

MASTER OF PUBLIC HEALTH (MPH) PROGRAMME CURRICULUM & SYLLABUS



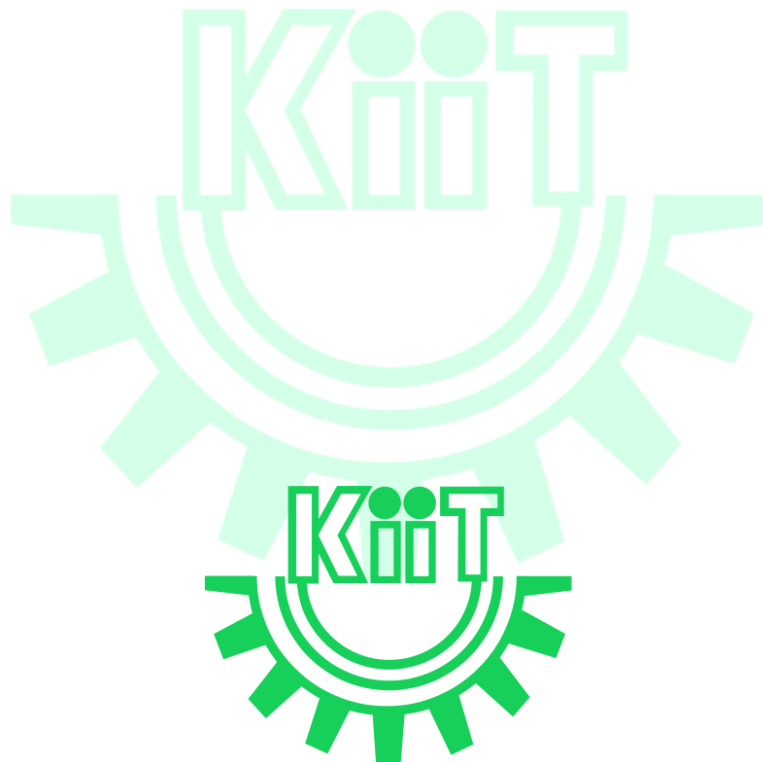
School of Public Health
KIIT Deemed to be University
(Declared U/S 3 of UGC Act 1956)
Bhubaneswar ,Odisha,India



KIIT Deemed to be UNIVERSITY

Declared U/S 3 of UGC Act 1956

Master of Public Health (MPH) Curriculum and Syllabus



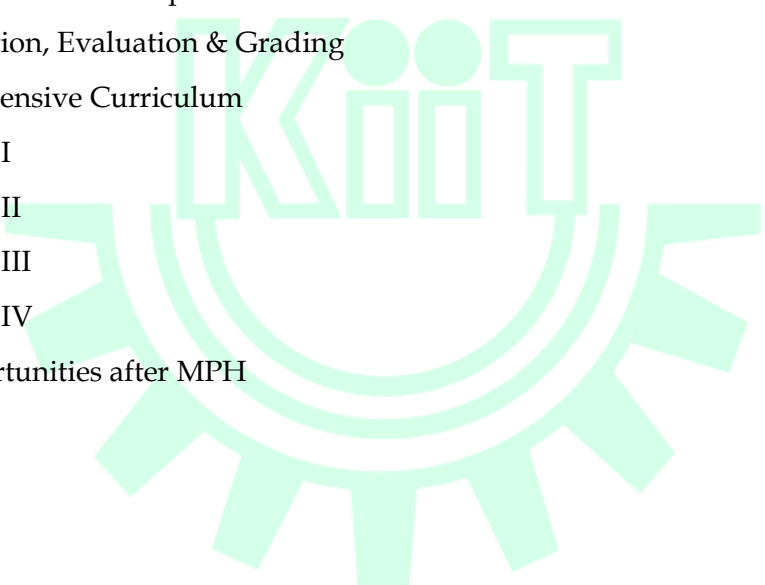
School of Public Health KIIT Deemed to be University

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Contents

Table of contents	Page
1. Background	4
2. About KIIT School of Public Health (KSPH)	4
3. MPH Program	6
4. Objective of MPH Program	6
5. Programme Outcomes	6
6. Programme Specific Outcomes	7
7. Uniqueness of MPH Program at School of Public Health, KIIT DU	7
8. Features of MPH Curriculum	8
9. Semester wise Break up	9
10. Examination, Evaluation & Grading	12
11. Comprehensive Curriculum	15
12. Semester I	15
13. Semester II	25
14. Semester III	35
15. Semester IV	46
16. Job opportunities after MPH	48

A large, light green watermark of the KIIT logo is centered on the page. The logo consists of the letters 'KIIT' in a stylized font, with a gear-like shape below it. The gear has several teeth pointing outwards.

Background:

KIIT Deemed to be University is a Deemed University, recognized in A - Category status by the Ministry of HRD, Govt. of India, placing it among the most elite universities of the country. It is accredited by NAAC of UGC in "A" Grade. Further it has received Tier 1(Washington Accord) accreditation by NBA of AICTE.

KIIT Deemed to be University sprawls over 25 sq.km area with one million square meters of aesthetically constructed built up area. Its cosmopolitan campus is proud to have 25, 000 students from all corners of India and more than 20 countries. There are 24 constituent schools, contiguously located in impeccably landscaped and modern -technology-enabled campuses offering world class graduate, post-graduate, doctoral and post-doctoral programs in a wide range of disciplines with adequate and well qualified faculty, scientists and researchers. The university has its own entrance examination (KIITEE) for admission into most of the academic programmes and has excellent track record of nearly 100% placements. There exists academic partnership with several world class universities from across the world and industry- Institute interaction with more than 15 corporate giants. Other facilities include excellent convention centre complexes, accommodation and other facilities such as Wi-Fi Multimedia Classrooms & ERP, Large Open Air Theatre, Library, Ultramodern laboratory, close circuit cameras, Auditorium, Seminar Hall (50 to 500 capacity), Sports and athletic facilities and Cafeteria, 24x7 Internet and Intranet access.

About KIIT School of Public Health (KSPH)

Public health is a multidisciplinary field that involves a range of disciplines such as medicine, social and behavioral sciences, epidemiology and biostatistics, environmental science, management and information technology.

Based on a situational analysis of (i) the needs and demands for competent public health professionals and health work force, and (ii) the need for evidence based research for advocacy and to influence public health policy in the country, KIIT Deemed to be University

Vision:

Our vision is to strengthen India's public health systems through institutional approach and provide in-depth knowledge and skills in various domains of public health to achieve better health outcomes for all.

Mission:

- Develop competent public health workforce and setting standards in various domains of public health
- Inculcating interventional approaches to public health research and technology
- Strengthening knowledge based application and evidence informed public health practice and policy through collaboration at local, national and international level

Core Values:

Commitments to excellence following ethics, addressing equity and integrity, innovating, respecting human dignity, cultural and gender sensitivity and special attention to vulnerable and deprived people are our core values.

has established a KIIT School of Public Health (KSPH) in 2015.

KIIT School of Public Health is “not a stand-alone” institution. It is truly multidisciplinary and draws its strength by pooling resources and support from various schools of KIIT Deemed to be University such as medical science (KIMS), Biotechnology (KSBT), social science (KISS), management (KSRM, KSoM), engineering (SOT) and law (KSL). KIIT School of Public Health also receives support from well-established laboratories of KIMS, KSBT and other schools for training, research and practice. All public Health Domain expertise and excellent research opportunities/facilities are available at KSPH and the other constituent schools of KIIT Deemed to be University.

KIIT School of Public Health’s mandate is to (i) provide student centric and world class quality teaching for the in service candidates and fresher,(ii) undertake evidence based research, and (iii) facilitate service provision to the community through local, national and international collaboration. Currently KSPH is implementing multiple projects on contemporary public health topics in collaboration with several agencies national and international.

KIIT School of Public Health (KSPH) is also in the process of establishing collaboration with the Universities/ Institutions/ Schools of Public Health in Asia-Pacific region and other regions for innovations, joint-research and student-faculty exchange program.

KIIT School of Public Health (KSPH) is launching its Master of Public Health (MPH) program from the academic year 2017-2018 and onwards, in order to prepare the next generation of public health professionals, managers, health policy makers, public health practitioners, research leaders and academicians. Student oriented MPH program is aimed at providing knowledge and skill in core subjects of public health as well as encourage students to choose elective courses in their field of interest in public health. This course is offered by KIIT Deemed to be University.

Continuing the tradition of cent percent placement of KIIT Deemed to be University, KSPH is also exploring collaboration with national, state and international agencies for facilitating placement.

Training at KSPH emphasizes learning by practice and solving problems not only at the classroom, but also at the community, health facility and health system level. KSPH provides a platform to identify and design the solution for Public Health Problem by joining the hands with different experts like Biotechnologist, Sociologist, Community Medicine, Pediatrician, Obstetric & Gynecologist, Rural Management experts etc.

KSPH envisages preparing Public Health Experts of different domains such as epidemiologists, health behavior scientists, health systems experts, health management and health policy experts, health economists, health communication

specialists, environmental health specialists, occupational/industrial health and safety specialists, etc.

Master of Public Health (MPH) Program

The Master of Public Health (MPH) program at the KIIT School of Public Health, Bhubaneswar, is offered from 2017-18 academic year (begins in July) by KIIT Deemed to be University. The MPH program at KSPH is a competency based teaching program that prepares students to stand out among future public health professionals. This is a two years 4 semester and credit based full time course. The candidates have to complete all the 14 core and one elective module of their choice during first three semesters. Fourth semester is devoted for dissertation work and internship. The students have to start preparing their research topic during second semester and submit study protocol with necessary approval in 3rd semester. A total of 87 credits offered in four semesters.

This document outlines the curriculum of MPH offered by KIIT Deemed to be University. The curriculum has been prepared by a consultation process with subject experts both within and outside the KIIT Deemed to be University.

Objectives of MPH Program

Overall objective of the MPH Program is to prepare competent public health professionals who can (i) assess the public health needs and problems, (ii) find solutions to the problems and develop strategy and to (iii) efficiently and effectively manage, lead, implement and evaluate public health program in India and other countries, through evidence based practice of the profession.

Programme Educational Objectives (PEOs):

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

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

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

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

Programme outcomes (PO):

Public health graduates will be able to:

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

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

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

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

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

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

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

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

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

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

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

Programme Specific outcomes (PSO):

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

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

PSO3. Apply appropriate epidemiological methods in public health practice.

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

Uniqueness of MPH Program at School of Public Health, KIIT Deemed to be University:

1. A **competency based teaching program** that prepares students to stand out among future public health professionals.
2. **Combination of Conventional and Modern Pedagogy:** Lectures, small group discussions, independent class and home work assignments, simulations, debates, case studies, role playing, demonstrations, experimental learning activities, instructional technologies using slides, videos, case presentations, use of ICT methods and collaborative learning work to enable students to participate and apply what they have learned.
3. A strong foundation in public health is built in the first semester
4. Interdisciplinary teaching.
5. 14 core subjects and one elective subject of their choice.
6. Practicum opportunity in the field.
7. Hands on training at health facilities, community-based public health programs, disease prevention and control programs, national and international health agencies, non-governmental organizations (NGO).
8. Faculty guide assigned to each student to guide in thesis as well as practical work
9. **Mentorship:** Each faculty will be responsible for at least 3-5 students. The mentorship includes close interaction with the students and solving their education related problems
10. Building of soft skills like writing, presentations, group discussions.
11. Seminars and journal clubs.
12. Leadership and communication training.
13. opportunity to do research work & write a thesis
14. Analytical skills will be developed through, epidemiological and statistical exercises, journal clubs, case studies.
15. Reputed guest faculty
16. Opportunity to participate in institutional and community-based research projects.
17. Encouragement for participation and presentation of papers in national and international training workshops / seminars / conferences.
18. Attractive career path for health professionals with academic and research possibilities.

