**

- Each credit is equivalent to fifteen hours of in-class sessions.

- Faculty led workshop sessions is equated to class room sessions.
- Faculty led field sessions extending to one full day is equivalent to three in-class
- Faculty led field sessions of half a day is equivalent to one in-class session.
- Field sessions not led by faculty extending to one full day is equivalent to two in-class sessions and half a day field session to one in-class session.
- Assignments, term papers, readings, report writing and other tasks will be given as home work, which would be in addition to the credit requirements not exceeding 25hours of work per credit.

### **III. Examination Regulations:**

#### **1. Attendance:**

**75% of attendance (physical presence) is mandatory.** Medical leave or other types of sanctioned leaves will not be counted as physical presence. For those who possess a minimum of 70% attendance, deficiency up to 5% may be condoned on medical or other genuine grounds by the Principal, School of medicine at his sole discretion and as per the recommendation of the Faculty concerned. Students are allowed such condonation only once for entire course of study.

Condonation fee as decided by the university has to be paid. Attendance will be counted from the date of commencement of the semester to the last day of the final examination in each subject. Absence without prior permission will be viewed seriously.

#### **2. Student Assessment**

- Internal assessment will be conducted for all core suites .
- Failure to attend an assessment will not be compensated for by substitution/replacement or in any other way and the mark for that assessment will be zero.
- Assignments that are submitted according to the instructions of the concerned faculty alone will be accepted for grading. Assignments related to theory/practical sessions that students have not attended will not be considered for evaluation.
- Any work submitted after the deadline will not be considered for evaluation.
- Students found plagiarizing in assignments will be given zero marks.
- While evaluating an assignment, if any faculty finds that the student has copied the assignment from another source, the concerned faculty will be sent a report to the Head of the Department along with the assignment and a copy of the original source and the decision of the faculty committee on the matter will be final.

##### **a) Internal Assessment:**

Regular periodic assessment shall be conducted throughout the course as decided by the faculty advisor. Day to day assessment will also be given importance during internal assessment.

##### **b) University Examination:**

University Examination shall be conducted annually at the end of second and fourth semesters. Those students, who did not clear the university examination, need to re-appear the examination after 6 months. Students need to clear first university examination before attending the second university examination. However, they can continue with their second year classes.

A candidate who satisfies the requirement of attendance & internal assessment as stipulated by the University shall be eligible to appear for the University Examination.

Students who have not completed their capstone project successfully will not be permitted to appear for second year university examination.

One academic year will be twelve months including the days of the Examination. Year will be counted from the date of commencement of classes.

The final examination will have theory, viva and practical. For the final examinations two externals will be invited for evaluation of students along with two internal examiners.

The minimum pass for internal assessment and for the University Examination is P grade (50%).

If a candidate fails he/she has to reappear for the failed papers and clear it. Please refer the rules for supplementary examination. Maximum number of attempts permitted for each university exam is three (3) including the first attempt.

If a candidate fails in a particular theory/ practical examination of a core suite, he/she must rewrite both the theory and practical of that particular core suite.

The maximum period to complete the course shall not exceed 5years.

### **3. The Grading system**

#### **Letter Grading Scheme**

Student's performance in each course is evaluated and graded as per the alphabetical letter grading scheme. Total 9 grades are there. Letter grades are as follows:

#### **Minimum Pass Grade is P (50%)**

<b>O</b>	<b>Outstanding</b>	<b>10</b>	<b>95%-100%</b>
<b>A+</b>	<b>Excellent</b>	<b>9.5</b>	<b>90%-94.9%</b>
<b>A</b>	<b>Very Good</b>	<b>9</b>	<b>85%-89.9%</b>
<b>B+</b>	<b>Good</b>	<b>8</b>	<b>80%-85.9%</b>

<b>B</b>	<b>Above Average</b>	<b>7</b>	<b>70%-79.9%</b>
<b>C</b>	<b>Average</b>	<b>6</b>	<b>60%-69.9%</b>
<b>P</b>	<b>Pass</b>	<b>5</b>	<b>50%-59.9%</b>
<b>F</b>	<b>Fail</b>	<b>0</b>	<b>Less than 50%</b>

Assessment will be based on grading system. A candidate should secure a minimum of "P" grade in internal examination is eligible to appear for the University examination.

**Log Book Maintenance:**

Each student should maintain a logbook and record the procedures they do and the work patterns they are undergoing. A daily work record and monthly work record should be maintained.

**4. Eligibility to appear university Examination:**

A student who has secured the required grade for Internal Assessment is qualified to appear for University Examination provided he/she satisfies percentage of attendance requirement as already mentioned at the III (1) of the clause.

**5. Valuation/ Revaluation Papers:**

Valuation work will be undertaken by the examiners in the premises of the Examination Control Division in the Health Sciences Campus.

There will be **Re-Valuation** for all the University examinations. Fees for revaluation will be decided by the university from time to time.

Application for revaluation should be submitted within 5 days from date of result of examination declared and it should be submitted to the office with payment of fees as decided by the university.

**6. Supplementary Examinations:**

Every main University examination will be followed by a supplementary examination which will normally be held within six months from the date of completion of the main examination.

Same attendance and internal marks of the main examination will be considered for the supplementary examination, unless the HOD furnish fresh internal marks and attendance after conducting fresh examination.

Students of supplementary batches are expected to prepare themselves for the University Examinations. No extra coaching is expected to be provided by the Institution. In case at any time the Institution has to provide extra coaching, students will be required to pay fees as fixed by the university for the said coaching.

A candidate must have passed in all subjects to become eligible to get the MPH degree, for the candidates who have not passed all the subjects the duration of the two year shall be extended until and upto five years they become eligible to get the degree.

## **8. Promotion from second semester to third semester in the MPH Programme**

Will be contingent upon the student fulfilling ALL of the following criteria:

- A minimum of 75% attendance overall in all class sessions in the semester;  
this will be calculated by adding up the attendance at all theory and practical classes where attendance is taken.

