PROGRAMME

Curriculum & Syllabus

Master of Public Health (MPH)

2023 - 2025

KIIT School of Public Health (KSPH)

KALINGA INSTITUTE OF INDUSTRIAL TECHNOLOGY (KIIT)

Deemed to be University

(Established U/S 3 of UGC Act, 1956)

Bhubaneswar, Odisha, India

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MASTER OF PUBLIC HEALTH
KIIT School of Public Health, KIIT Deemed to be University

Background

KIIT Deemed to be University (KIIT-DU) has fast emerged as an educational hub of Eastern India. With 'A++' grade by the NAAC, Ministry of HRD, Govt. of India, KIIT-DU is among the most diverse and elite Universities of the country. It has been ranked No 1 among the Private Higher Education Indian Universities by Atal Ranking of Institutions on Innovation Achievements (ARIIA). Further, it is the youngest University of India to have received the Institute of Eminence (IoE) status from the Ministry of HRD, Govt. of India, thus making it one of the leading destinations for international students.

KIIT-DU has more than 23 campuses and spread over 36 sq.km area in Bhubaneswar city, Odisha, with 25 million square feet of aesthetically constructed built up area. The campus is full of greenery and is truly reflective of the philosophy of unity in diversity. With over 40,000 students from all regions of India and more than 60 countries, it symbolizes a natural cosmopolitan culture. There are 28 constituent schools, contiguously located in an impeccably landscaped and modern–technology-enabled campuses offering best-of-it's-kind education to graduate, post-graduate, doctoral and post-doctoral participants in a wide range of disciplines.

The faculty pool is derived from diverse backgrounds who are highly qualified, having multi-faceted affiliations and skill sets to mentor, guide nurture young minds in the discipline of their choice. The university has its own entrance examination (KIITEE) for admission into most of the academic programmes and has an excellent track record of nearly 100% placements for almost all the courses being offered. The placement success is driven by a unique academic partnership with several world class universities and the industry. The Institute regularly conducts interaction sessions with more than 15 corporate giants.

Other facilities of the University include excellent convention centre complexes, accommodation for deserving candidates, free access to Wi-Fi, Multimedia Classrooms & ERP, Large Open Air Theatre, Library, Ultramodern Laboratories, Close Circuit corridors, state-of-the-art Auditorium, Seminar Halls, Sports and Athletic facilities, Cafeteria, and 24x7 Internet and Intranet access.

About KIIT School of Public Health (KSPH)

Public health is a multidisciplinary discipline that involves a range of subjects such as social and behavioral sciences, epidemiology, bio-statistics, environmental science, management science and information technology.

The KIIT School of Public Health (KSPH), KIIT-DU was established in 2015 in response to the need for building a competent health workforce to serve India and other countries; to cater to the needs of evidence-based policy formulation; undertake applied research to solve real life problems; and to create a platform for exchange of knowledge and skills in an environment of scientific discourses.

The School is known for its diverse faculty base, expertise on a wide-range of public health domains, multi-centric projects and vibrant teaching-learning environment.

Vision:
Individual wellbeing, healthy and happy population, just society.

Mission:
The KIIT School of Public Health is:

1. Determined to work towards improvement of health of the population, through infusion of technology and innovation
2. Dedicated to develop a competent and globally relevant public health workforce through teaching, training and transnational research
3. Committed to foster an environment of continuous learning and skill enhancement of professionals working in the public health sector and healthcare industries
4. Focused on application of evidences in the real-world policy making and public health practice, through collaborations at local, national and international levels

Core Values:
KSPH has deep commitments to the following core values: integrity, excellence with ethics, equity, cultural diversity, individual dignity, gender sensitivity, and special attention to the vulnerable.

The School draws its strength from faculty pool of various schools of KIIT-DU, specifically from Kalinga Institute for Medical Science (KIMS), School of Biotechnology (KSBT), School of Social Science (KISS), School of Management (KSOM), School of Rural Management (KSRM), and School of Law (SoL). KSPH has national and international collaborations with several Universities/ Institutions/ Organizations that are in the business of health care.

The Master of Public Health (MPH) programmes aims at creating health policy makers, public health practitioners, research leaders and academicians. The curriculum and pedagogy have been developed keeping in mind the knowledge and skillsets of contemporary world. Both programmes offer electives to students to choose from a basket which are uniquely designed to fulfil the aspirations of individual's professional development and at the same time fulfilling the demands of the Industry. The curriculum is designed to create public health professionals with various thematic expertise, such as, epidemiologists, health behavior scientists, health system experts, health management experts, health policy analysts, health economists, health communication specialists, environmental and occupational health specialists, and hospital quality management experts.

Master of Public Health (MPH) Program

The Master of Public Health (MPH) program at the KIIT School of Public Health, Bhubaneswar is a competency-based degree program that prepares students to stand out. This is a two-years (four semesters) full time programme in which the candidate needs to complete all compulsory courses and one elective specialization course during three semesters, while the fourth (last) semester is devoted for dissertation/internship work.

Objectives of MPH Program:
The overall objective of MPH Programme is to prepare competent public health professionals who can (i) assess the public health needs, (ii) identify and implement solutions to real-life population health problems; and (iii) efficiently and effectively organize, manage, lead, monitor and evaluate public health interventions. The specific objectives of the MPH program are:

1. **To equip students with knowledge and demonstrable skill sets on:**
    a. Assessment of health status of populations at local, national and global level.
    b. Identifying determinants of health and illnesses at local, national and international level.
    c. Understanding concepts, principles, functions and practices of public health.
    d. Recognizing strategies for health promotion, disease prevention, injury prevention and health protection.
    e. Realizing factors that influence the delivery, use, and quality of health services and related National Health Programs.
    f. Designing socially, culturally and economically diverse interventions with special attention to the needs of the disadvantaged and the vulnerable.

2. **To enable students to assess, compare and analyze health information** for:
    a. Recognizing a health problem in a community.
    b. Collecting, storing, retrieving and using accurate and appropriate information on community health issues.
    c. Examining health disparities across demographic, socioeconomic and geographical strata.
    d. Identifying opportunities for new interventions and recommending evidence-based approaches to national and state health policy and program reforms.

3. **To improve the competency of students for designing, implementing, leading, managing and evaluating projects** in order to:
    a. Identify and use appropriate and relevant health policy guidelines to address specific community needs.
    b. Identify gaps, barriers, limitations and opportunities in existing health policies, health systems and services.
    c. Design, budget and prepare workflow processes for health interventions.
    d. Design and implement robust evaluation plan for community-based interventions.

4. **To develop among students a sense of partnerships, collaborations and collective work in the domain of public health** which would help them to**:**
    a. Identify and collaborate with potential partners in public sector, NGO sector, and corporate sector.
    b. Practice team building, negotiation, conflict management and group facilitation skills at work.
    c. Demonstrate leadership traits with appropriate authorities for healthy public policies and services.
    d. Undertake stakeholders' analysis and SWOT analysis of organizations, entities, national and state policies.

5. **To strengthen effective communication skills and enhance soft skills** to**:**
    a. Effectively manage individuals, groups, communities and organizations.
    b. Mobilize individuals and communities for social action
    c. Apply technology in health, such as, social media ICT, AI, etc
    d. Build capacity of stakeholders and develop resources for the same.

6. **To enable students acquire and polish skills for undertaking and publishing qualitative and quantitative research studies** so as to
    a. Disseminate new knowledge to the wider audience
    b. Engage in advocacy for policy reforms
    c. Share with the large society the benefits of certain interventions/policies/programmes
    d. Inform the policy makers about the need for interventions / innovations

Eligibility

1. Bachelors' degree in Medicine, AYUSH, Dentistry, Nursing, Pharmacy, Veterinary Sciences, Physiotherapy, or Allied Health Sciences from a recognized Institute / University with minimum 50% marks in aggregate, (or)
2. Bachelor's degree in Technology (BTech), Public Health (BPH), Business Administration (BBA) or Law (LLB) from a recognized Institute / University with minimum 50% marks in aggregate, (or)
3. Bachelor's degree in Science / Life science / Statistics / Economics / Nutrition / Demography from a recognized Institute / University with minimum 50% marks in aggregate, (or)
4. Post-graduation degree in Psychology, Anthropology or Sociology or Equivalent Degree from a recognized Institute / University with minimum 50% marks in aggregate.

All the above qualifications must be from Universities/Institutions recognized by UGC or government of India, and the medium of instruction must be English. Those candidates with prior public health experience will be given preference for admissions in case of a tie in the academic profile / performance in the entrance examination.

Selection and Other Details

Medium of Instruction:
Medium of Instruction for MPH will be English.

Credit Hours and Duration of Study:
The programme is offered on full-time basis and consists of four semesters, spread over two academic calendar years, including internship and dissertation. First, Second and Third semesters are for on-campus studies only. During the Fourth semester, students are required to undertake for internship and dissertation-related field work as per the course requirements. One semester consists of a minimum of 90 working days.

One credit shall consist of 15 contact hours for class-room teaching and 30 contact hours for sessional activities / internship.

Role of Yoga:
Yoga is a non-credit course to be offered in collaboration with the School of Yoga, KIIT-DU in the 1st Semester. A satisfactory grade from the School of Yoga, KIIT-DU is required to obtain the final degree from the University.