Features of MPH Curriculum (total 87 Credits)

A. The 14 compulsory/core courses are:

1. Foundations in Public Health (4 credits)
2. Epidemiology and Biostatistics(4 credits)
3. Demography and Population Health(2 Credits)
4. Social and Behavioural Science in Public Health (4 Credits)
5. Environmental and Occupational Health (4 Credits)
6. Health Communication and Health Promotion (3 Credits)
7. Research Methodology (2 Credits)
8. Health Policy and Health Program Management (4 Credits)
9. Reproductive and Child Health (4 Credits)
10. Communicable and Non-communicable Diseases(4 Credits)
11. Global Health (3 Credits)
12. Ethics in Public Health and Public Health Laws (3 Credits)
13. Food and Nutrition in Public Health (3 Credits)
14. Public Health Needs of Specific Population Groups(3 Credits)

B. Departmental Elective Courses(Students to choose any one out of these)

1. Technology and Public Health (3 Credits)
2. Mental Health(3 Credits)

3. Hospital Administration (3 Credits)

C. Practicum (10 Credits)

D. Seminars & Field Work (10 Credits)

E. Dissertation and one paper publication in Index journal (15 Credits)

F. Internship (2 Credits)

G. Other research related teaching

Journal clubs

Writing skills through assignments and paper publications

Semester wise break up

SEMESTER - I

Theory							
Sl. No.	Course code	Subject	Contact Hours per week				Credit
			L	T	P	Total	
1	PE6001	Foundations in Public Health	3	1	0	4	4
2	PE6003	Epidemiology and Biostatistics	3	1	0	4	4
3	PE6005	Demography and Population Health	1	1	0	2	2
4	PE6007	Social and Behavioural Science in Public Health	3	1	0	4	4
5	PE6009	Environmental and Occupational Health	3	1	0	4	4
Total Theory						18	18
Practical							
1	PE6091	Epidemiology and Biostatistics	0	0	3	3	2
2	PE6093	Environmental and Occupational Health	0	0	3	3	2
Total Practical						6	4
Sessional							
1.	PE6081	Seminar	0	0	2	2	1
2.	PE6083	Field Work	0	0	3	3	2
Total Sessional						5	3
Total Practical & Sessional						11	7
Semester Total						29	25

L=Lecture, T=Tutorial, P=Practical, FW=Filed Work (Sessional), DW = Dissertation Work

SEMESTER - II

Theory							
Sl. No.	Course code	Subject	Contact Hours per week				Credit
			L	T	P	Total	
1	PE6002	Health Communication and Health Promotion	2	1	0	3	3

2	PE6004	Research Methodology	1	1	0	2	2
3	PE6006	Health Policy and Health Program Management	3	1	0	4	4
4	PE6008	Reproductive and Child Health	3	1	0	4	4
5	PE6010	Communicable and Non-communicable Diseases	3	1	0	4	4
Total Theory						17	17
Practical							
1	PE6092	Reproductive and Child Health	0	0	3	3	2
2	PE6094	Communicable and Non-communicable Diseases	0	0	3	3	2
Total Practical						6	4
Sessional							
1.	PE6082	Seminar	0	0	2	2	1
2.	PE6084	Field Work	0	0	3	3	2
Total Sessional						5	3
Total Practical & Sessional						11	7
Semester Total						28	24

Note: Students can undergo study tour or summer training (optional) at the end of Semester-II

N.B.: Theory : 1credit = 1 contact hour per week

Practical/ Field work (Sessional): 1 credit = 2 contact hours per week

: 2 credit = 3 contact hours per week

L=Lecture, T=Tutorial, P=Practical, FW=Filed Work (Sessional), DW = Dissertation Work

SEMESTER - III

Theory							
Sl. No.	Course code	Subject	Contact Hours per week				Credit
			L	T	P	Total	
1	PE7001	Global Health	2	1	0	3	3
2	PE7003	Ethics in Public Health and Public Health Laws	2	1	0	3	3
3	PE7005	Food and Nutrition in Public Health	2	1	0	3	3
4	PE7007	Public Health Needs of Specific Population Groups	2	1	0	3	3
5		Departmental Elective	2	1	0	3	3
Total Theory						15	15
Practical							
1	PE7091	Food and Nutrition in Public Health	0	0	3	3	2
Total Practical						3	2
Sessional							
1.	PE7081	Seminar	0	0	4	4	2

2.	PE7083	Field Work	0	0	3	3	2
Total Sessional						7	4
Total Practical & Sessional						10	6
Semester Total						25	21

LIST OF DEPARTMENT ELECTIVES (choose any one subject)

Sl. No.	Course code	Subject	Credit
1	PE7009	Technology and Public Health	3
2	PE7011	Mental Health	3
3	PE7013	Hospital Administration	3

Note: Each student has to select any one of the above Elective course. There is no practical or field work for the electives.

N.B.: Theory : 1credit = 1 contact hour per week

Practical/ Field work (Sessional) : 1 credit = 2 contact hours per week

: 2 credit = 3 contact hours per week

L=Lecture, T=Tutorial, P=Practical, FW=Filed Work(Sessional), DW = Dissertation Work
SEMESTER - IV

A. Dissertation Work

B. Internship

A. Dissertation Work							
Sl. No.	Course code	Subject	L	T	DW	Total	Credit
1	PE7082	Dissertation / Capstone Research	0	0	15	15	15
Total						15	15

B. Internship/Public Health Field Experience							
Sl. No.	Course code	Subject	L	T	DW	Total	Credit
1	PE7084	Internship	0	0	0	0	2
Total						0	2

L=Lecture, T=Tutorial, P=Practical, FW=Filed Work(Sessional), DW = Dissertation Work

Note:

- Total MPH course credits = 87 credits in 4 semesters.
- **Dissertation:** Students shall select an acceptable type of projects (Case study, policy analysis, descriptive study, analytical study, program evaluation, experiment- Randomized or otherwise, innovative approaches etc) for MPH dissertation during early part of their 3rd semester in consultation with the assigned Guide, get it approved by the departmental dissertation approval committee, and start the study in the beginning of the 4th semester. Dissertation duration is 5 - 6 months in the 4th Semester. The student shall follow the dissertation project guidelines, stick to the time line, follow the standard dissertation format and submit before the given deadline. In addition students have to publish at least one paper in Index journal.

- **Internship:** Students shall undergo one month internship at any reputed local, national or international agency, NGOs or Government of their choice to acquire practical experience in public health practice. They have to maintain the internship diary. After completion of the internship, students shall submit the internship diary duly certified by the respective supervisor of the organization where they did the internship. Students also shall appear in an interview with assigned Faculty of KIIT School of Public Health regarding the work done during the internship.
- **Field Work:** Specific hours for field work will be mentioned in the timetable.
- **Mentorship:** Each faculty will be responsible for at least five students. The mentorship includes close interaction with the students and solving their education related problems.

Examination, Evaluation & Grading

1. Rules of Examination:

1.1. The MPH programme shall consist of the following items:

- Theory
- Practical
- Sessional

1.2. At the end of each semester, there shall be an examination called End-Semester Examination

1.3. If a student fails in a subject in 1st or 2nd semester, a Supplementary Examination will be conducted in the early part of next academic session. However, if a student fails in 3rd semester, a back paper examination will be conducted for him/her during the end of 4th semester. If a student fails in the dissertation, he/she shall be evaluated after 6 months of time.

2. **Evaluation of Course Items:** The evaluation of course items listed in Section 1.1 shall be done as per the following guidelines:

2.1. **Theory:** Each item under this classification shall be evaluated on the basis of 100 percentage points, subdivided in to the following categories:

2.1.1. End Semester Examination – 60 points

2.1.2. Internal Assessment: 40 points

Internal Assessment (of 40 points) comprises of:

- Mid Semester Examination : 25 points,
- Quizzes and Home Assignments: 15 points.

At least 2(Two) quizzes and a number of home assignments shall be given by the course teacher. The pattern of evaluation under each category and the distribution of marks in the quizzes and assignments will be announced by the course teacher in consultation with the Head of the School at the beginning of each semester.

2.2. **Practical:**

Every item under this category shall be evaluated out of 100 percentage points divided under two broad categories:

2.2.1. End semester examination - 40 percentage points.

The evaluation shall be done based on:

- Organization of the experiment/ epidemiological/ statistical exercises/ Case studies - 10 points
- Actual data generated in the experiment/ epidemiological/ statistical exercises/ Case study - 10 points
- Data analysis/ synthesis, interpretation and conclusion etc. - 10 points
- A comprehensive viva-voce about the experiment/ epidemiological/ statistical exercises/ Case studies - 10 points.
- Viva-voce will consist of a jury of faculty members (including subject teachers + 1 external Non - subject teacher). 10 points will be distributed as Fundamentals -5 points, Analysis and interpretation - 5 points)

2.2.2. Practical Sessional : 60 percentage points

The distribution of the points will be done on the basis of the following:

- Attendance and conduct while performing the test/ exercise/case study - 10 points
 - Record File - 10 points
 - Basics - 10 points
 - Application of Techniques/execution - 10 points
 - Analysis and interpretation - 20 points.
- 2.3. Sessional** (out of 100 percentage points) - Items include Field visits/surveys/ quantitative and qualitative data collection, field practice and training/ Seminars/ Journal Club / presentation of papers at conferences etc. There will be no formal end semester examination of the written kind.

The evaluation shall be done internally through a Departmental Committee appointed by the Head of the School.

2.3.1. For Items conducted outside the School of Public Health:

Assessment will be made by the Supervisor's assessment of the report submitted by the student, participation and attendance and viva-voce conducted by the committee constituted by the Head of the School of Public Health.

2.3.2. For items conducted in the School of Public Health: Items such as Seminars, Journal Clubs shall be evaluated as below:

- (i) Evaluation of seminar: Student will choose a Seminar topic of public health importance in a given semester. They have to make the manuscript, PPT and seminar should be presented in front of two internal evaluators. The marks will be distributed based on chosen topic, preparation of slides, presentation skills, content, response to questions and attendance in the seminar presented by fellow students.
- (ii) Evaluation of Journal Club: Students will choose a recently published journal article from a high impact journal in relation to the modules covered in a given semester. They have to make PPT and it should be presented in front of two internal evaluators. The marks will be equally distributed across the domains such as abstracting skill, presentation skill, discussion and critical appraisal.

2.4. Evaluation of Dissertation:

Dissertation write up as well as viva-voce will be evaluated by internal as well as external examiners. Distribution of points will be: 60 points for work done (Background, literature review, research question/hypotheses, objectives, Methods, quality of data, data analysis and interpretation, discussion and conclusion), 20 points for report writing skills, and 20 points for defense and viva-voce.

2.5. Evaluation of Internship:

Work done during the Internship will be evaluated on the basis of the Internship diary submitted by the students and the interview for the work done by the faculty assigned to the student by the Head of the School of Public Health.