## **IV. Criteria for Pass in University Examination - Regulations**

### **1. Eligibility criteria for pass in University Examination:**

Minimum marks for passing is 50% for theory and practical.

### **2. Evaluation and Grade:**

A candidate who takes more than one attempt in any subject and pass subsequently shall be ranked only in pass grade.

## **V. General considerations and teaching / learning approach:**

There must be enough experience to be provided for self learning. The methods and techniques that would ensure this must become a part of teaching learning process.

Proper records of the work should be maintained which will form the basis for the student's assessment and should be available to any agency that is required to do statutory inspection of the school of the course.

### **a) Student**

#### **1) Award of degree:**

The degree will be awarded to students who have successfully completed all requirements of their programme.

#### **2) Facilities:**

Students are provided with computer laboratory, wireless internet connectivity,

Audiovisual equipments and a reference library with a large collection of books and journals in order to facilitate a better and an effective learning process. Printers are available in the computer lab and Photostat facility is available in the library. Since it is important to maintain the facilities and resources to the best of standards for the benefit of everyone, students are expected to follow certain norms of social and professional behaviour within the campus including the classrooms, corridors, canteen, seminar halls, and auditoriums

### **3) Class Rooms**

- Students are expected to be present in class on time and stay for the entire class period since random arrivals and exits in classrooms are distracting for the faculty and other students.

- Use of mobile phones is strictly prohibited inside the classrooms, seminar halls and in meeting rooms. All mobile phones must be switched off before entering the class/library/auditorium or any other designated area

- Laptops should be used with discretion during class sessions. Doing assignments/ personal work, web browsing and emailing during lecture sessions are forbidden. During sessions/presentations laptops are to be switched off and students are expected to pay attention to the presenters. Individual faculty has the discretion not to allow or have periods during class where laptop may not be used.

- Smoking, consumption of alcohol, food and beverages is forbidden in the classrooms.

- All computers and audiovisual equipments, fans and lights in the classrooms must be switched off after use.

- Students are not allowed to use the computer and audiovisual equipments in the classroom for web browsing and other personal work. They should be restricted for use for teaching in class and workshop sessions

- Students must do their best to preserve order in class as well as behave in a manner that does not disrupt classroom learning or smooth conduct of the class

- Students are expected to raise their hands and wait to be called upon to speak during a class session. If the class is involved in an informal discussion, take turns with others when speaking

- Private conversations during class sessions and discussions will distract the students and teachers and hence must be avoided.
- Students can be asked to leave the class/session if found disruptive in class even after repeated warnings and their attendance cancelled
- Students are expected to complete their assignments/ readings work prior to start of the class sessions
- Students are expected to abide by the norms of decency and academic civility during class discussions/ debates/ seminars etc. They are expected to learn to respectfully agree to disagree on opposing points of view. Avoid arguments that are not healthy and *can be interpreted as personal, rude, intolerant, intimidating, sexist*

**Part –II**  
**Syllabus**

## **1. INTRODUCTION**

Master of Public Health Program at Amrita Institute of Medical Sciences and Research Centre, Cochin, Kerala, India is designed to meet the healthcare needs of people. This being a full-time programme can be completed in two full years. This is a new venture of Amrita deemed university and we are committed to make this course of global standard. It is a 24 month full time course and has been designed to build an understanding, knowledge, skills and attitude for better public health practice and research. The standards and syllabus are at par with the renewed international and national universities.

All students receive a sound education in the core six suites-

- 1). Epidemiology
- 2). Biostatistics
- 3). Public health biology
- 4). Environmental& occupational health
- 5). Social and Behavioral science
- 6). Health care and system management.

In all classes which are mandatory, the emphasis is on the relevancy of information and skills to public health practice.

## **II. Aims and Objectives of the Course:**

### **The objectives of the Master of Public Health programme are:**

1. To equip students to have an overall perspective on public health
2. To create good programme managers in public health
3. To inculcate interdisciplinary approach to problem solving skills in public health
4. To encourage interdisciplinary research in public health

4. To improve leadership skills in public health. to prepare students to tackle current and emerging global public health problems such as pandemic flu, AIDS, bioterrorism, obesity, diabetes, disparities in access to healthcare, and many other critical public health problems.
5. Recognizes that in today's world, a thorough and rigorous public health education must embrace multiple areas including: biostatistics, environmental health, epidemiology, health services administration, social and behavioral sciences, biological sciences, ethics, the role of information technology in health, health policy and law in health.

The program also requires a field experience that serves as a capstone experience and helps students integrate knowledge across courses.

### **\*Program Outcomes (PO)**

**PO1:** Deep knowledge on the subject.

**PO2:** Better employment opportunities.

**PO3:** Thorough knowledge in professional ethics.

**PO4:** Good leadership qualities and team work.

**PO5:** Deep knowledge on research methodology.

**PO6:** Good communication skills.

**PO7:** Good teaching skills.

### **\*\*Program Specific Outcomes (PSO)**

**PSO1:** Good knowledge about health problems in the community.

**PSO2:** Good knowledge about prevention and control of diseases.

**PSO3:** Employability as a public health consultant.

**PSO4:** Employability as teaching faculty.

**PSO5:** Entrepreneurship in occupational health, environment safety & medical entomology,

**PSO6:** Good knowledge about principles and practice of public health epidemiology.

**PSO 7:** Skill in performing epidemiologic investigation.

**PSO 8:** Core knowledge on biostatistics.

**PSO 9:** Ability to interpret the results.

**PSO 10:** Good knowledge about health education methods.

### **Courses and Course Outcomes**

#### **MPH CC Case Study - Presentation**

CO1: Analysis of a recent public health event and identification of the missing evidence necessary to make a decision.

CO2: Ability to present a case in a comprehensive way.

CO3: Ability to solve public health problems.