Inter-semester break:

End-semester breaks, if any, will be notified at the beginning of the semester based on approved academic calendar of the University. Students will be encouraged to undergo short internships or field studies during inter-semester breaks.

Selection process:

(i) Indian students:

Eligible Indian students need to appear the All India online KIITEE Entrance Examination (htttps://kiitee.kiit.ac.in) to be qualified for admission into MPH programme. The entrance examination is aimed at screening and selecting suitable candidates with proper aptitude to pursue Master Degree.

(ii) Overseas students:

Eligible overseas students will be selected based on educational qualifications, experience and online interview. Students will have to provide certification of proficiency in English at the time of selection.

All the applicants have to submit their original certificates for verification at the time of admission.

Fee Structure:

Fee structure will be decided by the University and will be notified in the admission brochure/student manual.

Accommodation:

Selected candidates will be given accommodation in campus hostels as per the university procedure, subject to availability of seats.

Stipend:

No Stipend will be given to the students during the MPH programme. However, students may avail scholarships as and when they are available and notified from time to time. Students are also encouraged to apply for government-sponsored scholarships whenever available.

How to Apply:

Interested candidates may apply through the online portal athttps://www.kiitee.kiit.ac.in/

Examination, Evaluation & Grading

General Rules of Examination:

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

If a student fails in a subject during a semester examination, a Supplementary Examination will be conducted in the early part of next academic session/semester. If a student fails in the dissertation, he/she shall be evaluated after six months.

Examination of Theory:

Each item under Theory shall be evaluated on the basis of 100 percentage points, subdivided in to internal assessment of 50 percentage points and end-semester examination of 50 percentage points.

Internal Assessment:

The minimum qualifying marks in the internal assessment is 50% to be eligible to appear in the End-Semester Theory Examination.

The Internal Assessment comprises of:

(i) Mid-semester examination: 30 percentage points

A mid-semester examination will be conducted as per academic calendar approved by the University. The mid-semester examination will be of two hours duration. It will be evaluated by the subject teacher within 15 days of the actual conduct of the examination. After evaluation, the mid-semester copies are to be shown to the students for any omission or correction. Accordingly revision of evaluation (if any) by the subject teacher, marks will be finalized. In case a student secures less than 50% mark, she/he will appear for a re-mid-semester examination for the concerned subject(s).

(ii) Quiz / assignments: 20 percentage points.

The pattern of evaluation under each category and the distribution of marks in the quiz and assignments will be announced by the subject teacher with due approval from the Head of the School at the beginning of each semester.

It should be the endeavor of all students to secure a minimum of 'C' Grade in a theory subject after the end-semester examination. Students can appear improvement examinations with C or D grades both in the end-semester examinations (Autumn / Spring) and the supplementary examination in the next available opportunity for the said theory paper to improve his/her grade.

End-Semester Examination:

The question paper of concerned subject will be set by an external or any faculty as decided by the Director of the School. The externals should be in the rank of Assistant Professor or above.

The end-semester examination will be of 3 hours duration.

The end-semester examination papers will be centrally scanned and evaluated by two faculty members of the school as appointed by the Director of the School, to complete the evaluation within 15 days from the last date of examination. After evaluation, scanned copies are to be shown to the students for any omission or correction. On the student's feedback and after re-evaluation (if any), marks will be finalized and forwarded to the Controller of Examinations within a period of 18 days from the last date of examination. The final results shall be published within a period of 20 days from the last date of examination by the Controller of Examinations.

Evaluation of Seminar / Journal Club:

Seminar/Journal Club will be having 100 percentage points. There will be no formal / written examination for evaluation of the Seminar / Journal Club activities. A Seminar Committee appointed by the Head of the School shall evaluate it.

(i) Evaluation of Seminar: Student will choose a seminar topic in a given semester and present it in front of two internal evaluators approved by the Head of the School. The marks will be distributed based on attendance, chosen topic, preparation of slides, presentation skills, content, and ability to respond to questions.

(ii) Evaluation of Journal Club: Student will choose a recently published journal article from an indexed journal in relation to the modules covered in a given semester. He/she will present a PPT in front of two internal evaluators approved by the Head of the School. The marks will be distributed on abstracting skill, presentation skill, discussion and critical appraisal.

Evaluation of Dissertation and Viva Voce:

The dissertation will be of 100 percentage points.

Dissertation write-up as well as viva-voce will be evaluated by one internal and one external examiner, both duly approved by the Head of the School. The External shall be in the rank of an Assistant Professor or above, from within KIIT-DU excluding the School of Public Health or any other universities of Odisha or outside.

Evaluation of the dissertation write-up (60 percentage points) will be undertaken by the external examiner; Viva Voce (40 percentage points) which will be conducted jointly by one internal and one external examiner. Marks will be allotted by both the Examiners through consensus. In case of any difference of opinion, the decision of the Head of the School will be final and binding.

Evaluation of Internship:

Internships constitutes 100 percentage points.

The work done by the student during the Internship will be evaluated on the basis of the feedback given by the external supervisor (of the organization where the internee was posted) and the internal supervisor as assigned by the Head of the School (60 percentage points) and class presentation (40 percentage points) assessed by two faculty members appointed by the Head of the School.

Guidelines about Dissertation / Project Work Write-up:

Dissertation should be written in original and in not less than 15000 words with the following heads and sub-heads:

a. Background: Introduction about the topic and its significance
b. Literature review and rationale: Should include recent, relevant and exhaustive literature
c. Objectives and Research questions: Should include specific objectives and research questions
d. Methods: Study settings, sampling, data collection tools, ethical issues and data analysis

e. Results, Discussion & Recommendation: It covers the art of relating the results with contemporary knowledge and contrasting it with other studies, recommending on the basis of study findings.
f. References: A minimum of 50 articles/books/reports should be referenced with use of appropriate referencing style.
g. Plagiarism: Each submission will be accompanied with a Plagiarism report (from Turn-it-in report).

Guidelines about Internship Report Write-up:

The Internship Report should be written in original and not less than 10000 words with the following heads and sub-heads:

a. Background of the organization
b. Background of the project
c. Literature review
d. Objectives and activities
e. Key findings
f. Key learnings
g. Recommendations

Grading & Performance Index:

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

CREDIT POINT = CREDIT X POINT for each Course item.
CREDIT INDEX (CI) = ∑ CREDIT POINT of all course items in a semester.

SGPA: Semester Grade Point Average (**SGPA**) = CI / ∑ 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**) = [∑ CI of all previous semesters up to current semester] / [∑ CREDITS of all previous semester up to current semester]. It indicates the current performance level of a student.

Note: Letter grade "I" will be awarded in case the candidate fails to appear in the examination of any subject.

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.

Pass / Fail in an individual course:

- The minimum pass grade in Sessional is 'C'.
- The minimum pass grade in theory is 'D'. Below that it would be the Fail, i.e. 'F' grade.
- The student will be promoted to the next semester even if s/he has failed in one or more subjects. However, the student has to secure pass grade in the failed subject(s) subsequently through the Supplementary Examination.
- The Supplementary Examination will be conducted annually following the rules and regulations for the KIIT-DU. The Student shall follow the rules and regulation of KIIT-DU available at http://coe.kiit.ac.in for appearing in the examination or to clear back paper(s).

Degree Requirement:
A student must

(i) Complete all the credit requirements for the Degree as laid down in the prescribed curriculum of the discipline with a minimum of "D" Grade scored in every theory and a minimum of "C" grade in every Sessional item.
(ii) A satisfactory grade in Yoga from the School of Yoga, KIIT-DU, is necessary for the award of the degree.
(iii) Obtain a minimum CGPA of 6 or higher at the end of semester in which he/she completes all the requirements for the degree.

Degree certificate will be kept on hold till the payment of all institutional dues of the University including hostel fees. Maximum a period of 4 years is allowed to a student to fulfill the degree requirements. No degree shall be offered to a student after four years of enrolment with the university.

Special Tracks:
The KIIT School of Public Health offers special tracks for in-house students and external candidates. The special tracks are competitive, domain specific, additional programs beyond the core curriculum aimed at honing the students as per the industry need on specific thematic domains pertaining to public health and health care services. Students may apply for one or more tracks (in the order of their preference) towards the end of their second semester. However, they can only participate in one special track. Students are expected to attend all the special track-specific classes and related practical sessions in addition to the core curriculum. External candidates interested for the special tracks will have to contact the school prior to the beginning of each academic year. Please refer to specific syllabus for further details.

Dissertation:
The preparation for dissertation will start as early as the end of first semester, immediately after allocation of the guides. During the second semester, problem identification, conceptual framework and topic finalization will take place. During third semester the methodology and ethical clearance will be obtained. One manuscript is desirable by end of third semester for submission to an indexed journal. During the fourth semester the internship report and dissertation report need to be submitted.

Internship:

A student will be encouraged to undergo internship during the inter-semester breaks and during final semester. He/she may identify an organization through mutual discussion and agreement. The School will provide all support for this. A local supervisor from the organization will be finalized and allotted to the student to work with. A final report duly signed by the local supervisor will be submitted to the School for approval of the guide and the Head / Director of the School.