3. Grading & Performance Index:

Grading System: A seven point grading system (GS) on a base of 10 is followed for grading in the examination categorization of these grades and their correlation shall be as below

Qualification	Grade	Score on 100	Point
Outstanding	'O'	100 to 90	10
Excellent	'E'	89 to 80	9
Very good	'A'	79 to 70	8
Good	'B'	69 to 60	7
Fair	'C'	59 to 50	6
Below average (Pass)	'D'	49 to 40	5
Failed	'F'	Below 40	2

CREDIT POINT = CREDIT X POINT for each Course item.

CREDIT INDEX (CI) = \sum CREDIT POINT of all course item in a semester.

SGPA : Semester Grade Point Average (**SGPA**) = CI / \sum CREDITS (for a semester) is the credit weighted average of grade points earned in all the subject items in a Semester. It indicates the performance level of a student in a particular semester.

CGPA : Cumulative Grade Point Average (**CGPA**) = $[\sum CI \text{ of all previous semesters up to current semester }] / [\sum \text{ CREDITS of all previous semester up to current semester }]$. It indicates the current performance level of a student.

The medium of the instruction of the university is English.

4. Attendance:

If a student's attendance in a subject item falls below 75%, he/she will be debarred from appearing in the end-semester examination in that subject item.

5. Pass/ Fail in an individual course:

- 'D' will be the minimum pass grade. Below that would be the Fail, i.e. 'F' grade.

6. Degree Requirement:

For award of the degree the student has to secure minimum CGPA of 6 and should have secured minimal grade 'D' in all the subjects.

COMPREHENSIVE SYLLABUS

In order to generate competent public health professionals, KSPH primarily focuses on imparting knowledge, skill and attitudes among students. KSPH envisages each module in the MPH programme should be able to meet core competencies required for a public health professional to effectively deliver the job responsibilities shouldered by him/her .

KSPH offers 14 core and one elective module to be chosen from 3 electives offered over three semesters (total 15 modules). Fourth semester is completely devoted to dissertation and internship. Out of 15 modules, 5 modules covered each in 1st, 2nd and 3rd semester. Out of 3 departmental elective modules offered in 3rd semester, students can choose any one module as elective.

SEMESTER-I

PE6001 - Foundations in Public Health

Course Outcome:

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

1. Define Public health & its scope
2. Recognize core functions, essential services and core competencies in public health
3. Describe the Indian healthcare delivery system,
4. Utilize the principles and practices of public health in different resource constraint scenario

Unit I: Introduction to Health, Public Health and Health Systems:

- Concept of health, well-being and disease, Determinants of health, Natural history of disease, disease burden, measurement of health – mortality and morbidity e.g. PQLI, HALE, HDI etc.; health indicators, developing and developed country comparison, rural urban comparison, inequity in health across geographic and socioeconomic strata, health and development.
- Public Health - Definition, history, scope, multidisciplinary nature, public health domains, core functions – assessment, policy development and assurance; essential public health services, achievements of public health, new public health, global health.
- Public Health professional - Duties and responsibilities, competencies and scope.
- Prevention : Body Immune Mechanism – Individual & herd immunity; Different levels of prevention – primordial, primary, secondary and tertiary, high risk and population approach;
- Concept of health promotion, life expectancy ,prolonging life,
- Rural and Urban Health, primary, secondary and tertiary health care, Health for all, MDGs & SDGs, health disparity, universal health coverage.
- Concept of health care and health care delivery system in India and other selected countries.
- Health of vulnerable population
- Contemporary issue in public health.

Tutorial

- Gender & vulnerability assessment using WHO tools & case studies

Field Work:

- Introduction to urban and rural community and health facilities
- Assessment of perception of health & well-being

Unit II: Public Health Practice:

- Principles of Public Health Practice; Public health approaches - Population-based and risk approach, Medical policing, Social justice; Surveillance; Public health emergencies and preparedness - Disaster management (natural, man-made), Outbreak response, Epidemic investigations and control, Bio-terrorism.
- Public Health practice in primary, secondary, tertiary level health care and international health.
- Public health practice in health promotion and disease prevention.
- **Disaster Management:**
 - **Introduction to Disaster:** Definition, Concepts ,types of disaster- Natural , Man-made, Social, economic, political, developmental, health impacts of disaster, refugee and gender issues, issues of human resettlement and rehabilitation issues, Principles of disaster management, risks and vulnerabilities,
 - **Public Health issues in Disasters:** Environmental health(Water, Sanitation, Hygiene, Vectors, disposal of dead bodies), Injuries, Communicable diseases control, Epidemics, Immunization, Nutrition, psychological effect, direct impact on health systems(damage to physical infrastructure, loss of personnel), Emergency risk communication, working with media.
 - **Disaster Preparedness :** Hazard, risk and vulnerability assessments and risk reduction, Response mechanisms and strategies Preparedness plans, Coordination, Information management, Early warning systems, Resource mobilization, Public education, training, & rehearsals, mock drills, Community-Based disaster preparedness
 - **Disaster Risk Management In India:** Hazard and Vulnerability Profile India,, Disaster Management Indian scenario, National Policy on Disaster Management(2009). Disaster Management Act 2005 and Policy guidelines, Institutional Framework, National, State and districts, National Institute of Disaster Management, , National Disaster Response Force (NDRF)National Disaster Management Authority(NDMA), States Disaster Management Authority, District Disaster Management Authority, National and International Players, collaboration and partnership

Field Work:

- Visit to state Disaster Management Authority
- Visit to state IDSP & Disease Surveillance Unit

Tutorial:

- Analysis of Surveillance Data
- Case studies and best practices in Disaster: Cases Studies and Best practices in Disaster Management: Bhopal Gas Disaster, Gujarat Earth Quake, Odisha Super-cyclone, south India Tsunami, Plague Surat, Heat waves of AP&Odisha etc.

Unit III: Developments in Public Health:

- Public Health Laboratory - Need, case load based, certification of standards, Lab network and linkage,
- Innovations in public health: Scope and examples.
- Technology application in PH – Biotechnology (Screening, Investigation, Biomedical devices, implants, and materials, diagnostic and therapeutic); Medical equipments; rapid diagnostic tests, digital health.
- Telemedicine; GPS, GIS use in public health; Use of Computers in Health and Statistical software.
- e-health, m-health etc applications

Field Work

- Visit to Public Health Laboratories
- Visit to telemedicine centre

Tutorial:

- GPS based study (mapping of health facilities, household, patient, ambulance services)

Unit IV: Public Health Leadership

- Definition, type and leadership attributes.
- Key leadership competencies
- Policy, advocacy, effective communication
- Change process and its application in the organization
- Team building, negotiation and conflict management skills.
- Decision making.
- Community health safety, emergency preparation and response
- Collaboration and partnership.

SEMINARS - 2**Text Books:**

1. Oxford Textbook of Public Health 5th edition, 2009, The Practice of Public Health, Vol. 1. Author(s): Detels, Roger; Beagle hole, Robert; Lansang, Mary Ann; Gulliford, Martin. Oxford University Press (OUP), Chapters 1 & 2.
2. Park's Textbook of Preventive and Social Medicine, 23rd Edition, (2017). K.Park. Banarsidas Bhanot publishers.

References:

1. Gender analysis in health: a review of selected tools by WHO. Available at <http://apps.who.int/iris/bitstream/10665/42600/1/9241590408.pdf>
2. Concepts in Health and Wellness by James Robinson, III & Deborah J. McCormick. (2011). Delmar Cengage Learning.
3. District Laboratory Practice in Tropical Countries by Monica Cheesbrough (2005 edition) Cambridge University press

Journals: Relevant article from:

1. Indian Journal of Public Health
2. Asia-Pacific Journal of Public Health
3. Indian Journal of Community Medicine
4. Lancet Public Health

SEMESTER - I

PE6003 - Epidemiology & Biostatistics

Course Outcome:

By the end of this course, the student will able to:

1. Define epidemiology and appreciate its importance in public health practice
2. Measure disease burden in the community using epidemiological methods
3. Design appropriate epidemiological study in a given scenario
4. Apply basic principles and methods of epidemiology in analysing public health problems and suggesting appropriate intervention
5. Appreciate key bio statistical concepts and reasoning
6. Use, analyse, interpret and present public health data
7. Use statistical software for data entry, data processing and data analysis

Unit I: Introduction to Epidemiology-

- Definition and objective of epidemiology, History and Evolution of epidemiology, Epidemiology Triangle, Scope and uses of epidemiology and prevention, Epidemiology and Clinical Practice, epidemiologic approach(asking questions and making comparisons), achievements in epidemiology.
- Distribution and determinants of disease
- The Dynamics of Disease transmission - mode of transmission; clinical and subclinical diseases, carrier status; concept of endemic, epidemic, pandemic, disease outbreak & its determinant; herd immunity, incubation period, latent period, lead time, attack rate, occurrence of disease, outbreak investigation.
- The natural history of disease: ways of expressing prognosis - CFR, Person Years, Five year survival rate, observed survival, Kaplan-Meier method, life tables, Lead-time bias, median survival time, relative survival, generalizability of survival data
- Measurements in Epidemiology(morbidity, mortality , disability) - Incidence and prevalence, Usage of rates , ratios and proportions, methods of direct and indirect standardization, quality of life, Measures of mortality, comparison of mortality in different populations.

Unit II: Epidemiologic study designs and methods

- Disease/Cause identification - Cross sectional, longitudinal studies, analytical and experimental studies
- Case control studies and Cohort study designs; Estimating risk - absolute risk, relative risk, Odds ratio, attributable risk, population attributable risk; Deriving inference from epidemiological studies - approaches, association and causal relationship, Bias, Confounder & Interaction, guidelines - Hill's criteria, Sufficient cause model, Genetic and Environmental factor in disease causation.

- Assessing the efficacy of preventive and therapeutic measures: randomized trials, blinding, concurrent parallel study designs, cross over study designs, clinical trials, preventive trials, Non-randomized trials(uncontrolled trials, natural experiments, Before and after comparison studies
- Assessing validity and reliability of diagnostic and screening tests - biologic variation of human population, validity of screening tests, use of multiple tests, predictive value of tests, relationship between validity and reliability
- Evaluation of health services and Public Policy
- Ethical and Professional Issues in Epidemiology
- Concepts of disease control, elimination and eradication

Unit III:Special Topics:

- Surveillance
- Use of Secondary data
- Ecological studies
- Introduction to clinical epidemiology, environmental epidemiology, Social epidemiology, Nutritional Epidemiology, Infectious disease epidemiology, genetic and molecular epidemiology.
- Meta analysis and systemic review.