**Knowledge of analyzing recent public health events and decision making along with the ability to present cases and solve public health issues . There will be assessment of theoretical and practical skills**

**MPH MB 001 Fundamental Maths for Bio-statistics**

CO1: The knowledge of basic data collection methods.

CO2: The ability to summarize statistical data.

CO3: The knowledge of basic statistical tests.

**Skill in collecting data using basic collection methods and summarizing statistical data, along with knowledge of basic statistical tests There will be assessment of theoretical and practical skills**

**MPH MB 002 Methods in Biostatistics & research methodology**

CO1: Ability to collect compile, and analyze data.

CO2: Ability to identify relevant associations.

CO3: Apply the knowledge for public health research.

**Competency in identifying relevant associations and its applications for public health research There will be assessment of theoretical and practical skills**

**MPH MB 003 Advanced Bio-statistics&Advanced special topics**

CO1: Familiarity with regression analysis.

CO2: Familiarity with correlation techniques.

CO3: Interpretation of advanced biostatistics tests.

**Knowledge of regressions analysis and correlation techniques and a basic understanding of advanced biostatistical test There will be assessment of theoretical and practical skills**

**MPH MB 004 Analysis Concepts and methods in Infectious disease & Non - Infectious disease**

CO1: Familiarity with descriptive epidemiological methods.

CO2: Familiarity with analytical epidemiological methods.

CO3: Interpretation of epidemiological data.

**Competency with descriptive epidemiological methods as well as analytical epidemiological methods and its interpretation There will be assessment of theoretical and practical skills**

### **MPH MB 005      Statistical Methods and SPSS Application**

CO1: Ability to enter data using SPSS

CO2: Ability to analyze data using SPSS

CO3: Ability to interpret the results given by SPSS

**Skill in the usage of SPSS which include analysis and interpretation There will be assessment of theoretical and practical skills**

### **MPH ME 001      Epidemiology**

CO1: Knowledge about the uses of epidemiology.

CO2: Ability to describe a disease under epidemiological parameters.

CO3: Ability to develop etiological hypothesis.

**Knowledge about epidemiology and skill in developing etiological hypothesis There will be assessment of theoretical and practical skills**

### **MPH ME 002      Biostatistics**

CO1: Ability to apply biostatistics in field epidemiology.

CO2: Ability to identify the appropriate statistical tools to be used in a public health data.

CO3: Ability to correctly interpret public health data.

**Skill in correlating biostatics and epidemiology and ability to interpret public health data                      There will be assessment of theoretical and practical skills**

### **MPH ME 003      Public Health Biology**

CO1: Knowledge about the fundamentals of Human Anatomy.

CO2: Knowledge about the fundamentals of human physiology.

CO3: Knowledge about the fundamentals of biochemistry .

**Knowledge about the basic sciences including Anatomy , physiology and biochemistry in relation to public health There will be assessment of theoretical and practical skills**

### **MPH ME 004      Environmental & Occupational Health**

CO1: Knowledge about the environmental issues affecting public health.

CO2: Knowledge about the occupational diseases.

CO3: Ability to develop solutions to environmental and occupational challenges.

**Knowledge about the various environmental , occupational diseases and the ability to form steps/plan to counter such challenges. There will be assessment of theoretical and practical skills**

### **MPH ME 005& MPH ME 006 Mini Project -I & II**

CO1: Ability to identify and describe a public health problem.

CO2: Ability to find a solution to the above problem.

CO3: Implement and document a practical solution to the same.

**Competency in creating a mini project which consists of identifying a public health problem and finding a solution to the said problem and implementing it . Projects to be completed in two months. There will be assessment of theoretical and practical skills**

### **MPH ME 007 Social and Behavioural Sciences**

CO1: Knowledge of the fundamental principles of sociology.

CO2: Knowledge of the basics of behavioural science.

CO3: Ability to apply the above for public health solutions.

**Brief knowledge of sociology and behavioural science and its application in Public health solutions There will be assessment of theoretical and practical skills**

### **MPH ME 008 Health Care and Health System Management**

CO1: Knowledge about health care delivery system in India.

CO2: Analyse the deficiencies and problems of health care delivery in India.

CO3: Apply the principles of health management to improve the healthcare delivery.

**Knowledge of health care delivery systems and identification of deficiencies and application of principles in order to improve said systems. There will be assessment of theoretical and practical skills**

### **MPH ME 009 Dissertation**

CO1: Knowledge about the basic principles of biomedical research.

CO2: Ability to conduct a research in the field of public health.

CO3: Ability to document and present the results to policymakers.

**Knowledge about biomedical research and the ability to conduct and document research in the field of public health and presentation of results to the policymaker There will be assessment of theoretical and practical skills**

### **MPH MEOH 001 Environmental and occupational epidemiology & Environmental Health and Human Ecology**

CO1: Ability to study the environmental problems arising from specific conditions in human ecology.

CO2: Knowledge about the effects of newer occupations on human health.

CO3: Competency in prevention and control.

**Competency in understanding environmental problems and formulation of strategies for prevention and control There will be assessment of theoretical and practical skills**

### **MPH MEOH 002 Pollution & Waste Management**

CO1: Knowledge about the impact of pollution on human health.

CO2: Knowledge about the various waste disposal methods.

CO3: Competency to provide solutions to pollution and waste disposal problems.

**Knowledge about various causes of pollution , its disposal methods and strategies to implement for improvement There will be assessment of theoretical and practical skills**

### **MPH MEOH 003 Environmental Safety**

CO1: Knowledge about the environmental hazards of industrial establishments.

CO2: Knowledge about the hazards to population due to industrial processes.

CO3: The ability to evaluate the environmental safety and suggest solutions.

**Knowledge of environmental hazards in industries and to provide safety solutions to minimize damage to the environment There will be assessment of theoretical and practical skills**

#### **MPH MEOH 004 Medical Entomology**

CO1: Knowledge about the insects with medical importance.