Career Opportunities After MPH

The Master of Public Health (MPH) programme provides a unique opportunity to acquire new knowledge and skills from a vastly experienced pool of faculty of the KIIT University, and work towards improvement of health and well-being of individuals, families, communities and the society at large. Our past graduates have taken up positions of health care administrators, public health managers, epidemiologists, public health researchers, occupational health and safety officers, health behavior change officials, health information officers, public health planners, program/project evaluators, public health tutors, and disease surveillance officers. The field of public health is fast-growing and there is plenty of opportunities to contribute to this discipline to work with (1) State and Central Government Departments, (2) National Health Mission, (3) Multilateral and Bilateral agencies such as WHO, and the UN agencies, (4) National and international organizations, (4) Corporates, (5) Corporate Social Responsibility (CSR) wings of the industry, (6)Hospitals and health insurance companies, (7) Academic institutions, and (8) Research. Many MPH Graduates also opt to pursue higher studies, dual degree programmes and PhD in India and abroad.

Uniqueness of MPH Program at KSPH

1. A competency-based curriculum that prepares students to stand out
2. Combination of conventional and modern pedagogy: lectures, small group discussions, independent class and homework assignments, simulations, debates, case studies, role plays, demonstrations, experiential learning techniques, slide-shows, videos, case presentations, etc enable students to participate, experience and apply what they have learned
3. An interdisciplinary faculty pool of experts ensure delivery of the curriculum in an uncompromising manner
4. Practicum opportunity in the field, following theoretical learning in the class
5. Hands on training in various demonstration sites of at health care facilities, community-based public health programs, disease prevention and control programs, national and international health agencies, and non-governmental organizations (NGO)
6. Guide-assisted thesis preparation and internship activities
7. Mentorship-driven close interaction with the students and solving their education related problems in the campus
8. Focus on soft skill development as writing, presentations, group discussion, data analysis and documentation
9. Active participation in academic and scholarly endeavours through seminars and journal club sessions
10. Opportunities to interact with the industry experts, guest faculty
11. Encouragement for participation and presentation of papers in national and international training workshops / seminars / conferences
12. Attractive career path with academic and research possibilities

MPH Curriculum at a Glance

Code	Module/Course	Contact Hours per Week			Credits
		L	T	P	
Semester I					
HE61001	Principles and Practices of Public Health	3	1	0	**4**
HE61003	Organizational Behavior	2	1	0	**3**
HE61005	Principles of Epidemiology	3	1	0	**4**
HE64001	Biostatistics	1	1	1	**3**
HE64003	Research Methods	1	1	1	**3**
HE61007	Social and Behavioural Sciences in Health	2	1	0	**3**
HE68001	Field Visit and Seminar	0	1	2	**2**
	Total Semester I				**22**
Semester II					
HE61002	Health Communication and Health Promotion	2	1	0	**3**
HE61004	Health Economics and Financial Management	2	1	0	**3**
HE61006	Health Planning and Management	2	1	0	**3**
HE61008	Health Systems and Health Policy	2	1	0	**3**
HE61010	Demography and Population Sciences	2	1	0	**3**
HE61012	National Health Programmes	2	1	0	**4**
HE68002	Field Visit and Seminar	0	1	2	**2**
	Total Semester II				**21**
Semester III					
HE71001	Law and Ethics in Public Healthcare	2	1	0	**3**
HE71003	Global Health	2	1	0	**3**
HE71005	Environmental and Occupational Health	3	1	0	**4**
HE71007	Reproductive, Maternal, New born, Child and Adolescent Health (RMNCH+A)	3	1	0	**4**
Special Tracks					
HE74101	Implementation Science and Operations Research	3	2	1	**6**
HE74201	Technology in Health and Health Informatics	3	2	1	**6**
HE74301	Health Insurance and Risk Management	3	2	1	**6**
HE78001	Field Visit and Seminar	0	1	2	**2**
	Total Semester III (with one Special Track)				**22**
Semester IV					
HE77002	Dissertation*	0	0	24	**12**
HE78002	Internship*	0	0	12	**6**
	Total Semester IV				**18**

L=Lecture; T=Tutorial; P=Practical; *Evaluation modalities specified

Total Credits of MPH Programme = 83 (Sem I = 22; Sem II = 21; Sem III = 22; Sem IV = 18)

MPH Syllabus in Detail

SEMESTER I

Module Code: HE61001 **Credits: 04**

Module Name: Principles and Practices of Public Health

Learning Outcomes:

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

1. *Remember the definitions of health, disease and wellbeing*
2. *Understand the emerging concepts of health (i.e. international health, global health, One health & Planetary health)*
3. *Recognize models of healthcare service provisions in India*
4. *Understand different types of healthcare systems in India*
5. *Analyze the role of hospitals in healthcare delivery system*
6. *Enumerate steps in estimation of economic dimensions of health and disease*
7. *Realise the approaches to public health practice*

Unit 1: Concept of Health, Disease and Wellbeing

- Definition of health, disease and wellbeing
- Dimensions & determinants of health
- History, scope and functions of public health
- Natural history of disease & disease dynamics
- Concepts of disease control, elimination and eradication
- Prevention of diseases & Promotion of health, Changing pattern of diseases, Health indicators, Newer concepts in health –global health, one health, planetary health, Role of hospitals in disease control
- Disease burden, measurement of health – mortality and morbidity, e.g. DALY, QALY, PQLI, HALE, HDI etc
- Individual & herd immunity; levels of prevention

Unit 2: Introduction to Human Physiology and Key Terminologies

- Introduction to various system of human body and terminology
- Investigation terminology
- Genetic disorder and counselling
- Basic immunological concepts

Unit 3: Health & Healthcare Services

- Health Statistics of India: health & healthcare service indicators, current scenario
- State role in health care – constitutional & other provisions, health as a right
- National health policy, Universal Health Coverage, National Health Programme, SDGs
- Primary healthcare, Antimicrobial/Antibiotic resistance; introduction to Global Health and One Health.

Unit 4: Health Care Systems

- Development of Indian Health Care Sector/Services (from Bhore Committee 1946 to National Health Policy 2017), Classification of healthcare system
- WHO health system framework

- Role of private sector in health service provision, Comparison between public and private health care provision, Public-private partnership in health care provision, Scope & future of private health care in India

Unit 5: Public Health Principles, Practices and Actions

- Principles of Public Health Practice; Public health Surveillance; Outbreak investigation and response, Concept of Bioterrorism
- Introduction to Disaster management, disaster preparedness and response in health sectors, disaster management in India with reference to health sector
- Public Health Laboratory services
- Technology application in Public health – Biotech, rapid diagnostic tests, ICT in Healthcare; GIS, digital health; Concept of Telemedicine, e-health, m-health etc.

Text Books & Key Readings:

1. Concepts in Health and Wellness by James Robinson, III & Deborah J. McCormick. (2011). Delmar Cengage Learning.
2. Essentials of Public Health Biology: A Guide for the Study of Pathophysiology By Constance U. Battle. Jones and Bartlett Publishers, Inc; 2nd Edition (2009)
3. Park's Textbook of Preventive and Social Medicine, 26th Edition (2021), K.Park. Banarsidas Bhanot publishers.

Journals:

1. Indian Journal of Public Health
2. Indian Journal of Community Medicine
3. Journal of Hospital Administration

Module Code: HE61003 **Credits: 03**

Module Name: Organizational Behavior

Learning Outcomes:

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

1. *Recognize role of individuals and organizations in attainment of objectives*
2. *Describe the individual traits in an organization and its role in healthcare*
3. *Appreciate the organizational structure of hospitals/organizations*
4. *Analyze organizational culture and stressors at workplace*
5. *Apply the concept and theories of organizational behavior at work*
6. *Apply techniques of stress management, problem solving and conflict resolution in healthcare/hospital settings*

Unit 1: Overview of Organizational Behavior in Healthcare and Hospital Settings

- Introduction, Components of organizational behavior (Sociology and Anthropology, Basics of Psychology)
- Individual characteristics: Learning, Motivation, Attitude, Personality and Leadership
- Creating thinking and problem solving
- Behavior of people at work place, Groups and Teams, Characteristics of work groups & Dynamics of team members
- Transactional analysis

- Organizational culture & change management
- Organizational Behavior & its application in hospital setting: Concept of healthcare institutions, services industry and hospitals
- Evolution of hospital services: Indian & Global Scenario
- Changing Role of Hospitals in a Globalized Society
- Privatization in Health Sector Patient centric health care and concepts of patient satisfaction

Unit 2: Organizational Structure and Functions of Hospitals

- Types of Hospitals according to ownership and specialization (General, specialist, super specialist), Bed Strength and Profit: Non-profit hospitals; General, Corporate, Teaching and Non-teaching hospitals)
- Functional units of hospitals
- Functions of Hospitals (care of sick & injured, education of physicians, nurses, others, disease prevention & health promotion, waste disposal, education, training & research)

Unit 3: Hospital as an Organization

- Hospital as a complex organization
- Systems approach to hospitals (Input, process, output, outcome)
- Management structure of a Hospital (Governing Body, Hospital Committees, Medical Director, Medical Superintendent, Hospital Administrator, Nursing Superintendent, Departmental Heads)