Unit IV: Introduction to Biostatistics

Meaning of Statistics, Statistical methodology, Branches of Statistics-Bio-Statistics, Vital Statistics, Health Statistics, Application of Statistical Methodologies in Public Health Management Basic Concept sin Biostatistics: Data - its presentation & measurement

- Data: Definition and Types of data, Different scales of data measurement, Different methods of data collection, Merits and demerits of data collection methods under different situations , Classification of morbidity, mortality and socio-economic data
- Presentation of Data: Tabulation of data, Graphical presentation of data (Need and uses, Types of diagrams, bars, pie chart, line diagram, histogram, frequency polygon, frequency curve, Ogives)
- Measuring variation/dispersion of data: Mean, Median and Mode for raw data, Merits and Demerits, Calculation of Measures of Central tendency-ungrouped and grouped data (Calculation and interpretation of Range, Percentiles, Quartiles, Standard deviation and Co-efficient of variation- both ungrouped and grouped data)
- Probability : Concept of probability, Probability distributions and their applications in Public health management, Normal distribution, Binomial distribution, Poisson distribution, Standard error of mean, difference of means, proportion and difference to two proportions
- Sample and sampling techniques: Types of surveys, their role in Public health management, Planning of surveys, Concept of sampling, Use of random number tables for selection of samples, Different Sampling designs, Calculation of sample size for field surveys
- Testing of hypothesis: Concept of Sampling variation, Tests of significance Z-test, t-tests, Chi square test and Important Non-parametric tests, Pearsonian Correlation and Regression as prediction techniques, Introduction to Multivariate Correlation and Regression, Logistic Regression, Odds ratio and their applications in Public Health, Life table technique and Survival analysis, Introduction to Planning of Research studies

- Introduction to Statistical Software
 - Data entry into software (Excel, Epi-Data, SPSS, Epi-Info)
 - Data Analysis using software SPSS, R

Practical:

- **Epidemiological Exercise** : epidemiological data analysis – distribution & determinants, study design, Risk estimation, outbreak investigation, analysis & interpretation of routine surveillance data like HMIS
- **Statistical exercises** : Core exercises ,Software based(excel, SPSS)

Text Books:

1. Leon Gordis (5th Edition, 2014) , Epidemiology, Saunders (Elsevier Inc) Publication
2. Basic epidemiology by World health Organization, Ruth Bonita, Robert Beaglenole, Tord, Kjell Storm, 2nd Edition 2007, WHO
3. Mahajan B.K: Methods of biostatistics for Medical Students and Research Workers, 8th Edition, Revised and edited by Arun Bhadra Khanal, The Health Science Publisher, New Delhi
4. Hill A.B : Principles of medical statistics, Oxford University press, New York

Journals: Relevant articles from:

1. International Journal of Epidemiology
2. Journal of Epidemiology and Community Health

SEMESTER – IPE6005 - Demography and Population Health

Course Outcome:

By the end of this course, the student will able to:

1. Appreciate the basic demographic concepts and its scopes,
2. Measure the demographic processes
3. Appreciate the population policies and its impact on society
4. Appreciate different population health issues
5. Apply the tool and technique to design and conduct demographic survey

Unit I: Introduction to Demography/population science

- Demography and health: Definition, Measures of demography – CBR, TFR, IMR, MMR, life expectancy, etc. Ageing; demographic composition, Vulnerable population- mother and child, Low SES – poverty, migrant, tribal, victims of war, refugees, disasters, street children, gender disparity.
- Scope, evolution, classification and importance of population science in relation to public health; Demographic composition, Demographic processes- birth, death, marriage, migration, social mobility; Demographic theories - Malthusian Theory, Optimum population Theory, Demographic Transition theory and population explosion, its impact on health etc.

Field Work: Family Study – structure & socio-economic status & its health implications

Unit II:Measurements in Demography, Concept of Fertility and Population data sources

- Rates & Ratios, Mid-Year Population, measures of fertility and Mortality (CBR, TFR, IMR, MMR), determinants and differentials across states and some selected countries, life expectancy, Life table concepts
- Concepts of Fertility- Fecundity & fertility, Sterility-Primary, Secondary, abortion, natural fertility- biological limits and social determinants, Physiological factors, role of Social and cultural factors of fertility, levels trends and differentials in fertility.
- Sources of population data - Indian Census: Historical view, salient features of Indian censuses; Vital Statistics: Registration of births, deaths Marriages- Act 1966; National Sample Survey (NSS); National Family Health Surveys (NFHS-I, II, III and IV); U.N Demographic year book. (Annual)

Tutorial: Demographic indicators assessment from secondary data (for developed and developing countries)

Unit III: Population Growth, Distribution & Mortality

- Population pyramid and Characteristics: Age, Sex distribution; Marital Status: age at marriage & Public Health Concerns; Sex ratio - causes & consequences; Caste & Religious distribution of Population.
- Critical review of World Population Growth- Regional distribution & its impact; Population Growth & distribution in India & states;
- Mortality, Expectation of life at birth Infant mortality, determinants of trends, differentials-India, States & Selected Countries: Age & Sex differentials in mortality - trends causes of death, Patterns; Causes of mortality decline- developed & developing countries focusing on Indian experience, AIDS-future prospects.
- Health of Vulnerable Population mother and child, Low SES, migrant, urban poor - homeless, pavement dwellers, street children, tribal, victims of war, disasters, gender disparity, elderly people.

Tutorial : Demographic transition & Health vulnerability assessment

Unit IV: Population policy and welfare programme

- Family Planning Programme - Global and Indian prospective, Critical review of programmes, achievements, management , Methods of Birth Control - male ,female methods, Mechanical, Chemical, Natural and other methods, Medical Termination of Pregnancies
- Act, Post-legalization Scenario in India; Population policy-India and China- One Child Policy, 2 child policy- consequences, role of immigration in contemporary world.

Tutorial : Family planning methods

Field visit: KABP study on family planning methods in the community

SEMIANRS - 2

Text Books:

1. Bouge Donald: Principles of Demography, John Wiley & Sons, New York

2. Asha A Bhende & Thara Kanitkar: Principles of population studies, Himalaya Publishing House.
3. Park K: Text book of preventive and social medicine, M/s Banarasidas, Jabalpur
4. Cox P.R: Demography, England. Cambridge University Press; 5 edition (1976)

Journals: Relevant articles:

1. Fertility and Sterility
2. Journal of Reproductive Health and Medicine

SEMESTER – IPE6007 - Social and Behavioral Sciences in Public Health

Course Outcome:

By the end of this course, the student will able to:

1. Appreciate socio-economic determinants of health
2. Appreciate factors affecting human behavior
3. Apply socio-behavioural model in designing public health interventions
4. Appreciate social welfare programmes in India

Unit I: Introduction to society and social and behavioral health:

- **Society-** types of society, Family- types, Social institutions- marriage, family trends, political, religious, economic; Social mobility; Social control mechanism, Social change - planned and unplanned; Industrialization, urbanization and modernization; Social pathology in relation to public health, Social problems - Crime; Slums; Delinquency; Alcoholism; Drug addiction, Prostitution; Beggary; Mental disorders, Domestic and gender violence, Child abuse, Female infanticide.
- **Introduction to social and behavioral health:** Socio-economic determinants of health, Importance of social, psychological, cultural and behavioral factors in public health; Historical perspectives on population and diseases; Social epidemiology; Social ecological web, applied medical anthropology, health seeking behavior, Social medicine

Unit II: Health and illness behavior:

- Health and illness behavior in developing countries, Social and cultural context of health, Diffusion of innovation and social marketing, Social reaction to diseases; Comparative health cultures; Health disparities, Diversity and cultural competencies; Deviance and social control
- Nurturing healthy behavior development (for future generation)
- Health Behavior Change at the Individual, Household, and Community Levels

Field visit: Perception & self efficacy assessment in relation to WASH programme

Unit III: Theories of Behavior Change:

Defining theories of Behavior change, Key elements(Threat, fear, response efficacy, self efficacy, barriers, benefits, subjective norms, attitudes, intentions, cues to action, reactance) and process of behavior change, Major theories of behavior change and models: Health belief model, Social cognitive theory, Theory of planned behavior; Transtheoretical (Stages of change) model etc. and their applications with examples.

Tutorial : Situation based applicability of different health behavior models/theories (case studies based)

Unit IV: Social Welfare policies and Programs:

Global and Indian Context, Social welfare agencies , List of social Welfare programs in India and its impact on health:

Tutorial : Review of geriatric/MH/CH/Maternal health/Immunization health policies in India

SEMIANRS - 2

Text Books

1. Essentials of health behavior: Social and behavioral theory in public health by Mark Edberg. Jones and Bartlett publishers (2013)
2. Health Psychology. Theory, Research and Practice, Third Edition by David F. Marks, Michael Murray, Brian Evans, Emeé Vida Estacio. Sage Publications (2011)

References:

Theories of Behaviour Change : World Bank; documents.worldbank.org

SEMESTER -I

PE6009- Environmental and Occupational Health

Course Outcome:

By the end of this course, the student will able to:

1. Identify the current environmental health problems and its mitigation strategy
2. Apply different methods for environmental risk assessment and its prevention measures
3. Appreciate various environmental protection laws and policies
4. Identify occupational health and safety issues in workplace and suggest appropriate interventions

Unit I: Fundamentals of Environmental Health:

- Definition, components (physical, biologic and social)
Ecosystem, Climate, Links between environment and human health. Global climate change, Deforestation, soil degradation, Loss of bio-diversity, Impacts of environmental degradation on health; Environment role for health, human activities affecting environment,
- Green revolution, Food security, Role of chemicals and fertilizers on health, Food products, Food borne illness, Water logging, shifting of agricultural practices based on water availability,
- urbanization and adequacy of sewerage, Housing, overcrowding, social anatomy of habitations,
- Climate change, green house effect, carbon foot print, carbon credit; renewable energy,
- Health hazards of Pesticides

Unit II: Water, Air, Light, Heat, Noise, Radiation & Housing

- **Water:** Properties of water, Hydrological cycles, Uses of water, Water resources- Sources of water supply, Water and health, Water shortage and scarcity, Sources of drinking water; Water pollution: Definition, types of pollution, sources of pollution, Water related diseases
- Purification of water in Large and small scales: storage, filtration and disinfection Chlorination,
- Water quality criteria and standards: Physical, inorganic constituents, Microbiological aspects: Bacteriological, Virological and other biological aspects, Chemical aspects, radiological aspects, monitoring of drinking water quality and quality assessment methods., Water quality in Health facilities
- Surface water drainage in urban areas,
- **Air:** Composition, Atmosphere and methods of dispersion, Chemical and physical characteristics; Air pollution: air pollutants, Outdoor and indoor air pollution , Health implications of air pollution, Prevention and control of air pollution, Ventilation, monitoring of air pollution
- **Noise:** Properties, health effects of noise, control, and regulations.
- **Heat, cold and Radiation:** sources, types, and health effects of radiations, heat wave and heat strokes, frost bites
- **Light:** natural and artificial, criteria for good lighting, health effects of bad lighting.
- Public health importance of air, noise, light, heat ventilation and radiation;
- **Housing:** Healthy housing, Health impact of Overcrowding – Physical and social. Light and ventilation

Practical: Water quality analysis, indoor pollution assessment, Air quality assessment

Field Visit: Visit to State Pollution Control Board/Water purification & supply facility

Unit III: Disposal of Wastes

- Solid Waste: Definition and characterization of municipal solid waste, Sources of waste/ refuse, Collection and disposal of solid waste; Management of solid waste: Dumping, landfills, incinerator, composting manure pits, burial etc.,
- Excreta disposal: open defecation, public health importance, extent of problem, transmission of faecal- borne diseases, Sanitary barrier, Biological Oxygen Demand(BOD), Methods of excreta disposal unsewered, septic tank and sewerred areas, Sanitary latrines, Modern sewage treatment
- Management of wastes from health care activities: Definition and characterization, segregation, storage, transport, treatment and disposal methods. Health safety practices by health care providers and waste workers, Hospital Hygiene and infection control. Guidelines for safe management.
- Hazardous waste: Definition, sources of hazardous waste; Management and disposal of hazardous waste
- Sanitation: Sanitation and excreta disposal: fairs, festivals and public gathering; Types of latrines. Excreta disposal- public health importance

Field Visits:

- Visit to municipality solid and liquid waste disposal system
- Visit to hospital waste disposal system