CO2: Knowledge about the habitats and control measures.

CO3: Ability to assess the impact on public health and devise control measures.

**Knowledge of Medical entomology and its control measure and assessment of its impact on public health There will be assessment of theoretical and practical skills**

#### **MPH MEOH 005 Principles and Relevance of Industrial and Occupational Health**

CO1: Knowledge about the principles of industrial and occupational health.

CO2: Ability to function as an effective occupational health consultant.

CO3: Competency to provide solutions to industrial and occupational health problems.

**Knowledge about principles of industrial and occupational health and competency in functioning as an occupational health consultant who provides solutions to health problems There will be assessment of theoretical and practical skills**

#### **MPH MPH 001 Public Health Practice and Decision Making.**

CO1: Knowledge about the public health challenges in the community.

CO2: The ability to devise solutions..

CO3: Ability to assist the policymakers in decision making.

**Knowledge of public health challenges and skill in devising solutions and assisting policymakers in decision making There will be assessment of theoretical and practical skills**

#### **MPH MPH 002 Public health Ethics , Health Systems & Policy**

CO1: Knowledge about basics of public health ethics.

CO2: Knowledge about the functioning of public health systems.

CO3: Applying the principles of ethics in public health systems.

**Knowledge of public health ethics , the functioning of public health systems and the application of ethics in public health systems There will be assessment of theoretical and practical skills**

### **MPH MPH 003 Health Economics & Health Project Management**

CO1: Knowledge about the fundamentals of health economics.

CO2: Ability to apply the principles of economic evaluation in public health.

**Brief knowledge of health economics and application of economic principles in public health There will be assessment of theoretical and practical skills**

### **MPH MPH 004 Strategic management in Public Health&Human Resource Development**

CO1: Knowledge about the basic principles of management

CO2: Ability to apply the principles of management to improve public health.

CO3: Knowledge about the principles of human resource development.

**Competency in the field of strategic management and application of basic principles to improve public health and human resource development There will be assessment of theoretical and practical skills**

### **MPH MPH 005 Quality Assurance and Total Quality Management**

CO1: Knowledge of the principles of quality assurance.

CO2: The ability to apply principles of management for quality assurance.

CO3: The ability to apply these principles to improve the quality of public health services.

**Knowledge of quality assurance and application of its principles to improve quality of public health services There will be assessment of theoretical and practical skills**

### **MPH MPH 001 Fundamentals of Physiology & Reproductive Biology**

CO1: Knowledge of the basics of human physiology.

CO2: Knowledge of the basics of reproductive biology.

CO3: The ability to apply the knowledge of physiology and reproductive biology in public health.

**Basic knowledge of human physiology and reproductive biology and its application in public health There will be assessment of theoretical and practical skills**

**MPH MPHB 002 Evolution of Infectious Disease & Major Global Infectious & non infectious Diseases**

CO1: Knowledge about the natural history of infectious diseases.

CO2: Knowledge about major global non communicable diseases.

CO3: Ability to apply the the knowledge about major infectious and non infectious diseases in prevention and control of diseases.

**Knowledge about natural history of infectious diseases and its application in disease prevention and control There will be assessment of theoretical and practical skills**

**MPH MPHB 003 Women Empowerment and gender related issues and Medical anthropological perspective in health**

CO1: Knowledge about the need and importance of women empowerment

CO2: Sensitisation about gender issues.

CO3: Ability to apply the medical anthropological perspective in public health.

**Knowledge about the importance of women empowerment and the ability to apply medical anthropological perspective in public health There will be assessment of theoretical and practical skills**

**MPH MPHB 004 Principles of Human Nutrition , and Nutrition Policy, Public Health Nutrition**

CO1: Knowledge about the principles of human nutrition.

CO2: Knowledge about nutrition policy and public health nutrition challenges.

CO3: The ability to use the above knowledge in finding solutions for public health problems.

**Knowledge of principles of human nutrition and ability to use knowledge in finding solutions for public health problems There will be assessment of theoretical and practical skills**

### **MPH MPHB 005 Population Science**

CO1: Knowledge about the basics of demography.

CO2: The ability to analyze the public health problems from the perspective of population science.

CO3: The ability to apply the principles of demography while planning future public health measures.

**Competency in understanding basic demographics and its application while planning future public health measures There will be assessment of theoretical and practical skills**

### **MPH MSS 001 Social and Behavioural Foundations of Primary Health Care**

CO1: Knowledge of the principles of primary health care.

CO2: The ability to apply the principles of sociology in primary health care.

**Knowledge of principles of primary health care and application of sociology in it There will be assessment of theoretical and practical skills**

### **MPH MSS 002 Introduction to Persuasive Communication: Theories & Practice**

CO1: Knowledge about the principles of communication.

CO2: Knowledge about the methods of communication.

CO3: Ability to apply the knowledge of persuasive communication for behavioural change.

**Knowledge of principles of communication and various methods and application of knowledge for behavioural change There will be assessment of theoretical and practical skills**

### **MPH MSS 003 Health Behavioural Change at the Individual, Household, and Community**

CO1: Knowledge of the importance of behaviour in causation of diseases.

CO2: Knowledge of the importance of behavioural change in prevention of disease.

CO3: Ability to apply the principles of behavioural change at individual, household and community level.

**Knowledge of behavioral health in causation of diseases as well as its importance in prevention , with the ability to apply principles at different levels of society There will be assessment of theoretical and practical skills**

#### **MPH MSS 004 Social & Behavioural Aspects of Public Health**

CO1: Knowledge of the behavioural aspects of emerging diseases.

CO2: Knowledge of the behavioural aspects of re-emerging diseases.

CO3: Ability to apply the principles of behavioural change in implementing public health policies.

**Knowledge of behavioural aspects of emerging as well as re emerging diseases and its application in implementing public health policies There will be assessment of theoretical and practical skills**

#### **MPH MSS 005 A New View: Improving Public Health through Innovative Social and Behavioural Tools and Approaches**

CO1: Knowledge of innovative tools in changing social and cultural practices.