Unit 4: Attributes of a Manager

- Managerial activities in healthcare and hospitals
- Duties, functions & responsibilities of a manager/hospital administrator
- Managerial Attributes
- Competencies required for an efficient and effective hospital Manager– planning, communication, delegation, decision making, managing time and meetings, negotiations, innovations & leadership

Text Books & Key Readings:

1. Text book of Organizational Behavior by Fred Luthans. McGraw Hill Publications
2. Principles of Hospital Administration by S. A. Tabish
3. Sonu Goel, Anil Kumar Gupta and Amarjeet Singh (2014). (Editors). Hospital Administration – A Problem-Solving Approach. New Delhi: Elsevier.
4. BM Sakharker- Hospital Administration

Journals:

1. Journal of Hospital Administration (JAHA)
2. Journal of Organizational Behavior Management

Module Code: HE61005 **Credits: 04**

Module Name: Principles of Epidemiology

Learning Outcomes:

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

1. *Define epidemiology and appreciate its importance in public health*
2. *Understand the concept of the natural history of the disease, levels of prevention, disease causality, and errors in epidemiological measurement*

3. *Analyze epidemiological data for evidence-based public health practice*
4. *Apply basic principles of infectious disease epidemiology for prevention and control of infectious diseases including outbreak investigation*
5. *Apply basic principles of non-communicable diseases for the prevention and control of NCDs*
6. *Design appropriate epidemiological study for assessment of disease burden and disease determinants*

Unit 1: Introduction to Epidemiology

- Definition and objective of epidemiology, History, and Evolution of epidemiology, Scope and uses of epidemiology, Achievements in epidemiology
- Epidemiology Triad and tetrad, Natural history of disease and levels of prevention, Screening
- Concept of causality, risk factors and determinants of disease, Genetic and Environmental factors in disease causation.
- Measurements in Epidemiology (morbidity, mortality, disability, survival) - Rates, ratios, and proportions, prevalence and incidence, Direct and indirect standardization, Quality of life
- Ethical and Professional Issues in Epidemiology

Unit 2: Epidemiologic Study Designs and Methods

- Classification of various epidemiologic study designs, cross-sectional & longitudinal studies, observational and analytical studies, quasi & true experimental studies, ecological, case-control, cohort, clinical trials, community trials
- Concept of risk, estimating risk, absolute risk and relative risk, odds ratio, attributable risk, attributable fraction, population attributable risk and attributable fraction
- Deriving inference from epidemiological studies – approaches, association, and causal relationship, Bias, Confounder & Interaction
- Application of study designs in public health practice and clinical practice:
    - Validity and reliability of diagnostic and screening tests, interpretation of series and parallel testing
    - Assessing the efficacy of preventive and therapeutic measures

Unit 3: Principles of Infectious Disease Epidemiology

- 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, lead time, attack rate, transmission rate,
- Outbreak, epidemic, pandemic, types of epidemics
- Concepts of disease control, elimination, and eradication
- Infectious disease surveillance
- Outbreak investigation

Unit 4: Principles of Non-Communicable Disease Epidemiology

- Basics of NCD epidemiology, causality, latent time, lead time, iceberg phenomena, risk factor approach, common NCDs & shared risk factors
- NCD risk factor and disease surveillance
- Application of epidemiological principles in national health programme design

Text Books & Key Readings:

1. Leon Gordis (6th 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. Epidemiology for Public Health Practice (4th Edition, 2013) by Robert H. Friis. Jones and Bartlett Publishers, Inc.
4. Textbook of Modern Epidemiology by Rothman

Module Code: HE64001 **Credits: 03**

Module Name: Biostatistics

Learning Outcomes:

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

1. *Understand concepts of statistics and relevance in public health*
2. *Recognize theories of distribution, probability and sampling*
3. *Apply principles of biostatistics in population level data analysis*
4. *Design tools for data collection and analysis*

Unit 1: Introduction to Biostatistics

- Meaning and usage of statistics: Meaning of Statistics Application of statistics in healthcare
- Variables: Nominal, Ordinal, Interval and Ratio scale variables; discrete and continuous variables; qualitative and quantitative variables
- Measures of central tendency: Mean, Median, Mode; Merits and demerits of different measures.
- Measures of dispersion: Range, Inter-quartile range, Quartile, Variance, Standard Deviation; Uses of different measures of dispersion.
- Data presentation: Frequency distributions, Tabulation of data; Graphical presentation of data; Types of diagrams - bar chart, pie chart, line diagram, histogram, scatter plot, box plot

Unit 2: Probability and Distributions

- Probability: events; exhaustive, mutually exclusive events; laws of probability, additive and multiplicative laws of probability and its properties, Bayes Theorem
- Probability distributions:
  - Normal distribution and its properties;
  - Central limit Theorem;
  - Binomial distribution
  - Poisson distribution and their properties

Unit 3: Concepts in Sampling and Hypothesis Testing

- Sampling: Concept of population and sample, Types of sampling, sample size calculation
- Hypothesis testing: Statistical hypothesis, One sided and two sided test of hypothesis, Confidence Interval, Type I and Type II errors

Unit 4: Concepts in Inferential Statistics

- Comparison of means: t-test for small samples, independent and paired t-test; ANOVA, uses and interpretation
- Chi-square test: Pearson's Chi-square coefficient, and its properties; uses and interpretation

- Correlation: Concept of correlation, Pearson correlation coefficient, and its properties; uses and interpretation
- Basics of regression: Types of regression, regression coefficient, interpretation and uses
- Nonparametric tests: Difference between paramentric and non-parametric tests; Assumptions of parametric test; types of non-parametric tests; when to use non-parametric tests

Practicum / Sessional:

- Data entry into Excel/SPSS
- Data presentation - Graphs, Charts and Tables
- Data analysis using Excel/SPSS/R

Text Books & Key Readings:

1. Rao PSSS, Richard J. Introduction to Bio-statistics and Research Methods. 5th edition. PHI publisher, 2012.
2. Indrayan A, Malhotra RK. Medical Bio-statistics. 4thedition. Chapman & Hall Publishers, 2018.
3. Marcello Pagano and Kimberlee Gauvreau (2000) "Principles of Biostatistics" Second Edition, Duxbury Thomson Learning, United States.

Module Code: HE64003 **Credits: 03**

Module Name: Research Methods

Learning Outcomes:

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

1. *Discuss basic concepts of science and research, and methods to conduct public health research*
2. *Recognize various research designs and data collection tools*
3. *Realize critical dimensions of public health research, such as, settings, sampling, ethical issues, consenting, data collection, data analysis and report writing*
4. *Design research proposals on public health with scientific rigor and research acumen*
5. *Undertake and evaluate public health interventions using appropriate research designs*

Unit 1: Basics of Health Research

- Definition, objective, nature, scope and characteristics of research
- Research philosophies and research processes, Paradigms of research thinking
- Problem identification, Problem statement
- Research questions, Study objectives, and Hypothesis development
- Literature review and systematic review, referencing (including hands-on use of softwares for referencing)
- Criteria of good research and challenges in health care research
- Research methods versus research methodology
- Ethical and professional issues in research
- Health Care Research versus Health Systems Research
- Getting research into policy and practice
- Developing research proposals

Unit 2: Research Design and Methods

- Researchable problem
- Research Designs and their applications in health care:
- Observational Studies: Descriptive, Exploratory and Explanatory
- Experimental Studies: Pre-Post, Longitudinal designs and Clinical trials
- Epidemiological Studies: Cohort, Case control, Cross sectional, Interventional and Panel studies
- Sources and types of errors in research and strategies to minimize errors

Unit 3: Sampling and Measurement in Research

- Fundamentals of Sampling: Necessity and significance of sampling, Central Limit Theorem and Sampling theory
- Sampling Designs: Census and Sample Survey, Steps in sampling design, Criteria of selecting a sampling procedure, Characteristics of a good sample design
- Sampling types: Probability and non-probability sampling; Multi-stage sampling; Sampling with probability proportional to size, Sequential sampling
- Sample Size estimation for different studies
- Measurements in Research: Measurement Scales, Sources of error in measurement
- Developing measurement tools
- Scaling: classification, methods and construction
- Tests of measurement

Unit 4: Data Collection and Interpretation

- Data vs Information; Different types of data and their characteristics
- Methods of Data Collection: Census vs Survey, Primary Data vs Secondary data
- Data collection tools and techniques
- Data presentation techniques: editing, cleaning, coding, classification, tabulation, graphic and diagrammatic presentation techniques
- Data Interpretation: Essentials for data interpretation, Precautions in interpretation
- Conclusions and generalization, Objectivity in interpretation
- Report writing: Basic structure and characteristic of a report, types of reports and stages in preparation of report, techniques of report writing

Practicum / Sessional:

- Hands-on softwares (MS Office, Mendeley, SPSS, Atlas. ti)
- Literature search
- Referencing styles

Each student will develop a real research proposal during the course of this module.