UnitIV: Risk assessment and environmental Health Laws

- Environmental risk- characteristics, Development of risk analysis, Tools of risk analysis, Process of risk analysis, Hazard identification, Risk management and communication, Risk perception, Environmental health laws and compliance, Monitoring and impact; Environmental Biomarkers, Emerging global environmental health problems, Risk Mitigation

Unit V: Occupational health

- Occupational environment in various settings, Occupational hazards and diseases, Health of specific occupational groups - Sewerage worker, manual scavengers, workplace injuries, exposure to heavy metals, toxic fumes, waste effluence, etc. Prevention of occupational diseases, Health safety measures - promoting wet over dry crushing/pulverization of rocks in quarries, Health hazards of child labor, Health promotion among workforce in agriculture, manufacturing industries, Service sector (Banking, IT, etc.), Ergonomics, Occupational standard and occupational health laws

Field Visit: Visit to organized and unorganized industry sector

SEMIANRS - 1**Text Books:**

1. Essential Environmental Health by Fries, Jones & Bartlett Publishers – 2007
2. Park's Textbook of Preventive and Social Medicine, K.Park. Banarsidas Bhanot publishers

References:

1. Living with the Earth- Concepts of Environmental Health Science- Gary S Morare- Lavis Publications
2. Environmental Science- Toward a Sustainable future - Richard T Wright, Dorothy F Boors PHI learning Private ltd- New Delhi, Pearson Education
3. Environmental Health by Moeller D.W, Harvard University press.
4. New WHO Handbook on Safe management of wastes from health care activities, 2nd edition, 2014, WHO

Journals: Relevant articles from:

1. International Journal of Behavioural and Health Care research
2. Indian Social Science Review (ISSR)

SEMESTER II**PE6002 - Health Communication and Health Promotion****Course outcome:**

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

1. Enlist factors and barriers of communication

2. Apply tools and techniques for designing effective communication programme
3. Apply theories of health promotion in designing public health interventions
4. Apply theories and tools for promotion of healthy life style

Unit I: Introduction to Health communication

- Principles, process, application, models & elements of communication, factors influencing communication, barriers of communication, IEC, BCC, Information and Communication Technology (ICT)

Tutorial : Examination of various communication materials in health programmes

Unit II: Channels, Techniques, and Strategies

- Channels of health communication - Traditional, Modern; Individual/Group/Mass/ Target groups
- Communication techniques and strategies.
- Communication planning, tools and techniques, monitoring and evaluation, impact assessment

Tutorial : Preparation of audience, strategy, methods & contents of communications for a given health problem

Field Work: Assessment of impact of communications

Unit III: Health Promotion

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

Field Visit: Visit to school/industry to observe health promotion activities

Unit IV:

Propagation of healthy lifestyle

- Emerging lifestyle diseases, Women's health in the context of changing socio-economic pattern in India, Current health related messages; Role of media in health promotion - Mass media; Inter personal communication; Role of communication in promoting healthy lifestyle; Cost effective health promotion strategies; Role of corporate in health promotion; Role of internet viz. email, web portals, social media etc. in health promotion; Role of government and private sector in health promotion, Setting based health promotion in schools, work places and community.

Field Visit : Visit to Wellness Clinics/Gyms/Yoga centers

Text Books:

1. Oxford Textbook of Public Health 5th edition, 2009, The Practice of Public Health, Vol. 1. Author(s): Detels, Roger; Beagle hole, Robert; Lansang, Mary Ann; Gulliford, Martin. Oxford University Press (OUP), Chapters 1 & 2.
2. Ramachandran & Dharma lingam: Health education – a new approach, Vikas publishing
3. Park K, Park's Textbook of preventive and social medicine, M/s Banarasidas, Jabalpur

References:

1. Banerji D, Poverty, class and health promotion and protection WHO, Copenhagen
2. Health education: creating strategies for school and community health By Glen Gordon Gilbert, Robin G. Sawyer
3. Green A: An Introduction to health planning in developing countries, Oxford University Press

Journals: Relevant articles from

1. International Journal of Health Promotion
2. Journal of Health Communication

SEMESTER II**PE6004 - Research Methodology****Course Outcome:**

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

1. Appreciate different study designs to undertake health research
2. Appreciate ethical issues in research
3. Describe research method
4. Apply tools and techniques to conduct primary research in community and health facility settings
5. Apply tools and techniques to write scientific papers for publication

UNIT I: Introduction

Concept of health science research; Quantitative and qualitative research; Steps in Planning of Research studies in general

- Quantitative Research Methods: Study designs; Role of theory, Cause and effect phenomenon in research and formulation of hypothesis;
- Introduction to qualitative and operational research methods

UNIT-II: Research Methods

- Study Questions, Review of literature;
- Quantitative research methods: Different quantitative methods & its application in public health research
- Clinical trials: Concept, design, different phases of Clinical trial, ethical & regulatory issues

- Qualitative Research Methods: Relevance of qualitative methods in public health research; various methods; Qualitative data analysis.
- Operational Research: Scope of Operation Research in Public Health; Planning and conducting participatory action research in public Health; Introduction to Important Operation Research methods: Systems analysis, linear programming technique, Network analysis, Queuing theory
- Data Collection & Analysis; Dissemination: Publishing findings
- Ethics in research: Conflict of interest and integrity in research; Ethical review process-committees, roles and responsibilities; Evaluation of risk and benefits of research; Ethical reasoning; Ethical issues in public health programmes

Tutorial :

- Preparation of research protocol for a given research question
- Use of computer for research data collection & analysis
- Search for literatures
- Referencing using open software i.e. Zotero
- Quantitative and qualitative research data analysis using computer software programmes
- Application of Research methods with examples
- Writing a research proposal and publishing articles

SEMIANRS - 2

Text Books:

1. Basic Methods of medical Research by Abhaya Indrayan (2013- 3rd Edition). AITBS Publishers, new Delhi
2. Leon Gordis (4th Edition) , Epidemiology, Saunders (Elsevier Inc) Publication

References:

1. Fundamentals of Clinical Trials by Friedman, L.M., Furberg, C.D., DeMets, D., Reboussin, D.M., Granger, C.B. (5th Edition). Springer Publication
2. Flick, Uwe (2010) An introduction to qualitative research (4th edition) Sage, London
[http://dspace.utamu.ac.ug:8080/xmlui/bitstream/handle/123456789/172/LIVRO_Uwe %20Flick%20-%20An_Introduction_To_Qualitative_Research.pdf?sequence=1](http://dspace.utamu.ac.ug:8080/xmlui/bitstream/handle/123456789/172/LIVRO_Uwe%20Flick%20-%20An_Introduction_To_Qualitative_Research.pdf?sequence=1)

Journals: Relevant articles from:

1. Indian Journal of Medical Research
2. Operation Research for health care
3. Qualitative Research Journal(QRJ)
4. British Medical Journal(BMJ)

SEMESTER II

PE6006: Health Policy & Health Program Management

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

1. Describe the process of policy formulation and health and related policy analysis
2. Describe the basic health economics concepts, economic efficiency & evaluation, and health financing
3. Appreciate different health systems across the globe
4. Apply tools & techniques for effective public health program management
5. Enlist important national health programmes of India
6. Describe Indian Health Systems

Unit I: Introduction to Health policy

- Foundations of health policy and Social care policy, Concept of health policy, Normative and value base of health policy; Population policy, drug policy, medical education policy, policy for children, women and weaker section
- Formulation of health policy; Health policy planning process, need assessment, prioritization, peoples participation, decentralization; Health policy analysis; Evidence based policy; Policy communication (Writing), policy implementation
- National health policy; State health policy; Comparison of various international health policy, (USA, UK, Canada, China, France, Thailand); Health policy in the context of market economy;
- Health policy analysis, Current issues in health policy, Health policy and health systems research

Tutorial : Analysis of a given health policy

SEMINARS - 2

Unit II: Introduction to Health Economics & Health financing

- Basic economics and health economics, micro and macro approach health economics; Issues in public health in relation to economics, budgetary issues in public health; Fundamentals- demand, supply, consumption, saving, investment
- National income- GNP, NNP, GDP; Measures economic development, budgeting and allocation for health (percentage of GDP)
- Economic burden of diseases (Direct/Indirect cost), Economics evaluation of health care
- Introduction- equity; Health sector reforms, decentralization; health financing and its sources(National, international), Budget and financial management- Cost effective analysis, cost benefit analysis and cost utility analysis; Economic analysis; low allocation for health sector, ways to improve health financing. Health financing and universal health coverage
- Health insurance: community based health insurance, individual health insurance, and all types of health insurance.
- Models of health systems based on meeting the cost of care - public financed welfare model - NHS (UK), Cuba, Denmark; Self-financed - OOP, Risk pooling, Insurance Based (USA, Medicaid, Medi-claim, Japan, Germany, Canada)
- Partnerships and cost sharing - Public Private Partnership
- Out of Pocket Expenses and Financial security in health care

Tutorial :

- Estimation of Out of pocket expenses, cost-effective & cost-benefit analysis
- Review of sources of health financing in a given country

Unit III: Introduction to health systems

- Health system and its evolution, Challenges in public and private health system
- Various models of health system
- Biomedical model [actors - doctors, nurse, pharmacist, physiotherapist, lab technicians, technicians for ET, OT, ICU, nutritionist, etc.]
- Health determinant model [nutrition, water and sanitation, biostatistics, researchers, health administrators,]
- Socio-political and cultural model - health activist, policy advisors, health economists, insurance, religious leaders, alternative system of medicine
- Financial resource based Self-financed, public financed, Insurance Based - Medicaid, Medi-claim, mixed model
- Comparison of health systems across the globe - United states of America; United Kingdom; Canada; Germany; Russia; Japan; Africa; Sri Lanka, Thailand; Cuba
- Health system reform and development.
- Critical issues in Human resources for health
- **Indian Health systems**
 - Indian Public health care system - India: Primary health institutions (Primary health centers, sub-centers, district hospitals); Secondary health institutions ; Tertiary health institutions/ Research Institutes; State and central government hospitals; Employee State Insurance; Government and public sector undertaking hospitals - railways, defense, mining and coal hospitals, AYUSH
 - Private health care system: Private hospitals, polyclinics; Nursing homes, dispensaries; Private practitioners; Multispecialty hospital and medical college hospitals, RNP, AYUSH Practitioners, Private for profit and not for profit, voluntary organizations and NGOs.
 - Voluntary health agencies and International - Bi-/Multi-lateral agencies
 - Central and state health agencies and organizational structures: Planning at Central, State, District, Block and Village; Union Ministry of Health and Family Welfare; Directorate General of Health Services; Central Council of Health; State Ministry of Health, State Health Directorate; District Health Organization etc;
 - **National Health Programs**
 - Definitions, Vertical and Horizontal program, integration, multi-sectoral approach
 - Programme planning, goal and objectives, strategies, implementation, monitoring and evaluation
 - National Health Mission, different national health programme and disease control programmes in India, Role of Public Health professionals.