CO2: The ability to use innovative tools in changing social and cultural practices.

**Skill in using innovative tools to change social and cultural practices in public health scenario There will be assessment of theoretical and practical skills**

#### **MPH SS 001 Soft Skills - Elective Course**

CO1: The ability to incorporate the principles of sustainability in public health interventions.

CO2: The ability to apply human values in public health programmes.

CO3: The ability to work as a member/leader of a healthcare team.

CO4: Teaching abilities.

CO5: Attitude to be a lifelong learner.

### **.III. Career Opportunities for MPH Graduates:**

Graduates of this program typically enter services as public health administrators, advisors, researchers, practitioners, educators, and consultants in a wide variety of public health and N.G.O.and international

agencies settings. Many serve as health educators or health promotion specialists in business, industry, higher education, voluntary agencies, government, and private health care settings.

#### **IV. Program Highlights**

1. Competency based
2. Specially designed to develop leadership, communication and problem solving skills
3. Additional certifications as per the students' choices
4. Positioned for true integration of public health science and practice
5. Includes 2 Mini Projects and a capstone project to give real experience before graduation
6. Individualized Goals Analysis of each student

#### **A) Competencies**

All MPH students should graduate having achieved competencies in the following areas:

##### **a) Epidemiology Competencies**

Identify, access, and display in tables or graphs data relevant to disciplines of public health. Evaluate the quality and comparability of data and utilize appropriate methodology for combining relevant data from different sources.

Understand basic demographic techniques used in measuring the health of populations.

Understand the major study designs for obtaining quantitative information relevant to public health questions from surveillance data, other observational studies, community-based research, or controlled trials.

Design a surveillance system for a disease or condition of public health importance.

Understand commonly used public health measures, such as relative risk, attributable risk and relative hazards, and select appropriate statistical methods for estimating such measures in the presence of covariates.

##### **b) Biostatistics Competencies**

Interpret descriptive and inferential statistics resulting from data analysis and draw relevant conclusions.

Critique the study design and quantitative methods used in published literature and appropriately interpret the findings.

Attain a minimal level of competence in the effective access of frequently used literature databases, government data bases and appropriate software packages.

Apply ethical principles to the collection and use of data emanating from public health, epidemiologic and community intervention research.

### **c) Public Health Biology Competencies**

Describe the biological bases, e.g. molecular, cellular, and physiological, for the major determinants of human disease including infectious disease, nutritional deficiencies, and exposure to toxic environmental agents.

Describe the ecological principles that determine the distribution of infectious disease in human populations.

Apply principles of human immune system function to explain the rationale and mode of action of existing and potential methods of immunization.

Explain the role of genetic determinants in human disease and disease susceptibility caused by infectious agents, nutritional deficiencies and exposure to toxic agents, and in microbial virulence.

Apply biological principles to development of disease prevention, control, or management programs.

Apply biological principles to assessment of risk from potentially hazardous agents and behaviors.

### **d) Environmental occupational Health Sciences Competencies**

Define the major environmental agents and occupational (i.e., environmental chemical, biological, and physical agents that cause adverse effects on human health) and their sources, natural and anthropomorphic.

Discuss the transport and fate of these agents in the environment, and identify the carriers or vectors (air, water, soil, and food) that promote the transfer of these agents from the environment to the human.

Describe the toxicokinetics of these agents in the body, including the effect of route of entry (inhalation, ingestion, absorption).

Describe the toxicodynamics of these agents, including biotransformation and the mechanisms by which they exert adverse health effects, and the use of models for prediction of the magnitude of adverse effects.

Identify and define the steps in the risk assessment process, including both exposure and dose-response assessment, and the sources and magnitude of uncertainty.

Describe various risk management approaches, including regulatory, engineering, and behavioral/risk communication options.

Describe specific genetic factors (including gender- and ethnicity-related factors), physiologic factors (including age- and health status-related factors), and psychosocial factors (including SES- and social/cultural-related factors) that influence the risk of exposure and/or the likelihood of developing adverse health outcomes from exposure to environmental agents.

Identify techniques for improving risk assessment and risk management strategies, including consideration of:

- (1). Factors in the physical environment
- (2). Factors in the social environment
- (3). Community-based participation in both the assessment/management process and in  
basic environmental/public health research
- (4). Issues of environmental justice/equity.

#### **e). Social & Behavioral Sciences Competencies**

Describe the psychological and sociological conceptualizations of health, health behavior, and illness.

Describe and compare theories and principles of behavior change. Analyze their applicability to diverse populations and different types of health behavior problems, including interactions among biology, behavior, and environment.

Describe the concepts of stress, coping and social support, their inter-relationships and assess their impact on health, health behavior, and illness.

Analyze and predict the influence of major social structural divisions such as age, gender, socioeconomic status, and ethnicity on health, health behavior, and the treatment of illness.

Formulate behavioral, communication, educational, advocacy, health promotion, and community-based participatory strategies for improving the health of communities and individuals and preventing disease and injury.

Evaluate processes and outcomes of social and behavioral interventions on the health of communities, families, and individuals.

Demonstrate a cross-cultural awareness and sensitivity for the implementation and evaluation of health behavior change programs.

#### **f). Health care & system Management**

Describe the organization and structure of a health service system.

Evaluate basic models of health delivery systems.

Assess major approaches to managing and improving health services organizations, including approaches to process improvement, strategic planning, and organizational design.

Apply performance improvement concepts and tools in revising a specific process within an organizational setting.

Apply key concepts of human resource management to achieving the strategic objectives of health service organizations.

Prepare a basic budget and principles of health economics

Health Policy & Ethics Competencies

The MPH Program also considers it important that public health professionals obtain an understanding of the role of governments and policy in public health. It is expected that MPH students obtain competencies in this area that include:

Analyze and critique the government's role in health policy and how political processes have shaped that role.