Text Books & Key Readings:

1. Introduction to Health Research Methods-A Practical Guide, (2nd Edition) by Kathryn H. Jacobsen, 2016.
2. Research Methodology for Health Professionals (1st Edition) by RC Goyal, 2013. Jaypee Publication
3. Kothari C R. Research Methods & Techniques. New Age International Private Ltd., New Delhi, 2000

4. 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.
5. Hill A.B. Principles of medical statistics, Oxford University press, New York
6. Designing and Conducting Survey Research: A Comprehensive Guide, 4th Edition, by Louis M. Rea, and Richard A. Parker. 2014.
7. Determining Sample Size and Power in Research Studies- A Manual for Researchers by J. P. Verma and Priyam Verma, 2020. Spinger Publication

Journals:

1. Indian Journal of Public Health
2. Indian Journal of Community Medicine
3. International Journal of Epidemiology

Module Code: HE61007 **Credits: 03**

Module Name: Social and Behavioural Sciences in Health

Learning Outcomes:

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

1. *Understand health seeking behavior and health risk behavior*
2. *Recognize importance of social and cultural determinants of health*
3. *Recognize theoretical underpinning of social and behavioural sciences in public health*
4. *Enumerate steps and models of health promotion*
5. *Develop strategies for behavior change of the population*

Unit 1: Introduction to Health Behaviour

- Dimensions of health
- Health promoting behaviour and Health risk behaviour
- Understanding health seeking behaviour

Unit 2: Sociological Perspectives on Health and Illness

- Social origins of health/illness, lay understanding of illness
- Social perspectives on Health: Functionalism; Conflict Theory; Interactionism; Labelling Approach

Unit 3: Sociocultural Determinants of Health

- Social determinants: socioeconomic status, gender, literacy, occupation, caste/class, housing, geography
- Cultural determinants: religious beliefs, normative beliefs, cultural identity, racism, immigration & acculturation
- Psychological determinants: Personality types, Locus of control, stress, social support, social network, social isolation

Unit 4: Models of Health Behaviour Change

- Health Belief Model
- Theory of Planned Behaviour
- Trans-theoretical model/Stages of change model
- Social Cognitive Theory

Unit 5: Health Behavior Related Challenges to Specific Public Health Issues

- Tobacco use
- Alcohol consumption
- Dietary practice
- Road safety behaviour
- Disease screening behaviour

Text Books & Key Readings:

1. Mark Edberg. Essentials of health behavior: Social and behavioral theory in public health. Jones and Bartlett publishers, 2013
2. Social and Behavioral Science for Health Professionals. (2nd Edition, 2019), Brain P. Hinote and Janson A. Wasserman. Rowman & Littlefield Publishers
3. Park's Textbook of Preventive and Social Medicine, 26th Edition (2021), K.Park. Banarsidas Bhanot publishers.

Module Code: HE68001 **Credits: 02**

Module Name: Field Visit and Seminar

Objectives of field visit: The participant is expected to spend considerable amount of time in the field (slum/disadvantaged population) to apply the theoretical learning in real life settings. A seminar presentation of the field visit will be made at the end of the field visit before the designated committee/faculty for evaluation.

SEMESTER II

Module Code: HE61002 **Credits: 03**

Module Name: Health Communication and Health Promotion

Learning Outcomes:

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

1. *Describe the process, channel and techniques of communication in healthcare and hospital settings*
2. *Recognize the importance of technology in health communication and promotion*
3. *Analyze various communication related barriers and challenges*
4. *Apply principles of communication to develop strategies for effective communication*
5. *Develop health promotion strategies for public health interventions*

Unit 1: Introduction to communication process, forms and methods

- Basics of communication; element of communication and communication process
- Methods of communication: Intrapersonal, Interpersonal and Mass communication, Forms of communication: written, verbal, non-verbal
- Principles of communication
- Effective communication and barriers to communication
- Channels of health communication

Unit 2: Communication Types, Theories and Strategies

- Characteristics of effective communication
- Channels of communication
- Characteristics of effective communication
- Information, Education and Communication (IEC)
- Social and Behaviour Change Communication (SBCC)
- Social marketing
- Professional etiquette in Communication
- Design a health communication intervention
- Advocacy

Unit 3: Theories and Models of Health Promotion

- Theories of Health Promotion
- PRECEDE-PROCEED Model
- Community needs assessment
- Designing a health promotion intervention
- Evaluation of health promotion programmes

Text Books & Key Readings:

1. Detels R, Gulliford M, Karim QA, Tan CC. Oxford Textbook of Global Public Health. 7th edition. Oxford University Press, 2021.
2. Fertman CI, Allensworth DD. Health promotion programs: from theory to practice, 3rd edition. Jossey-Bass & Pfeiffer Imprints, Wiley, 2022.

Module Code: HE61004 **Credits: 03**

Module Name: Health Economics and Financial Management

Learning Outcomes:

At the end of this module, the students will be able to:

1. *Understand the key concepts of economics, micro and macro economics*
2. *Understand the determinants of demand, supply and costs of production*
3. *Understand and apply the concepts of efficiency, effectiveness, equity, elasticity of demand, costing, production, marginal cost analysis, and opportunity cost*
4. *Understand the goal of Universal health coverage and the role of health care financing to achieve UHC*
5. *Apply various techniques of economic evaluation in health care*
6. *Apply basic techniques of financial management, and techniques of financial analysis and planning in health care*

Unit 1: Fundamentals of Health Economics

- Key concepts of economics, micro and macro economics
- Strategizing and prioritizing within scarce resources (decision making)
- Determinants of demand, supply, production and cost
- Concepts of efficiency, effectiveness, equity, elasticity of demand, costing, production, marginal cost analysis, and opportunity cost
- Economic concept of market, market model, competitions, monopoly, oligopoly, market failure, and the roles and limitations of markets in health care; social marketing
- Alternative Models of Hospital Behavior-Utility Maximizing Model, Physician Control Models etc.
- Universal health coverage, health care financing models, role of health care financing
- National Health Accounts
- Health care and welfare state, private versus public health care, public-private partnerships (PPP) in health care
- Concept of Insurance
- Concept and estimation of out of pocket expenses and catastrophic health expenses

Unit 2: Health Economics and Economic Evaluation

- Input and output indicators of health and their correlation with the level of economic development and with public expenditure on health
- Cost concept- short term and long -term costs, economies of scale, various types of economic evaluation used in health care, consumer impact assessment
- Principles of economic evaluation in health care: Cost analysis, Cost Benefit Analysis (CBA), Cost-Effectiveness Analysis (CEA) and Cost Utility Analysis (CUA)
- Application of cost-benefit analysis and cost-effectiveness
- Measuring health outcomes- Quality adjusted life years (QALYs), Health year equivalents (HYEs), Disability Adjusted life years (DALY)

Unit 3: Fundamentals of Financial Management

- Introduction to financial management
- Tools of financial analysis and planning in health care
- Cash flow, accounts and balancing budgets
- Working capital management, fund allocation and department performance reports
- Cost and dividends for health outcomes
- Effectiveness and efficiency
- Sustainability of Health Programs

Unit 4: Fundamentals of Management Accounting

- Accounting principles and types of accounts
- Concept of book keeping, terms used in book keeping, business transactions, theory of double entry, preparation of journal, Ledger and trial balance
- Financial Statement, Profit and Loss Account, income and expenditure account, and balance sheet

Practicum / Sessional:

- Seminar -1; Journal Club – 1; Group Discussion / Case Study – 1
- Hospital Departmental Posting 18 hours in the entire semester for this module

Each Seminar/JC/GD/Case study presentation lasts for 2 hours. The list of topics will be notified at the beginning of each semester.

Text Books & Key Readings:

1. Nair KS. Health Economics and Financing. New Century Publications, 2019.
2. Baker JJ. Baker RW, Dworkin NR. Health Care Finance: Basic Tools for Non-financial Managers. 5th edition. Jones and Bartlett Publishers, Inc, 2017
3. Pattnaik P. Health Economics. Black Prints India Inc, 2013.
4. Raman AV, Björkman JW. Public-Private Partnerships in Health Care in India: Lessons for developing countries. Routledge, 2017.
5. Detels R, Gulliford M, Karim QA,Tan CC. Oxford Textbook ofGlobal Public Health. 6th edition. Oxford University Press, 2015.
6. Ross KT. Practical Budgeting for Health Care: A Concise Guide. 1st edition. Bartlett Publishers, Inc, 2020.

Journals:

1. Journal of Health Economics
2. The Economic and Political Weekly
3. International Journal of Health Economics and Management

Module Code: HE61006 **Credits: 03**

Module Name: Health Planning and Management

Learning Outcomes:

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

1. *Discuss importance of planning in health programmes*
2. *Recognize principles and steps of planning*
3. *Recognize principles of management and management functions*

4. *Understand types of plans and role of Niti Aayog in planning*
5. *Develop planning tools for programme planning and implementation*
6. *Apply tools for problem analysis and conflict management*

Unit 1: Introduction to Planning

- Definition, rationale & basis for planning in health sector
- Planning activities and terms; Development of formalized planning
- Rationale for health planning
- Activity-based, objective-based and allocative planning
- Different perspectives on health and health-care planning
- The State's responsibilities in the health sector
- State's attitudes to different types of health-care programmes
- Planning as an open and transparent process
- Planning as a technocratic and as a political activity
- Health sector development in India (from Bhore committee 1946 to National Health Policy 2017).