Field Visit: Visit to Primary, secondary and tertiary health care facilities, State units of national health programmes

Tutorial : Comparison of health systems between developed and developing countries

Unit IV: Introduction to health management and programme planning

- Principles of Management, Systems approach in health management – inputs, processes, outputs, outcomes and impact
 - Inputs – infrastructure, human resources, finance, medical technologies and medical products, capacity building
 - Process – Policies, Acts, Rules and regulations, SOPs, Guidelines, M&E,
 - Outputs – Service delivery
 - Outcome – Reduction in disease load and improvement in health indicators
 - Impact – Lifespan, development index, happiness index
- Concept of Planning, Planning process, structure, and functions of planning - Planning cycle, project management cycle; Management analysis; Political aspect, economic aspects; Epidemiological base for health planning; Planning tools- log frame, PERT, CPM; Health Planning Models; Discrete Choice analysis
- Health promotional planning; Planning health facilities; Community involvement; Organization structure and process; Monitoring and evaluation; Quality assurance in project management; Health planning in India, five years plans
- Management tools and techniques as applicable to health
- Hospital administration for public health
- Programme and project management-- National and sub-national health programmes – NRHM, UHM, NHM, Project management , Monitoring and evaluation programmes and projects
- Health administration, governance and accountability
- Governance Structures – controlling hierarchy, federal and state governments, departments
- Public health as a cadre, autonomy of nursing cadre for public health
- Public health education and human resource for public health
- Public Health Legislations

SEMIANRS - 2

Text Books:

1. Oxford Textbook of Public Health 5th edition, 2009, The Practice of Public Health. Author(s): Detels, Roger; Beagle hole, Robert; Lansang, Mary Ann; Gulliford, Martin. Oxford University Press (OUP)
2. Park K: Park's textbook of preventive and social medicine, M/s Banarasidas Bhanot, Jabalpur.

References:

1. Strategic Issues and Challenges in Health Management by K V Ramani, Dileep V Mavalankar, Dipti Govil. Sage Publications (2008)\
2. Management in Health Care Practice – A handbook for teachers, researchers and health professionals. Forum for Public Health in South Eastern Europe(2008)
3. Health Economics in India, Himanshu Sekhar Rout, Prasant Panda, 2007
4. Health Economics and Financing by Thomas E Getzen. Wiley; 5 edition (2012)
5. Understanding Health Policy, Sixth Edition (2012) by Thomas Bodenheimer and Kevin Grumbach. Lange Publications
6. A management guide to quality & productivity (1st ed, 2000). By John Bicheno & MR Gopalan. Wheeler Publishing

7. National Health Policy, 2017 and other related policies, Ministry of Health and Family Welfare

Journals:

1. Journal of Public Health Policy
2. International Journal of Health care Management

SEMESTER II

PE6008 - Reproductive and Child Health

Course Outcome:

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

1. Appreciate the sexual and reproductive health issues and services at local, national and global level
2. Describe the adolescent health issues and health programs
3. Describe the child health issues and programs
4. Appreciate determinants for maternal and child health disparities
5. Describe various schemes under RCH programme

Apply tools and techniques to design RCH interventions

Unit I: Introduction to Reproductive Health

- Evolution of MCH services in India; Development of MCH activities in India; The effect of Reproductive pattern on Maternal & Child Health.
- Women's Health: Menarche, menopause, and associated problems and management
- Measures of Reproductive Pattern: Age at Marriage & Maternal Age; No of children born (Parity, Gravidity, birth order) complete family size; Birth Intervals: Pregnancy Spacing preceding and succeeding intervals;
- Measures of Maternal and Child Health-
 - Mortality: Maternal Mortality Rate/Ratios; Infant & Child Mortality; Fetal Loss
 - Morbidity: Maternal complication or illness of pregnancy/delivery; Maternal Nutrition and health; Infant birth weight/Prematurity; Birth defects; Infants/Child Nutrition/ Infections*; *Growth & Development: Height/Weight, Body mass index, Intelligent Quotient (IQ)

Practical: Calculation & interpretation of reproductive health indicators, Interstate & inter-country comparison of indicators

Field Visit: Visit to a functional maternal & child health clinics

Unit II: Child Health

- Integrated child development Services (ICDS)-Organizational structures, Outreach, Critical assessment, Impact
- School Health Programme- Critical Review, objectives & Components, Child schooling and impact on health, Child labor,
- Childhood Disabilities- Problems, types, Causes, Preventive measures, Sources of data, community Rehabilitation.
- Child Immunization

Practical: Calculation & interpretation of child health indicators, Interstate & inter-country comparison of indicators, examination of current immunization status of mother & child and development of immunization schedule

Field Visit: Visit to cold chain systems at different levels

Unit III: Adolescent Health

- Introduction to Adolescent Care, Legal and Ethical issues, Growth and Development,
- Immunization and Infections, Nutrition, Sexual and Reproductive Health, Gender Issues,
- School Mental Health, Endocrine, Respiratory Problems, Neurological Problems

Field Visit:

- State unit of ARSH programme
- A KAP study on reproductive hygiene of adolescents

Unit V: National Programmes to improve Maternal, Child, & Adolescent Health

- Historical View from birth control to family welfare, family planning to family welfare, Child Survival and Safe Motherhood, RCH, RTI and STD, NRHM/NHM - RMNCH+A programme, RMNCH + A - 5x5 matrix for interventions and result
- Clinical Approach, Cafeteria Approach, Target based Approach, Target free approach, Organizational Structure, Eligible couple Survey.
- Key Personnel Involved ANM, National , state level Evaluations, Source of Data for the Programme, demographic goals, All India Hospital Post Partum Programme, Administration of Programme; National health policy- salient features, critical review Millennium Development goals- achievements. Critical assessment of components, implementation & outcomes of NHM in relation to MCH health
- Programmes for Adolescent Health

SEMIANRS - 1

Text Books

1. Park K: Park's textbook of preventive and social medicine, M/s Banarasidas Bhanot, Jabalpur.
2. Oxford Textbook of Public Health 5th edition, 2009, The Practice of Public Health. Author(s): Detels, Roger; Beagle hole, Robert; Lansang, Mary Ann; Gulliford, Martin. Oxford University Press (OUP)

References:

- 1 Morlev David: Pediatric priorities in the developing world London.
- 2 Venkatachalam P.S. Nutrition for mother and child, ICMR, New Delhi.
- 3 Clive Wood: contraception explained Geneva WHO
- 4 Bhavé's Textbook of Adolescent Medicine by Parthasarathy A, Nair MKC, Menon PSN, Bhavé Swati Y. Jaypee Publishers - New Delhi -2006
- 5 The Vaccine handbook: A practical guide for clinicians by Gary S Marshall (2004). Lippincott Williams & Wilkins Publishers

Journals:

1. Indian Journal of Maternal and Child Health
2. Journal of Adolescent Health
3. Indian Journal of Pediatrics

SEMESTER II**PE6010 - Communicable and Non-Communicable Diseases**

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

1. Describe natural history of common communicable & non communicable diseases
2. Appreciate national programs and public health interventions for various diseases
3. Apply tools and techniques to assess factors affecting morbidity & mortality from various diseases
4. Apply tools and techniques to conduct outbreak investigation and design public health interventions for disease programs

Unit I: Natural History of disease & principles of disease prevention

- Introductions to natural history of Disease
- Principles of disease prevention
- Hand hygiene
- Genetic prevention

Unit II: Communicable Disease

- Epidemiology of infectious diseases
- Specific Infectious Diseases covering diseases of public health significance (Commonly occurring bacterial, viral, mycotic and parasitic infections, Emerging Zoonotic and vector borne diseases, Bioterrorism, Neglected Tropical Diseases)
 - Respiratory infections (Small pox, chicken pox, measles, rubella, mumps, influenza, diphtheria, whooping cough, meningococcal meningitis, acute respiratory infections, SARS, Tuberculosis.)
 - Intestinal infections (Poliomyelitis, viral hepatitis, acute diarrheal diseases, Cholera, typhoid fever, food poisoning, amoebiasis, ascariasis, hookworm infection)
 - Arthropod-borne infections (Dengue, malaria, filariasis,)
 - Zoonoses (Rabies, yellow fever, Japanese encephalitis, chickungunya fever, leptospirosis, plague, KFD, salmonellosis; Rickettsial diseases; Parasitic zoonosis- (hydatid diseases, leishmaniasis)
 - Other infection (Tetanus, leprosy, STD, HIV/AIDS)
- Infection control in hospitals

Practical:

- Case study Snow & Cholera investigation
- Epidemiology of specific infectious agent in a given set up

Field Visits: Visit to state offices & laboratory for RNTCP & NVBDCP

Unit II:Chronic & Non-Communicable Disease

- Chronic NCDs covering diseases of public health significance including occupational health and mental health, Modifying lifestyles, food habits, Yoga, meditation, Junk food, COPD & Asthama, cardiovascular diseases, anemia, obesity, hypertension and

stroke, diabetes, cancer , inherited diseases, dental public health, Musculoskeletal diseases

- Public health approach to NCDs
- National programmes on NCDs

Practical:

- Community of Screening of selected NCDs using simple tools/technology
- Assessment of obesity in community & schools

Text/Reference Books:

1. Park K: Park's textbook of preventive and social medicine, M/s Banarasidas Bhanot, Jabalpur
2. Leon Gordis (4th Edition) , Epidemiology, Saunders (Elsevier Inc) Publication
3. Modern Infectious Disease Epidemiology by Johan Giesecke, (4th Edition) Arnold Publications
4. Oxford Textbook of Public health: The practice of public health (5th Edition)
5. Public health approaches to noncommunicable diseases by JS Thakur (2015). Wolters Kluwer: New Delhi.
6. Hospital Epidemiology and Infection Control (3rd Ed) by C Glen Mayhall. Wolters Kluwer publication

Journals:

1. International Journal of Infectious Diseases
2. Journal of Infection and Public Health
3. International Journal of Non-communicable diseases

SEMESTER III

PE7001 - Global Health

Course Outcome:

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

1. Appreciate the effect of globalization on health
2. Appreciate the effect of climate change on health
3. Enlist the role of international agencies and international development forums for health and development
4. Apply tool and techniques to assess and design public health interventions for important global health issues

Unit I:Globalization and health

- Concept of global village and localized action
- Health as basic human right and essential part of global developmental agenda (MDGs and SDGs)
- International collaboration and Need for it

- International agencies, bilateral partners, etc.
- International Migration and Public Health
 - Migration of health manpower resources & its implications
 - Refugees and their health.

Unit II: Climate change and health need for – international collaborations

- Climate change, Impact of climate change on health, Extreme heat, Natural disasters and variable rainfall patterns, Patterns of infection, measuring the health effects, identifying population at risk, international response – Partnerships, Awareness raising, Science and evidence, Support for implementation of the public health response to climate change

Unit III: Global Health Issues

- Bioterrorism,
- International trade/economic recession and health
- International travel and health, International health legislations, Biohazards and safety regulations
- Health issues on international borders
- Technology transfer - Free or with cost, Patents and copyrights, Safeguarding against exploitation in health sector
- Global actions in public health emergencies- Pandemics like Ebola, influenza (H1N1, Avian etc),
- Exploitation in health sector and value attrition – e.g. under the guise of GMP in pharmaceutical industry, denying developing country of cheaper drugs
- Health Tourism – income, ethical issues
- Organizations working for global health

SEMIANRS - 4

Text Books

1. Oxford Textbook of Global Public health (6th Edition, 2015)
2. Textbook of International Health: Global Health in a Dynamic World - Third Edition
-By Anne-Emmanuelle Birn, Yogan Pillay, and Timothy H. Holtz
3. Essentials of global health, by R. Skolnik, Sudbury, Jones and Bartlett Publishers, 2008, 322 pp., including index and supplementary materials

References:

1. Wagstaff, A, Claeson, M, Hecht, RM, Gottret, P, and Fang, Q. (2006) "Millennium Development Goals for Health: What Will It Take to Accelerate Progress?" In Disease Control Priorities in Developing Countries (2nd Edition), pages 181-194. New York: Oxford University Press.
2. Sustainable Development Goals. Online content available at <http://www.undp.org/content/undp/en/home/mdgoverview/post-2015-development-agenda.html>

3. Mitigation of Climate Change Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press; 2014.
4. WHO. Quantitative risk assessment of the effects of climate change on selected causes of death, 2030s and 2050s. Geneva: World Health Organization.