Recognize the institutional and political actors central to the formation and implementation of health policy.

Analyze and evaluate the process of public policy-making and how it affects the design, implementation, and performance of health policies.

Collect, analyze, and synthesize information about health policy problems and issues.

Identify the practical and political constraints of policy formulation and implementation.

Understand the ethical considerations associated with health policy formulation and implementation

## **B) Applied Learning Experience(ALE)**

### **i). Integration of science and practice**

An integral component of the Amrita MPH curriculum, which is unique to this AMPH is a small group sessions called the "Integration of Science and Practice" bridges the gap between what students traditionally learn in a classroom and the real-world experience of working as a public health professional.

This consists largely of case studies drawn from recent history and current events. (eg. Street Dog Menace of Kerala', 'Endosulphan disaster of Kasergode') This learning approach, called the "case method," will provide opportunities for the students to apply facts and information to solve complex public health problems. The students will analyze the cases in small interdisciplinary teams of 12 that may include students from other academic departments, guided by a faculty member and a teaching

assistant. Through this process they will gain skills such as negotiation, persuasion, public speaking, and critical judgment which are crucial to professional success.

The students will be asked to write a policy brief, identify what evidence is missing or necessary to make a decision, plan a media briefing, find citations in the scientific literature relevant to a case study, or identify the key aspects of an effective health intervention program. The nature of the teamwork involved will hone their problem-solving skills and their ability to apply public health theory to professional practice.

## **ii). Leadership & Innovation**

Public health is a field of collaboration and teamwork. And yet, formal coursework in teamwork and leadership skills have not traditionally been a required part of public health education. The Amrita MPH views leadership skills as an essential competency, and our curriculum incorporates a unique program in leadership and innovation.

The course aims to develop and improve MPH students' abilities in three key areas: leading teams in a variety of settings, working effectively as a team member, and implementing fresh, innovative ideas within an organization or larger community.

Leadership & Innovation is taught in an experiential and participatory manner. Working in small teams, the students will engage in role play, simulations, group work, and case analysis, sometimes using video and online tools. They will receive systematic feedback from faculty and fellow students as it happens in real life in workplaces.

Integrated into the second semester, the program covers such valuable topics as how to manage a team, negotiation, effective communication, and conflict resolution. The coursework, hands-on workshops, and lectures by invited public health leaders will foster the students ability to collaborate with diverse professionals in a wide range of settings – hospitals, research centers, public health organizations, NGOs, or wherever their career leads them.

## **C). Certifications**

The AMRITA MPH includes a Certificate program that provides training in a second, more focused area of expertise besides the main discipline. The School will offer over 12 Certificate programs in 2018. These programs have been developed in consultation with employers of public health professionals and other key stakeholders and therefore reflect today's most sought-after skills and knowledge.

Student may apply to a Certificate program when applying to the School or may wish to apply midway through the first semester. Applicants can indicate a first and second Certificate choice.

Prerequisites for the School's programs vary. Coursework takes place primarily in semesters 3 and 4, though the student may elect to begin work in the second semester.

### **Proposed Certificates**

1. Applied Biostatistics& Epidemiology
2. Adolescent Health
3. Comparative Effectiveness Outcomes Research
4. Environmental Health Policy
5. Health of an Aging Society
6. Health Policy and Practice
7. Health Promotion Research and Practice
8. Infectious Disease Epidemiology
9. Injury Prevention and Control
10. Public Health and Humanitarian Assistance
11. Project management in health care
12. Public Health project management
13. Research Methodology
14. Systematic Review and Meta Analysis

### **iii). Capstone Projects(Third Semester)**

The MPH Capstone project is a requirement for graduation for students in the Master of Public Health (MPH) program at the Amrita institute. The MPH Capstone is an opportunity for students to work on public health practice projects that are of particular interest to them. The goal is for students to synthesize, integrate and apply the skills and competencies they have acquired to a public health problem that approximates a professional practice experience. Before the capstone the students will receive education on project management to prepare them for undertaking the project on hand.

Completion of the MPH capstone project requires both written and oral components.

The capstone is typically completed in the four semester of the program. The project is done under the direction of the MPH capstone advisor who will coordinate with the student's advisor for selection of appropriate project.

In order to satisfy the written component, a student must write a paper. Students are also required to give a 10-minute oral presentation summarizing their project in a capstone symposium to be held on previously announced date.

Summary of steps to complete and document the capstone requirement

Step 1: Select a topic in consultation with Capstone Advisor

Step 2: Determine with the capstone advisor whether the project involves human subjects research (HSR) and do necessary paper work as necessary.

Step 3: Submit the MPH Capstone Information Form to the Program director

Step 4: Complete major work and submit first draft faculty councilor

Step 5: Submit final draft of paper to the capstone advisor for approval

Step 6: Submit final approved report

Step 7: Give an oral presentation of the project

Step 8: Get the Capstone course completion and grading

#### **iv). Mini Project**

The intent of the Mini projects is to engage students in activities aligned with their career goals, as well as activities that demonstrate application of public health concepts and critical thinking relevant to the student's area of interest. Students will seek out activities that further develop their skill set and add new tools to their professional toolkit. Upon completion of the MPH program, students will be able to provide evidence of application of these skills to potential employers.