Unit 2: Approaches to planning

- Various planning models
- Realistic rational planning model
- Private and public sector planning
- Levels of planning
- Niti Aayog and its role in sectoral planning in India
- Monitoring & Evaluation

Unit 3: Introduction to Management

- Definition of management, principles and functions of Management
- Systems approach in health management – inputs, processes, outputs, outcomes and impact
- Introduction to types and domains of management (strategic management, logistic management, human resource management etc)

Text Books & Key Readings:

1. Detels R, Gulliford M, Karim QA, Tan CC. Oxford Textbook of Global Public Health. 6th edition. Oxford University Press, 2015.
2. Lal S. Public Health Management Principles and Practices. CBS Publisher, 2016.
3. Gray CF, Larson EW, Desai GV. Project Management: The Managerial Process. 6th Edition. McGraw Hill Publisher, 2017.
4. Green A. An introduction to health planning for developing health system. 2017.

Module Code: HE61008 **Credits: 03**

Module Name: Health Systems and Health Policy

Learning Outcomes:

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

1. *Summarize basic concepts of health systems and health policy*
2. *Outline and describe important health system frameworks*
3. *Conceptualize health policy formulation*

4. *Describe context of health policy making and steps in policy making*
5. *Analyse role of power and influence, steps in policy analysis*
6. *Recognize importance of health policy research in the government and in academic settings*
7. *Discuss role of global health policies in improving population health*

Unit 1: Introduction to Basic Concepts on Health Systems and Policy

- Concept of health system
- Pillars of health system
- Health system strengthening
- Basic theoretical approaches and concepts used in policy analysis
- Understanding of global and national health policies, including current trends

Unit 2: Making Health Policy

- Concept of policy, types of public policies
- History and evolution of health policy in India
- Analyse the political system within which policies are made
- Contextual factors that influence policy change
- Changing global health policy environment
- Fundamental of health policy research
- Policy making: key components, policy framework, stakeholders in policy making

Unit 3: Analyzing Health Policy of India

- Steps in health policy analysis
- Law and politics in health policy
- Translating research in policy making
- Effects of different interest and advocacy groups in influencing health policy
- Effects of national and international affairs on health policy
- National Health Policy 2017 – analysis

Unit 4: Applied Concepts

- Policy and politics in health
- Policy in academic and industry contexts
- Evaluating health policies

Text Books & Key Readings:

1. Book: Making Health Policy, Tata McGraw Hills Publication
2. Park's Textbook of Preventive and Social Medicine, 26th Edition (2021), K.Park. Banarsidas Bhanot publishers.
3. World Health Systems by Xiaoming Sun. 2019. John Wiley & Sons, Inc.
4. National Health Policy 2017
5. Health Sector Reforms: Govt of India report

Module Code: HE61010 **Credits: 03**

Module Name: Demography and Population Sciences

Learning Outcomes:

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

1. *Describe definition and concepts of demography and population science*

2. *Calculate fertilities and mortalities*
3. *Recognize sources of data for population studies*
4. *Analyse population policy of India and relate it with various population control measures*
5. *Apply principles of demography in designing programmes*

Unit 1: Introduction to Demography and Population Sciences

- Demography and health: Definition; Scope; Evolution,
- Importance of population science in relation to public health;
- Demographic composition; Factors/process affecting population - birth, death, marriage, migration, social mobility;
- Concept of Gender & Sex; Vulnerable Population - mother and child, Low SES, migrant, urban poor, pavement dwellers, street children, tribal, victims of war, disasters victims, elderly people. refugee and asylum seekers
- Implication of rapid Population Growth; Population explosion, its impact on health.
- Demographic theories - Malthusian Theory, Optimum population Theory, Demographic Transition theory

Unit 2: Fertility, Mortality, Measures from Population Data Sources

- Concept of Fertility - Fecundity & fertility; Sterility-Primary, Secondary; abortion, natural fertility; Biological limits and social norms; Physiological factors, Social and cultural factors affecting fertility, Bongaarts proximate determinants of fertility, levels and trends in fertility both developed and developing countries; Differentials in fertility.
- Mortality, Expectation of life at birth, Infant mortality, determinants of infant mortality and trends, differentials-India, States & Selected Countries; Age & Sex differentials in mortality – trends, causes of death, Patterns; Causes of mortality decline-developed & developing countries.
- Rates & ratios, Mid-Year population, measures of Fertility (CBR, GFR, ASFR, TFR); Measures of Reproduction (GRR, NRR); Measures of Mortality (CDR, ASDR, IMR, MMR); determinants and differentials across states and some selected countries, Life table concepts, Standardization methods
- Sources of population data – Census, Civil Registration System (CRS), Sample Registration System (SRS), Annual Health Survey (AHS), National Family Health Survey (NFHS), District Level Household Facility Survey (DLHS), Reproductive and Child Health (RCH), National Sample Survey (NSS), UN Demographic year book

Unit 3: Population Growth, Distribution, Migration and Urbanization Unit III:

- Population growth and Projection
- Critical review of World Population Growth- Regional distribution & its impact; Population Growth & distribution in India & states
- Population pyramid and Characteristics; Age, Sex distribution; Marital Status: Age at marriage & Public Health Concerns
- Sex ratio - causes & consequences, Indian scenario
- Demographic dividend
- Concept of Migration, Types, Internal and International migration, Cause and consequence of migration
- Urbanization, Cause and Consequence of urbanization, Urbanization and health

- Gender issues

Unit 4: Population Policy and Welfare Programme

- Population policy - India and China; - One Child Policy in Chain - consequences,
- Family Planning Programme – Factors influencing population growth Global and Indian prospective; Family planning methods; Medical Termination of Pregnancies; Critical review of Family planning programme, achievements and its management.

Text Books & Key Readings:

1. POPULATION: An Introduction to Concepts and Issues (12th Edition), 2018. John R. Weeks. Rawat Publication.
2. Demography and the Anthropocene. (1st Edition), 2021. Larry D Barnett, Spinger.
3. Park's Textbook of Preventive and Social Medicine, 26th Edition (2021), K.Park. Banarsidas Bhanot publishers.

Module Code: HE61012 **Credits: 04**

Module Name: National Health Programmes

Learning Outcomes:

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

1. *Enlist important national health programmes of India*
2. *Understand the components of a national health programme*
3. *Appreciate the facilitators and barriers of implementing national health programmes*
4. *Assess the output and outcome of national health programmes*
5. *Compare the generic and specific strategies of national programmes*
6. *Critically analyze the national health programmes*

Unit 1: Introduction to National Health Programmes

- Evolution, definitions, components of a health program, vertical vs horizontal programs, integration, multi-sectoral approach
- Programme planning, goals, and objectives, strategies, implementation, monitoring and evaluation, the role of stakeholders in national health programme design and implementation

Unit 2: National Health Programmes to Control Infectious Diseases

- National Vector Borne Disease Control Programme;
- National Leprosy Eradication Programme
- National Tuberculosis Elimination Programme
- National AIDS Control Programme
- Universal Immunization Programme and IDSP

Unit 3: National Health Programmes on NCDs

- National Programme for Prevention & Control of Non-Communicable Diseases (NP-NCD)
- National Programme for Control of Blindness and Visual Impairment (NPCB&VI)
- National Programme for Prevention and Control of Deafness (NPPCD)
- National Programme for IDDs
- National Programme for Prevention and Control of Fluorosis
- National Programme for Prevention and Management of Trauma and Burn Injuries
- National Mental Health Programme

Unit 4: Other National Health Programmes

- National Health Mission: NHM, NRHM
- National Programme for Health care for Elderly
- National Program for Palliative Care
- Programmes for Maternal, Child, Newborn, and Adolescent health
- National Organ Transplant Programme
- National Oral Health Programme
- National programmes for Nutritional Health

Text Books & Key Readings:

1. National Health Programs of India: National policies and legislation related to health, (14th Edition) 2022, by Jugal Kishore. Century Publications

Module Code: HE68002 **Credits: 02**

Module Name: Field Visit and Seminar

Objectives of field visit: The participant is expected to spend considerable amount of time in the field (slum/disadvantaged population) to apply the theoretical learning in real life settings. A seminar presentation of the field visit will be made at the end of the field visit before the designated committee/faculty for evaluation.