SEMESTER III

PE7003 - Ethics and Public Health Legislation

Course Outcome:

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

1. Appreciate the policies and regulations in relation to public health and healthcare
2. Describe the ethical principles in public health and research
3. Describe the process of ethical approval
4. Apply tools and techniques to assess the impact of public health laws and regulations

Unit-I: Introduction

- Right to health – International perspective, Role of WHO, Health as a human Right, health insurance, Constitutional perspective – National Perspective, Regulation of public Health & Private Health, Enforcement Mechanism.

Unit II: Legislations & public Health

- Health: Legislative perspective – Legislation relating to public health- Object, Salient features of the Acts regarding health, the Drugs and cosmetic Act, 1940; The environment protection Act – 1986; The Epidemic Diseases Act, 1925; The Indian Penal Code, 1860; The Insecticides Act, 1968; The Maternity benefits Act, 1961; The Medical Termination of Pregnancy Act 1971; The Mental Health Act, 1987; The Narcotic drugs and Psychotropic substance, Act-1985; The Poisons Act, 1919; The Pre-Natal Diagnostic techniques (Regulation and prevention of Misuse) Act, 1994; The prevention of Food adulteration Act, 1954.
- The Regulation of Pharmaceutical Industry – Drugs and Cosmetics Act, 1940; Patenting of Drugs and Medicines, Advertising and consumer protection , Regulation of drug testing procedure in India, essential medicine
- Liability of Doctors and Hospital for Medical negligence –
 - Liability of doctors: Under Law of Torts and Consumer Protection Act
 - Liability for the use of Medical devices
 - Criminal liability of Doctors
 - Management of Hospital and Legal Regulations.
- Policy development, acts and notifications, enforcement mechanism, prosecution and conviction; public health acts, Medico-legal aspects and Consumer protection act.

Unit-III: Ethics

- Ethics in Public Health - principles - confidentiality, autonomy, non-maleficence, beneficence, justice, fairness, truthfulness), application of ethics in field of study/research, public health practice/implementation, Identifying and clarifying ethical dilemma, Analyzing alternative courses of action and its consequences, Resolving the dilemma by choosing best course of action
 - Functions of Public health ethics
 - Medical/bio- ethics - principles (confidentiality, autonomy, non-maleficence, beneficence, justice, fairness, truthfulness)
 - Public health ethics -In field of study/research; practice/implementation
 - Principles of Public health ethics - transparency, cost-benefit considerations, research denying basic needs withholding lifesaving interventions,
 - Authorships, acknowledgement of credits, disclaimers, plagiarism
 - Identifying and clarifying ethical dilemma - Analyzing alternative courses of action and its consequences, resolving the dilemma by choosing best course of action
 - Ethics in clinical trials

SEMIANRS - 4

Text Books:

1. Oxford Textbook of Public Health by Roger Detels, Robert Beagle hole, Mary Ann Lansang, Martin Gulliford. 5th Edition. Oxford Medical Publications. Section 3.2
2. Leon Gordis (5th Edition, 2014) , Epidemiology, Saunders (Elsevier Inc) Publication (chapter 20)

References:

1. Bakshi P. W. Law and Medicine, [1993], UP Institute of Judicial Trainng and Research, Lucknow
2. Robert D. Miller and Rebecca C. Hutton, problems in Health care law, [2000], Apen Publication, Maryland.

Journals:

1. Global Public Health
2. The Lancet Global Health
3. The BMJ Global Health

SEMESTER-III

PE7005 - Food and Nutrition in Public Health

Course Outcome:

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

1. Appreciate the role of nutrition in population health
2. Assess the nutritional status of humans
3. Describe nutritional intervention programs
4. Apply tools and techniques to design and evaluate public health nutritional programs

Unit I: Introduction to Food and Nutrition

- Basics of food and nutrition-Macro and micronutrient; Importance of food and nutrition, Hunger and starvation, seasonality, and spatial mapping, food habits and anthropological factors
- Food, its pattern and nutritional value
Food groups: Nutritive value of common food items (Cereals, pulses, vegetables, milk, egg, meat, nuts, oils, fruits); Food habits/meal pattern; Balanced diet- principles of formulating balanced diet; Recommended values of nutrients for children, adolescents, men, women, pregnant and lactating mothers, old age, sports persons etc. Diet modification; Cooking- principles of cooking, methods of cooking, effects of cooking on nutrients on common foods.
- Public health nutrition, preventing & promoting health, nutritional epidemiology (dietary assessment, study designs)

Practical: Assessment of Nutritional value of food

Unit II: Food and Nutritional Problems

- Major nutritional problems of public health importance: Growth retardation, PEM, wasting, stunting, obesity, anemia, IDD, and their prevention; Micronutrients and deworming; Vitamin deficiency (Fe, Zn, Fl, Ca, vitamins, etc.) disorders, Diet related chronic diseases,
- Food safety; Procurement and Storage food grains, food borne illness; Prevention of contaminations, food toxicants; Food adulterants; Food additives, Food safety standards, legislations and enforcement systems – efficiency, prosecution and conviction.
- Role of nutrition on health and life style diseases, Nutrition education – principles and methods of imparting nutrition knowledge
- Assessment of nutritional status (direct and indirect methods); Anthropometric measurement, biochemical, biophysical, clinical measurements; Food Fortification
- Clinical Nutrition

Practical: Demonstration of fortified foods, food supplements

Field visit: Nutritional status assessment in the community among specific groups

Unit III: Food and Nutritional Policies and Programmes

- Concepts in Food Security
- Policy and programmes for nutrition; PDS, ICDS, IYCF, Exclusive Breast feeding, IFA, WIFS, IDD – Iodized salt, supplementation – Zn, Vitamin A, school mid-day meal programme; Role of Government: policies and programs; agriculture development, public distribution system; International cooperation for food, Copenhagen Consensus etc.
- Data generation in food and nutrition – dietary survey, National Nutrition Monitoring Bureau (NNMB)

SEMIANRS - 2

Text Books:

1. Nutrition in Public Health: principles, policies & practice by Spark, Dinour & Obenchain. (2nd edition, 2016) by CRC Press, Taylor & Francis Group)
2. Williams' Basic Nutrition & Diet Therapy by Staci Nix (14th Edition, 2013) by MOSBY publications
3. Park K: Park's textbook of preventive and social medicine, M/s Banarasidas Bhanot, Jabalpur

References:

1. Shah P.M.: Early detection and prevention of protein caloric malnutrition, popular Prakash, Bombay.
2. Jellifee DB: The assessment of nutrition status of the community. WHO monograph series 53.
3. ICMR (1981): Recommended dietary intake for Indians, New Delhi
4. ICMR (1908) Nutritive value of Indian foods NIN, Hyderabad

Journals:

1. Journal of Nutritional Health and Food Science
2. Journal of Health, Population and Nutrition
3. The Indian Journal of Nutrition and Dietetics.

SEMESTER-III**PE7007 - Public Health Needs of Specific Population Groups****Course Outcome:**

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

1. Identify specified vulnerable populations groups and their health need
2. Appreciate health policies and programmes for Tribal, slum dwellers, Transgender, Prisoners, Migrants, street dwellers, disabled and elderly populations.
3. Measure the health needs of the specified vulnerable population and suggest appropriate interventions
4. Describe the various health policies and programmes for vulnerable populations

Unit I: Introduction

Health needs of People living in urban Slums, homeless & street dwellers, tribal population, transgender, Old age people, People with disabilities, Forced Migrants and other displaced population, People in Prisons, Gender & public health

Unit II:

Health policies & programmes to the above vulnerable population.

Field Visit:

- Health needs assessment in urban slums,
- Health service accessibility assessment for the assigned vulnerable population

SEMIANRS - 4

Text Books:

1. Oxford text book of Public health practice (5th edition)
2. Handbook of Urban Health: Populations, Methods and Practice. Edited by Sandro Galea and David Vlahov, 2005, Springer Science + Business Media, INC. USA
3. Park's Textbook of Preventive and Social Medicine, K.Park. Banarsidas Bhanot publishers

Reference Books

1. Elderly in India by Ministry of Statistics and Programme Implementation, govt, of India (2016)
2. Gender analysis in health: a review of selected tools by WHO. Available at <http://apps.who.int/iris/bitstream/10665/42600/1/9241590408.pdf>

DEPARTMENTAL ELECTIVE MODULES**SEMESTER-III****PE7009- Technology and Public Health****Course Outcome:**

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

1. Appreciate the use of technology in public health
2. Appreciate the concept of digital, eHealth, mHealth and Telemedicine
3. Apply digital technologies for data collection, data analysis and automation
4. Apply tools and techniques of informatics in developing monitoring system for public health system

Unit I: Biotechnology and Public Health

- Biomedical devices, implants, and materials,
- Medical equipments
 - Medical Instruments – procurement of simple, cheaper, indigenous products; cold chain equipments, cost benefit analysis for procurement and its place of installation
 - Preventive Maintenance (AMC, CMC), Health Equipment management system, monitoring of equipment use, downtime
- Role of biotechnology in clinical investigations, screening, vaccination and treatment

Unit II: Digital Health

- Telemedicine/Tele-Health, Capacity building training, clinical case discussions
- Health Kiosk, patient management - electronic health records, practice management, health information exchange, mobile health, tracking and health check-up reminder system, Biometrics, consumer health informatics, personalized medicine
- GPS, GIS use in public health - GPS enabled emergency transport, GIS-mapping of severe acute malnutrition, Malaria and other infectious diseases – incidences and outbreaks, disease load mapping in NCD, fluorosis

Unit III: Digitalization of Data

- Mobile and PDA based data collection, compilation and transmission
- Facility based digitalization of data – IDSP, NHM – HMIS, MCTS
- Web based State Health Portals e.g. Gujarat, TNMSC - Drug Procurement System
- IT enabled paperless patient charts, linking of imaging and diagnostics
- Customized Software development, Use of Statistical Software
- Data standards, data access & retrieval, analysis, web search, open access, research, and dissemination

Unit IV:Public health informatics

- Definition, Scope, Principles, Components; Evolution and significance of information systems and public health, Fundamentals of database systems (MS Access, database design, database table design etc.)
- Information architecture, Core competencies in public health informatics, Public health informatics and organizational change; Privacy, confidentiality and security of public health information; Data standards in public health informatics; Risk factors in information systems; Knowledge based information and systems.
- Means of data collection- Surveillances; Decision support and expert systems in public health
- Principles; Structure of HIS, HMIS; Data tools and techniques of measurements; Electronic population register; Informatics project planning and programmes; Evaluation, pit fall and system audit

Unit V:Current advances and future prospects of technology in public health

- Current advances in medical technology and public health
- Future prospects of technology use in public health
- Disadvantages in use of technology in public health
- Ethical issues in use of technology in public health
- Health IT Policy and Administration
- Health IT Law and Ethics

Text Books:

1. Public Health in India: Technology, governance and service delivery – 2015, EDITED BY Diatha Krishna Sundar, Shashank Garg and Isha Garg. Routledge India Publication.
2. Public health informatics and Information systems, Patric. W. O'Carroll et al, Springer's publishers

References:

1. Health care information system-A practical approach for health care management, Fances Wickham Lee, Karen A Wager.
2. Oxford Textbook of Public Health by Roger Detels, Robert Beaglehole, Mary Ann Lansang, Martin Gulliford. 5th Edition. Oxford Medical Publications.
3. Technology and Health: Man and His World : A Saluti Unitas Contribution to an International Conference on Medical Informatics, Riva, Italy, April 21: 007 (Lecture Notes in Medical Informatics) Springer publication by Gustav Wagner (Author), P. L. Reichertz (Author), Ezio Mase (Author))

4. Moral Responsibility and Risk in Modern Society: Examples from emerging technologies, public health and environment (Earthscan Risk in Society) - Publisher: Routledgeby Jessica Nihlén Fahlquist (Author)

Journals:

1. Health Policy and Technology
2. International Journal of Health Care Technology and Management
3. Journal of Innovation in Health Informatics.