- Applies public health skills and competencies. Students identify the public health skills and competencies relevant to their area of interest that are most beneficial to their career advancement. Students apply these skills and competencies in concert with knowledge gained from their coursework.
- Is framed and carried out within a public health practice context with an established organization or agency. The practicum is a population-level focused project conducted in a practice context.
- Is supervised by a qualified preceptor. The practicum preceptor must be qualified to evaluate the student's professional competence and supervise the student throughout the project. The preceptor is directly engaged in the population-level focused practicum activities. Preceptors can be from an organization outside of Amrita
- Is an evaluated experience. Students are evaluated on the achievement of defined learning objectives and deliverables (if applicable) by the preceptors
- Is a significant experience

The following are generalized examples of potential practicum activities:

- Analyze, interpret, and summarize de-identified survey data or public records data

- Analyze barriers to implementing a program and present recommendations

- Assess lab-based surveillance data
- Conduct cost-effectiveness, cost-benefit, and cost utility analyses
- Conduct needs assessments
- Contribute to the measuring, reporting and continuous improvement of organizational performance
- Create an advocacy or advertisement campaign
- Design programs/curriculum on health topics
- Determine the feasibility and expected outcomes of policy options
- Develop and coordinate programs and activities
- Develop and implement quality improvement projects
- Evaluate the effectiveness of existing programs
- Gather information relevant to specific public health policy issues and develop policy recommendations
- Provide support and assistance in funding research and grant writing
- Identify strategies for determining budget priorities based on federal, state, and local financial contributions
- Investigate new partnerships that could also act as client resources
- Organize, analyze, and summarize study data for a report
- Promote public health policies, programs, and resources

The practicum will be in the subcenters of AMRITA, The 101 villages adopted as a part of Amrita Serve project and also by involving various charitable activities of the institution and Math.

#### **D). Goal Analysis**

In order to full fill the requirements of the Goals Analysis project, students are asked to complete the following steps in close collaboration with their advisor.

**Step 1** - Briefly explain what knowledge, skills, and experiences you bring to the program.

**Step 2** - Identify your goals for your education by explaining what you hope to gain in terms of knowledge, skills, personal and professional contacts, and other experiences while a student in the MPH program. Review the list of MPH core competencies with your advisor. You are encouraged to identify additional competencies particularly relevant to your professional future. Describe any ideas that you may have at this point for potential capstone and practicum projects.

**Step 3** - Develop a tentative course plan for your entire MPH program. Identify what courses and special studies you intend to take and when you plan to complete your courses. Course descriptions in the current year's catalogue indicate when courses are generally offered. Your curriculum plan should include all 90 credits of courses work, and should be viable in terms of schedule and course load. You may use the excel templates provided by the MPH office to record your plan, or use some other format that you are comfortable with.

**Step 4** - Carefully review your goals statement and curriculum plan with your advisor to ensure the proposed curriculum is not only feasible, but that it meets program requirements. Assess if your curriculum plan is aligned with the goals you identified in Step 2.

**Step 5** - Submit the electronic Goals Analysis form, make sure that your advisor has approved your project. When you submit the electronic form, your advisor and your academic coordinator will automatically receive it.

#### **V. Justification for the course:**

AIMS is a specialized center offering tertiary level super specialty services over a range of specialty disorders. It has its own research wing and community projects. The Amrita Serve is the example of the mega community project implemented by AMMA The public health course will work complementary to this concept

With the infrastructure of the hospital, a very prospective program is credited in AIMS that would enable the students to strive for professional competence, productivity and services to society. This educational experience will consist of guided professional settings, organized self-directed study, active participation in classroom and clinical laboratory experiments. The community exposure and the hands on experience the students are gaining from the course will be a boon to the society.

Students will be exposed to professional settings in the hospital, intensive lectures, rotation through various departments, develop a unique ethnic and moral value system that would make them competent as public health administrators

#### **VI. Learning Objectives**

The learning objectives for the MPH Program that follow were developed by the program's Academic Affairs/Admissions Committee. Students in the MPH Program are expected to:

Demonstrate a thorough understanding of the areas of knowledge and skills basic to public health practice, with additional depth in at least one substantive area. The substantive area may be in one of the concentrations approved by the faculty (currently environmental health, health communication, nutrition, health services, and epidemiology & biostatistics), or an in academic discipline approved by the faculty for a combined or joint

degree program with the MPH (currently law, medicine or veterinary medicine).

Demonstrate, through an applied learning experience, the ability to integrate knowledge and skills from key public health disciplines toward the development, implementation, and evaluation of population-based strategies to enhance health in human populations.

Define and describe population-based methods by which public health practitioners strive to enhance the health of the public, namely through organized community effort; program administration; research; and policy development, implementation and evaluation.

## **VII. Experience with the course in other institutions**

This is a new venture by our university. There is only one centre in Kerala which is recognized by MCI, AchuthaMenon centre for health sciences, Trivandrum is having MPH course now .We are collaborating with them. We are collaborating with Public Health Foundation of India. Our future plan is to have collaboration with internationally and nationally renowned universities.

## **COURSE STRUCTURE**

### **1) Core Curriculum**

All students must do a total of 6 core courses called suits with 30 modules for graduation. The Amrita MPH gives prime importance to develop the ability of the students to integrate science of public health and public health practice. This is achieved through group dynamics and real life case studies. Also leadership skills and innovative thinking is developed through group work and seminars. These activities are carried out during the first ,second and third semesters of the MPH program. In addition a lecture series will be offered up to 50 topics covering different aspects of public health.

By the end of their studies, all students complete the core curriculum of 30 modules, additional lectures , a practicum following experience and a capstone project.

All students also work with an academic advisor throughout their time here. The academic program will be focused on core competencies listed on The assessment will be primarily based on the core competencies and academic counselors will certify that each student has the required set of competencies.

### **2). Core suites-Core of MPH-**

The core curriculum, taken by all incoming students in their first 4semesters, consists of six broad areas of study and one capstone

project, known as “**suits** .”These suits which are broken down into 30 modules, build one upon the next to provide the broad, interlocking foundation of knowledge needed for a career in first semester, second semester & third semester.

The six core suits consist of 5 modules each. The course is divided into 4 semesters as shown in the matrix. Each semester (1-3) will cover 10 modules each.