SEMESTER III

Module Code: HE71001 **Credits: 03**

Module Name: Law and Ethics in Healthcare

Learning Outcomes:

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

1. *Define public health law and public health ethics and its scope*
2. *Explain various policies and regulations in relation to public health and healthcare*
3. *Describe the ethical principles in health research and public health practice CO4: Execute the institutional ethical approval for his dissertation work*
4. *Critically analyze the public health laws*
5. *Critically analyze the ethical guidelines for public health practice*

Unit 1: Introduction

- Need vs Rights, right-based health, health as a human right, international and constitutional perspective on the health of people,
- Introduction to the Indian legislative system and judicial system
- Policy development, acts and notifications, enforcement mechanism, prosecution and conviction;
- Public health regulations in the Indian context,
- Different forms of power influencing policymaking,
- Political nature of the evidence for policy making in health
- International health regulations, Global health hazards and security, Public Health laws in the global economy

Unit 2: Important Health and Healthcare Legislations in Indian Context

- The Epidemic Diseases Act, 1925; Mental Health Care Act 2017; The Narcotic Drugs and Psychotropic Substance, Act-1985; The Poisons Act, 1919; The Maternity Benefits Act, 1961; The Medical Termination of Pregnancy Act 1971; The Pre-Natal Diagnostic Techniques (Regulation and prevention of Misuse) Act, 1994; The prevention of Food adulteration Act, 1954. The environment protection Act – 1986; The Insecticides Act, 1968; other Regulations for food safety, COTPA Act 2003, Disaster Management Act 2005
- 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, essential medicine list (EML)
- Medical negligence – Liability of doctors: Under the Law of Torts and Consumer Protection Act; Liability for the use of medical devices; Criminal liability of Doctors

Unit 3: Ethics in Public Health

- Ethics in Public Health - principles - confidentiality, autonomy, non-maleficence, beneficence, justice, fairness, truthfulness), application of ethics in the field of research and public health practice, Identifying and clarifying ethical dilemma,
- Principles of Public health ethics - transparency, cost-benefit considerations, research denying basic needs, withholding lifesaving interventions, public health information and

privacy, Regulations during emergencies and outbreaks, Addressing newer challenges: Bioterrorism, conflicts, and emerging infectious diseases

- Ethics in health research and clinical trials, Comparison between medical/bio-ethics & public health ethics
- Intellectual Property Rights (IPR)
- Authorships, acknowledgment of credits, disclaimers, plagiarism

Text Books & Key Readings:

1. Lectures on Law and Medicine (2018) by Dr. Rega Surya Rao and Smt. P. Aravinda. Publisher: Gogia Law Agency
2. National Ethical Guidelines for Biomedical and Health Research Involving Human Participants by ICMR, New Delhi
3. International Health Regulations (2005) by World Health Organizations
4. National Health Programmes, Health Policy and Health Legislations (2022) by J Kishore, Century Publishers

Module Code: HE71003 **Credits: 03**

Module Name: Global Health

Learning Outcomes:

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

1. *Articulate the importance of public health concepts related to global health: in the context of globalization, economic development and health challenges that affect people*
2. *Identify and critically examine key issues in global health*
3. *Discuss the burden of disease in various region of the world*
4. *Understand the effect of climate change on health*
5. *Identify the key actors and role of national and international agencies in global health and the manner in which they cooperate to address critical global health concerns*
6. *Apply tool and techniques to assess public health interventions for important global health issues*

Unit 1: Introduction to Global Health

- Definition of global health, history of global health, concepts of global impact, types of global health researches
- Concept of globalization, global developmental agenda (SDGs)
- Burden of disease in various regions of world
- International collaboration and Need for it
- International agencies, bilateral partners, etc.
- Global health issues with respect to: Migration, Refuges, Asylum seekers, International travel and Transboundary movements

Unit 2: Climate Change and Health need for International Collaborations

- Climate change, climatic associated events (Extreme heat, Natural disasters and variable rainfall patterns, Change in disease patterns), impact of climate change on health and Intergovernmental Panel on Climate Change (IPCC) role on climate change
- Agriculture and energy sector alternation - leading global health crisis

Unit 3: Global Health Issues and Containments

- Bioterrorism
- Health issues on international borders
- Pandemics
- International health regulations, Biohazards and safety regulations
- Global actions in public health emergencies such as Ebola, influenza (H1N1, Avian etc), COVID 19
- Organizations working for global health

Text Books & Key Readings:

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
4. Disease Control Priorities in Developing Countries (2nd Edition), Oxford University Press. 2006
5. Sustainable Development Goals. Online content available at http://www.undp.org/content/undp/en/home/mdgoverview/post-2015-development-agenda.html
6. 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.
7. WHO. Quantitative risk assessment of the effects of climate change on selected causes of death, 2030s and 2050s. Geneva: World Health Organization.

Module Code: HE71005 **Credits: 04**

Module Name: Environmental and Occupational Health

Learning Outcomes:

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

1. *Understand fundamentals of environmental health*
2. *Identify the current environmental health problems and its mitigation strategy*
3. *Recognize disposal of waste technique and its management*
4. *Assess different methods for environmental risk assessment and its prevention measures*
5. *Evaluate various environmental protection laws and policies*
6. *Assess occupational health and safety issues in workplace and suggest appropriate interventions*

Unit 1: Fundamentals of Environmental Health

- Definition, components (physical, biologic and social)
- Links between environment and human health.
- Global disease burden linked to environment health
- Environmental risk factors
- Water, hygiene and sanitation (WASH) and health
- Climate change and health (clean energy, solar energy)

- Classical areas of intervention to improve environmental health

Unit 2: Water, Air, Light, Heat, Noise, Radiation and Housing

- Water: Safe and wholesome water, 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, disinfection, chlorination.
- Air: Composition, 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 stress and its mitigation strategy, frost bites etc
- Light: natural and artificial, criteria for good lighting, health effects of bad lighting.
- Housing: Healthy housing, Health impact of Overcrowding – Physical and social. Light and ventilation

Unit 3: 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.
- Hazardous waste: Definition, sources of hazardous waste; Management and disposal of hazardous waste
- Bio-medical waste management
- Open defecation - public health importance, extent of problem, transmission of faecal-borne diseases, Sanitary barrier, Biological Oxygen Demand (BOD), Methods of excreta disposal

Unit 4: Risk Assessment and Environmental Health Laws

- Environmental risk: characteristics, Tools of risk analysis, Hazard identification, Risk management and mitigation
- Environmental health laws and compliance

Unit 5: Occupational health

- Occupational environment in various settings, Occupational hazards and diseases: Pneumoconiosis, lead poisoning, Occupational cancer, Occupational dermatitis
- Radiation hazards, Occupational hazards of agricultural workers, Accidents in industry
- Measures for health protection of workers, Prevention of occupational diseases; Ergonomics, Occupational health laws

Text Books & Key Readings:

1. Essential Environmental Health by Fries, Jones & Bartlett Publishers – 2007
2. Park's Textbook of Preventive and Social Medicine, 26th Edition (2021), K.Park. Banarsidas Bhanot publishers.
3. Living with the Earth: Concepts of Environmental Health Science. Gary S Morare. Lavis Publications

4. Environmental Science. Toward a Sustainable future. Richard T Wright, Dorothy F Boors PHI learning Private ltd- New Delhi, Pearson Education
5. Environmental Health by Moeller D.W, Harvard University press.
6. New WHO Handbook on Safe management of wastes from health care activities, 2nd edition, 2014, WHO

Module Code: HE71007 **Credits: 04**

Module Name: Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A)

Learning Outcomes:

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

1. *Recognize components and services of RMNCH+A strategy*
2. *Assess current status of maternal, child, neonatal and adolescent health in India*
3. *Identify various national programmes on RMNCH+A*
4. *Analyze the role of food and nutrition on the health of beneficiaries*
5. *Develop frameworks and evaluation plans for studying various programmes on maternal, child, neonatal and adolescent health in India*

Unit 1: Introduction to RMNCH+A

- Brief overview of Reproductive, Maternal, Child and Adolescent health in India
- Genesis of maternal and child health program in India, Evolution of RMNCH+A, Continuum of care and life cycle approach, and Features of RMNCH+A Strategy
- Current status of key RMNCH+A/RCH Indicators, RMNCHA+ and SDG 3, Overview of 5x5 matrix of RMANCH+A, Gender and RMNCH+A.

Unit 2: Reproductive and Maternal Health

- Reproductive health: Definition, Brief overview of ICPD, Sexual and Reproductive health rights, Family Planning – factors influencing population growth, Objective of Family Planning, Family planning methods, Current family planning programme under public sector in India - contraceptive methods at various levels of health system, Thrust areas of Family Planning programme in India and related schemes
- Maternal Health: Brief overview of maternal health, maternal mortality and its causes, achievements in maternal health, maternal health indicators, Service Provision: Ante Natal care, Essential Obstetric Care during Delivery, Post-natal care for Mother and New born, Provision of Emergency Obstetric and Neonatal Care at FRUs, Flagship Programme – Janani SurakshaYojana (JSY), Janani Shishu Suraksha Karyakram(JSSK), Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA), LaQshya; Other program - Comprehensive Abortion Care, MTP (Amendment) Act & Rules, 2021, Infrastructure development – Delivery points, Obstetric HDU/ICU: MCH Wings, Information system for maternal health- Maternal Death Surveillance and Response(MDSR), MCTS Portal, MCP Card

Unit 3: Child Health

- Brief overview of Child health in India, Causes of Child mortality, Infant mortality and Neo-natal mortality in India
- Neonatal and Child Health: Essential new born care, Facility based sick newborn care, Home Based Newborn Care and Home-Based Care for Young Child (HBYC) Programme;