SEMESTER III

PE7011 - Mental Health

Course Outcome:

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

1. Appreciate the importance of mental health for health and wellbeing
2. Describe epidemiology of common mental illnesses
3. Apply tools and techniques to design and implement the community mental health interventions
4. Describe the national health policies and programmes for mental health

Unit I:Introduction to Mental Health

- Definition, burden and scope of commonly occurring mental disorders and their public health significance
- Global and Indian prospective on mental illness and mental health

Unit II:Epidemiology of Common Mental illness

- Common Mental Health Problems of public health significance and its Risk factors Substance Abuse, Schizophrenia, Depression, and mood disorders, Anxiety, Neurosis and Stress, Postpartum Psychosis, Behavioural Disorders, Mental Retardation, Suicide, Domestic violence, PTSD – disaster related, Senile Dementia, Human rights violation and mental health, Gender violence,

Unit III:Community Psychiatry

- Asylum vs. care of patients in community settings; Mental health interventions and programmes; National mental health programme.

Unit IV:Mental health policy and legislation

- Mental health policy - Indian and global prospective, Legislations governing treatment, and certification of people with mental illness; Health human resource for mental health

Practical: Critical review of national mental health policies and programmes

Field Visit: Assessment of common mental health programmes in the community

Text books

1. Shorter Oxford Textbook of Psychiatry – 2013 by Paul Harrison, Philip Cowen and Tom Burns. Oxford Publishers
2. Oxford Textbook of Community Mental Health Edited by Graham Thornicroft, George Szmukler, Kim T Mueser, and Robert E. Drake. Publisher: Oxford University Press
3. Park's Textbook of Preventive and Social Medicine, K.Park. Banarsidas Bhanot publishers

References:

1. National Programmes, Policies and Legislations by J Kishore, Century Publications (2014)
2. National mental health policy by Govt. Of India
3. Operational Manual for District Mental Health Program by Govt. of India

Journals:

1. Indian Journal of Psychological Medicine
2. Society and Mental Health
3. Ageing and Mental Health

SEMESTER III

PE7013 - Hospital Administration

Course Outcome

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

1. Understand the complexity of hospital as an organization its organizational structure & functions of hospitals.
2. Conceptualize various clinical & support services provided at a hospital and pre-requisites for efficient & effective service delivery
3. Effectively step into hospital administrative positions with solid management skills like critical thinking, analysis, and excellent communication skills.
4. Perform teamwork and leadership skills in hospital administration.
5. Solve day-to-day problems of hospital through the application of appropriate theories, principles and data.
6. Learn the tools and techniques of Hospital Administration.
7. Demonstrate an understanding and appreciation of ethical principles at both the professional and community levels.
8. Adopt newer developments/ regulations in hospital administration for efficient & effective administration of hospital services.

Unit I: Hospital Organization

- Hospital and its role, History & evolution of hospitals, peculiarities and factors influencing hospital care, Types of hospitals, number, size, distribution, ownership, utilization, issues and trends.
- Hospital as a complex organization - Elements, Structure, Design
- Planning of hospital & supportive services – Design and layout, infrastructure, patient amenities, housekeeping, human resource, safety, signage, lighting, emergency services,

OPD service, in-patient service, dietary services, CSSD, MRD, Pharmacy, medical/surgical services, Operation Theatre, waste management, drainage

Unit II:Hospital Management

- Foundation of Management, Organization Behaviour, Principles of Health Service Management
- Management Skills: Planning, information system, communication, delegation, decision making, monitoring and evaluation and leadership, managing time, meetings, negotiations, & innovations,
- Man, Money & material management

Unit III:Role of Hospital Administrator

- Hospital Administration as a specialty: role and function of hospital administrator, system approach to hospital administration, human relation and employee welfare, public relation and hospital training of medical, paramedical, nursing and non-medical manpower in hospital, interpersonal relationship, conflict management, stress management, counseling, occupational safety.
- Administration of clinical services, nursing services, financial services, infection control, MRD, Specialized hospitals and Super specialty centers, hospital hazards, waste management, disaster managements in hospital
- Hospital Information system -

Unit IV:Hospital Marketing, Communication, Statutory issues and quality control in Hospital

- Marketing Management - Marketing Concept & current trends, Marketing process, Marketing environment, Marketing Orientation, Social Marketing, Patient care & communication, Role of PR dept. in hospital, E- Marketing & Marketing Mix, Creating customer value, Strategic marketing, Competitors analysis, pricing strategies & programmes, Factors influencing consumer behavior, Consumer decision making process, Marketing implications, Conducting Marketing Research in relation to hospital, Market Segmentation, Market Targeting & Positioning Strategies, Designing & Managing Services, Case Analysis
- Communication in Hospital - Importance of communication in the hospital, purpose, Understanding communication process in hospital, communication need of manager, communication flow required, methods of communication practiced in the hospital, written, oral, nonverbal, communication network in the hospital, barriers, effective communication
- Legal issues related to Hospital - Medical jurisprudence and its application, Drug and Cosmetics Act, Organ Transplant Act, Nursing Home Registration, BARC guide lines, PNDT Act, MTP Act, Births and Deaths Registration Act 1969, Transplantation of Human Organs Act, Pharmacy Act, Labor laws Applicable to Hospitals, ethics & laws applicable to hospitals (Consumer protection Act)
- Medical Audit and its Administration; Hospital Committee, Hospital Standards, Quality assurance assessment and certification, Patient satisfaction
- Logistic Management and inventory control.
- Hospital in the framework of India's health policy

Practical: ABC, VED analysis

Field visits: Visit to hospital to assess different service units and hospital waste management system

Text Books:

1. Hospital Administration by CM Francis, Mario C De Souza (2004- 3rd edition). Jaypee Brothers Medical Publishers
2. Hospital Operations: Principles of High Efficiency Health Care by Wallace J. Hopp , William S. Lovejoy. Publisher: PEARSON HIGHER EDUCATION

References:

1. Introduction to Health Care Management (2nd Edition) by Sharon B. Buchbinder, Nancy H. Shanks. Jones and Barlet Learning
2. Organizational Structure of Health Care System and Hospital Administration by SL Goel (2010). Neha Publishers & Distributors.
3. Principles of Hospital Management by S.A. Tabish, Jaypee Publishers
4. The Health Care Manager's Guide to Continuous Quality Improvement by Wendy Leebov and Clara Jean Ersoz by To Excel/kaleidoscope Sof publisher
5. Hospitals and Nursing Homes Planning, Organizations and Management - 1st Edition by Tabish. Jaypee Brothers Medical Publishers
6. Measuring Patient Outcomes by Nolan and Mock. Sage Publications \

Journals:

1. Journal of Academy of Hospital Administration(India)
2. Journal of Hospital Administration(international)

SEMESTER IV

PE7082 - Dissertation / Capstone Research

Course Outcome:

By the end of the dissertation work, students will be able to:

1. Design and undertake research work
2. Apply tools and techniques to conduct research projects in public health settings
3. Identify issues and suggest appropriate solutions on public health issues
4. Write a scientific report on researched topic

Each candidate is required to carry out a study on a selected research project under the guidance of a recognized postgraduate teacher of the KSPH. The work and results of such a study shall be submitted in the form of a dissertation (15000 words) for evaluation. A manuscript based on study shall be submitted without fail along with dissertation report for publication in a relevant journal. The dissertation is aimed at skilling postgraduate students in research methodology and techniques. It includes identification of the problem, formulation of a hypothesis, review of literature, getting acquainted with recent advances, designing of a research study, collection of data, analysis, and comparison of results and drawing conclusions. In exceptional cases, dissertation based on secondary data analysis may be considered for foreign students with prior approval of the Director, KSPH.

A co-guide can be opted wherever required with prior permission from the Director, KSPH.

The Co-Guide should be either a post graduate teacher or an expert in the specialized area in public health recognized by the School. In the event of registered Guide leaving the institute permanently for any reason, the Guide may be changed with prior permission from the Director, KIIT School of Public Health.

Each candidate has to conceptualize and finalize research topic in consultation with his/her mentor and proposed guide and submit the same to the school academic division during the early part of 3rd semester. In third semester candidates have to also to submit their research proposal for technical as well as ethical review of respective committees of the school. In third semester seminars and journal clubs will be aligned with candidate's research area. The schedule for completion of literature review, tool development, research proposal for technical review and ethical review will be notified at the beginning of 3rd semester.

Technical review and Ethical review: Each proposing candidates have to obtain both technical and ethical clearance before they should be obtained before registration of dissertation with the university and implementation of study. The technical review and IEC submission format can be obtained from the academic division of the school. IEC approval along with research proposal should be forwarded to the University for Registration of research topic. Once the research proposal is approved and registered by the university no change in the topic or Guide will be allowed without the prior approval of the University.

Submission of the Dissertation and Evaluation:

The dissertation complete in all respects and duly certified by the Guide, Co-Guide, and Director or the Authority in – charge of the course should be forwarded it to the University for Evaluation.

SEMESTER-IV

PE7084 - Internship

Course Outcome:

By the end of the internship work, students will able to:

1. Appreciate the importance of hands-on experience in the selected area of public health
 2. Apply the practical experience of internship in problem solving of public health issues
 3. Apply tools and techniques to write a scientific report based on internship
- Students have to undergo one month internship at any reputed local, national or international agency, NGOs, and Government of their choice to acquire practical experience in Public Health practice.
 - Students have to submit internship Diary duly signed by the respective supervisor in the organizations where they had undergone internship. The will appear for an interview with the assigned faculty of KSPH to discuss about the work during Internship.
 - The Internship carries 2 credits

Job opportunities after MPH:

The work of public health professionals is important because public health initiatives affect people every day in every part of the world. Master of Public Health (MPH) provides you the opportunity to work towards the improvement of health and well-being of individuals, families, communities and populations. You may act as health care administrator, public health project /program manager, epidemiologist, public health researcher, occupational health and safety officer, health behavior change official, health information officer, public health planner, program/project evaluator, public health teacher/tutor, disease surveillance officer etc. The field of public health is constantly evolving in response to the needs of communities and populations around the world and so is the scope of work in the field of public health. Potential employers include (1) State and Central Government Departments, National Health Mission (2) Multilateral and Bilateral agencies like WHO, and other United Nations Agencies like UNICEF, UNDP, UNAIDS etc. (3) National and international non-governmental organizations(NGOs)(4) Corporate sectors under Corporate Social Responsibility(CSR) or other industry supported foundations,(5) Hospitals, health insurance companies (6) academic institutions including Schools Public Health (7) Research organizations and (8) Allied health organizations etc.

MPH Graduates also have the option to pursue higher studies like specialized trainings or PhD in India and abroad.



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