Core suits	Modules	Credits
Epidemiology	<ol style="list-style-type: none"> <li>1. Principles of epidemiology</li> <li>2. Quantitative epidemiology</li> <li>3. Special studies and research epidemiology</li> <li>4. Qualitative epidemiological studies &amp; Critical Analysis of Published Epidemiological Studies</li> <li>5. Epidemiology of infectious &amp; non-infectious diseases</li> </ol>	12
Biostatistics	<ol style="list-style-type: none"> <li>1. Fundamental Math’s for Bio-statistics</li> <li>2. Methods in Biostatistics &amp; research methodology</li> <li>3. Advanced Bio-statistics&amp; Advanced special topics</li> <li>4. Analysis Concepts and methods in infectious disease&amp; non-infectious disease</li> <li>5. Statistical Methods and SPSS Application</li> </ol>	12
Public health Biology	<ol style="list-style-type: none"> <li>1. Fundamentals of Physiology &amp; Reproductive Biology</li> <li>2. Evolution of Infectious Disease &amp; Major Global Infectious&amp; non infectious Diseases</li> <li>3. Women empowerment and gender related issues and Medical anthropological perspective in health</li> <li>4. Principles of Human Nutrition , and nutrition policy, public health nutrition</li> <li>5. Population Science</li> </ol>	12

Environmental & occupational health	<ol style="list-style-type: none"> <li>1. Environmental and occupational epidemiology &amp; Environmental Health and human ecology</li> <li>2. Pollution &amp; Waste management</li> <li>3. Environmental safety</li> <li>4. Medical entomology</li> <li>5. Principles and Relevance of Industrial and Occupational Health</li> </ol>	10
Social and Behavioral Sciences	<ol style="list-style-type: none"> <li>1. Social and Behavioral Foundations of Primary Health Care</li> <li>2. Introduction to Persuasive Communication: Theories &amp; Practice</li> <li>3. Health Behavioral Change at the Individual, Household, and Community</li> <li>4. Social &amp; Behavioral Aspects of Public Health</li> <li>5. A New View: Improving Public Health through Innovative Social and Behavioral Tools and Approaches</li> </ol>	12
Health care and health system management	<ol style="list-style-type: none"> <li>1. Public Health Practice &amp; Decision Making,</li> <li>2. Public health ethics , Health systems &amp; policy</li> <li>3. Health economics &amp; Health Project management ,</li> <li>4. Strategic management in Public Health &amp; Human Resource Development</li> <li>5. Quality Assurance and Total Quality Management</li> </ol>	12

**Additional Lectures(5 - Credit hour's)**

1. Statistical Reasoning in Public Health I-II
2. Statistical Methods in Public Health I-III
3. Epidemiologic Inference I
4. Occupational Safety and Health Management
5. Applications in Managing Health Organizations in Low and Middle Income Countries
6. Quality Assurance Management Methods for Developing Countries
7. Public Health Practice

8. Fundamentals of Management for Health Care Organizations Managing Health Service Organizations
9. Strategic Leadership Principles and Tools for Health System Transformation  
in Developing Countries
10. Community processes Managing Health Service Organizations
11. Fundamentals of Budgeting and Financial Management
12. Pharmaceuticals Management for Under-Served Populations
13. Managing NGOs in the Health Sector
14. Problem Solving in Public Health
15. The Tools of Public Health Practice & Decision-Making
16. Molecular Biology of Pandemic Influenza
17. Molecular Endocrinology
18. Stem Cells & the Biology of Aging & Disease
19. Public Health Toxicology
20. Biological Basis of Vaccine Development
21. Immunology, Infection, & Disease
22. Biology of Parasitism
23. Vector Biology & Vector-borne Diseases
24. Principles of Public Health Ecology
25. Malariology
26. Epidemiologic Basis for Tuberculosis Control
27. Epidemiology & Public Health Impact of HIV & AIDS
28. Epidemiology & Natural History of Human Viral Infections
29. Advanced Topics on Control & Prevention of HIV/AIDS
30. STI's in Public Health Practice
31. Life Course Perspectives on Health
32. Fundamentals of Health, Behavior & Society
33. Psychosocial Factors in Health and Illness
34. Social & Behavioral Aspects of Public Health
35. Program Planning for Health Behavior Change
36. Health Literacy: Challenges and Strategies for Effective Communication
37. Human Development across the Lifespan

38. National Health Mission
39. Govt. schemes
40. District health administration
41. Quality assurance programmes
42. Hospital infection control practices
43. Public health Dentistry
44. Supply chain management in health
45. Industrial Psychology
46. Legislations related to occupational health and safety.
47. Management Information and Evaluation System
48. NGO Management+ Marketing
49. International health
50. Gender issues

### **3. Sessions Semester wise**

The total class hours in a day will be eight hours ,including lunch break out of which three hours will be didactic lectures and four hours will be various assignments like presentations,groupdiscussions,articlereview,readingassignmentsand online resource search etc by students under the leadership of faculty. There will be community exposure twice a week During the first year the students will have didactic lecture from 10.am to 1.00pm and from9.00am to 10.00am and 2pm to 5pm different assignments for students. Thus the total hours a day will be eight hours with one hour lunch break between 1.00pm to 2.00pm

### **4. Scheme of Examination**

No.	Name of the Paper	Time hrs	Internal	External			Project	Total
				Theory	Viva	Practical		
<b><i>First Year</i></b>								
MPHI	Epidemiology	3	50	100	20	30		200
MPH II	Biostatistics	3	50	100	20	30		200
MPH III	Public health Biology	3	50	100	20	30		200

MPH IV	Environmental & occupational health	3	50	100	20	30		200
MPH V	Mini Project		50				50	100
MPH VI	Mini Project		50				50	100
<b>Second Year</b>								
MPH VII	Social and Behavioral Sciences	3	50	100	20	30		200
MPH VIII	Health care and health system management	3	50	100	20	30		200
MPH IX	Dissertation		50				100	150
	<b>Total</b>							<b>1550</b>

**IMPORTANT TELEPHONE NUMBERS :-**

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