- Nutrition: Promotion of optimal Infant and Young Child Feeding Practices under Mother's Absolute Affection (MAA) Programme, Micronutrient supplementation (Vitamin A, Iron Folic Acid), Management of children with severe acute malnutrition, National Deworming Day;
- Management of common Childhood illness: Management of Childhood Diarrhoeal Diseases & Acute Respiratory Infections;
- Immunization: Intensification of Routine Immunization, Eliminating Measles and Japanese Encephalitis related deaths, Polio Eradication; Rashtriya Bal Swasthya Karyakram (RBSK)

Unit 4: Adolescent Health

- Overview of Adolescent Health and Development; Adolescent Health status – Global and Indian perspective, Health issues specific to adolescents: Nutritional, Sexual and Reproductive Health, teenage pregnancy, Substance misuse, mental health, injuries and Violenec, and NCDs
- Adolescent Health Programme in India - Rashtriya Kishor Swasthya Karyakram (RKSK); Adolescent Friendly Health clinics, Weekly Iron Folic Acid supplementation (WIFS); Menstrual Hygiene Scheme; School Health and Wellness Programme

Unit 5: Food and Nutrition

- Basics of food and nutrition-macro and micronutrient; food and nutrition relevant to human health, scope of public health nutrition, Major nutritional problems of public health importance: Growth retardation, PEM, wasting, stunting, underweight, obesity, anemia, IDD, and their prevention; Micronutrients and deworming; Vitamin deficiency disorders, Diet related chronic diseases, population based dietary and nutritional recommendations

Text Books & Key Readings:

1. RMNCH+A strategy document, Government of India
2. Park's Textbook of Preventive and Social Medicine, 26th Edition (2021), K.Park. Banarsidas Bhanot publishers.

Journals:

1. Journal of Maternal and Child Health
2. BMC Women's Health and BMC Series

Special Tracks

Code: HE74101 **Credits: 06**

Special Track: Implementation Science and Operations Research

Learning Outcomes:

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

1. *Recognize various factors that influence implementation of a programme*
2. *Design monitoring and evaluation tools for implementation of projects/programmes*
3. *Apply principles of research in conducting implementation research*
4. *Develop concept notes on implementing innovations in health and healthcare*
5. *Understand the quantitative methods and modern management techniques as applicable in health care settings as a tool to systems development and managerial control*
6. *Apply principles of operations research for optimum resource utilization*
7. *Apply important analytical tools and techniques of operations research in healthcare settings*

Unit 1: Basic Concepts of Implementation Science

- Definition of implementation science
- Domains of implementation
- Types and categories of implementation
- Consolidated framework for implementation research (CFIR)
- Role of health systems preparedness
- Implementation of evidence-based practices, programmes, or policies in healthcare

Unit 2: Theories and Model of Change and Implications

- Theory of change
- Designing implementation strategies
- Models of implementation and best practices
- Theories, models and frameworks
- Strategies and methods of evaluation

Unit 3: Emerging Trends in Implementation Research

- Emerging trends in implementation research
- Opportunities and challenges
- Health equity in implementation science
- Costs in implementation
- Information management systems in implementation

Unit 4: Fundamentals of Operations Research

- Evolution of Operations Research
- Formulation of models and using models for problem solving
- Limitations of Operations Research
- Recent developments in Operations Research
- Application of Operations Research in the field of health care

Unit 5: Operations Research Techniques

- Linear Programming Problems
- Network Analysis: PERT, CPM and Shortest Rout Algorithm
- Decision Tree Analysis
- Game theory
- Queuing theory
- Management by objective and management by result

Practical:

- Document Review
- Research Framework and Proposal Development
- Field visit

Text Books & Key Readings:

1. Oxford Textbook of Global Public Health, edited by Roger Detels, Quarraisha Abdool Karim, Fran Baum, Liming Li, and Alastair H. Leyland. Oxford University Press, 2021.
2. Practical Implementation Science: Moving Evidence Into Action, edited by Weinger Bryan J, Lewis Cara C, Sherr Kenneth. Springer Publishing.

3. Implementation Science 3.0. Editors: Aron Shlonsky, Bianca Albers, Robyn Mildon. 2020. Springer International Publishing
4. National Implementation Research Network. (2013). Active Implementation Hub. from http://implementation.fpg.unc.edu/
5. Nilsen, P. (2015). Making sense of implementation theories, models and frameworks. Implement Sci, 10, 53. doi: 10.1186/s13012-015-0242-0
6. Bauer, Mark S., and JoAnn Kirchner. "Implementation Science: What Is It and Why Should I Care?" Psychiatry Research 283 (January 2020): 112376. https://doi.org/10.1016/j.psychres.2019.04.025.
7. Bauer, Mark S., Laura Damschroder, Hildi Hagedorn, Jeffrey Smith, and Amy M. Kilbourne. "An Introduction to Implementation Science for the Non-Specialist." BMC Psychology 3, no. 1 (December 16, 2015): 32. https://doi.org/10.1186/s40359-015-0089-9.
8. Kothari C R. Research Methodology Methods & Techniques. New Age International Private Ltd., New Delhi:2000
9. Dharani Venkatakrishnan S. Operations Research Principles and Problems. Keerthi Publishing House, Coimbatore

Code: HE74201 **Credits: 06**

Special Track Name: Technology in Health and Health Informatics

Learning Outcomes:

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

1. *Critically appreciate the drivers and enablers of digital innovation in health and health care.*
2. *Develop understanding of the barriers and challenges associated with digital innovation in health and health care settings.*
3. *Recognize and assess the importance of ethics and risks associated with the use of digital technology in health.*
4. *Evaluate technological solutions in health and healthcare settings through health technology assessment*
5. *Develop strategies for implementation of digital health technology solutions project in real life settings.*
6. *Reflect the changes that are happening in public health practice and professional accountability.*

Unit 1: Introduction to Technology in Health

- eHealth Systems, Standards, and Digital Services: healthcare information systems, electronic health records, personal health records, other digital services, and learning healthcare systems, cases studies on digital health interventions
- Digital health transformation: cultural, structural, and technology dynamics of transformation within organisations
- Bio-Medical Technology and its application in hospital environment
- Digital health research design: identify, understand, find and appraise scientifically valid evidence; an appreciation of the scientific discipline and rigour involved in creating and applying evidence; and the value of scientific research.

- Digital health and wellbeing: design, architecture, governance, interoperability, management, adaptability, personalization, evaluation and maintenance of such systems

Unit 2: Health Technology Assessment

- Health technology assessment (HTA); components of HTA, advantages and disadvantages of technological solutions; efficiency and effectiveness analysis of HTA in Indian context, hospital settings and healthcare organizations.
- Data science and AI in healthcare: application of big data analytics techniques and artificial intelligence (AI)/machine learning techniques in healthcare.
- Digital health mission: components, progress and future

Unit 3: Fundamentals of Healthcare Informatics

- Introduction to healthcare informatics, characteristics, framework, evolution and recent developments
- Technical, social and ethical considerations in healthcare informatics
- Issue and challenges in healthcare informatics
- Best practices and multidisciplinary approach to healthcare informatics
- Scope of healthcare informatics interventions
- Healthcare informatics solutions for decision support
- Application of data science techniques in healthcare informatics

Practical:

- Case studies of bigdata analytics in healthcare
- Applying Data Science techniques for decisions support in healthcare sector

Text Books & Key Readings:

1. Cook, A.M. & Polgar, J.M. (2015). Essentials of Assistive Technologies (4th edition). St Louis: Elsevier Mosby.
2. Fong, B., Fong, A.C.M. & Li, C.K. (2014). Telemedicine Technologies: Information Technologies in Medicine and Telehealth. Wiley on-line library.
3. Moss Richins, S. (2015). Emerging Technologies in Healthcare. Boca Raton: Productivity Press.
4. Information Technology for the Health Professions By Lillian Burke, Barbara Weill. 2013. Pearson Education
5. Adaptive Health Management Information Systems-Concepts, Cases, and Practical Applications-By Joseph K. H. Tan. 2019. Jones & Bartlett Learning
6. Big Data and Health Analytics. 2014 Springer International Publishing
7. Health Informatics-Practical Guide. Robert E. Hoyt, William R. Hersh. 2018. Informatics Education
8. Artificial Intelligence in Healthcare- Adam Bohr, Kaveh Memarzadeh. 2020 Elsevier Science
9. Data Science and Medical Informatics in Healthcare Technologies- By Nguyen Thi Dieu Linh, Zhongyu (Joan) Lu. Springer Nature 2021
10. Digital health mission. Government of India. 2022

Journals:

1. Journal of Digital Health
2. Journal of Telemedicine and Telecare

Code: HE74301 **Credits: 06**

Special Track Name: Health Insurance and Risk Management

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

1. *Understand about health insurance and its applications*
2. *Learn principles of health insurance to develop insurance products*
3. *Apply the tools for assessment of health risks of individuals*
4. *Engage with stakeholders involved in providing cash-less service to patients*
5. *Create suitable policy prescriptions for insurance coverage and risk mitigation*
6. *Assess work profile and challenges of Third-Party Administrators*

Unit 1: Introduction to Health Insurance

- History, recent trends and reforms in health insurance
- Concept of Health insurance and risk pooling
- Principles and models of Health Insurance
- Health Insurance products and product design
- Development and Evaluation of health insurance
- Health insurance versus health assurance
- Public funded and private funded insurance models
- Regulation of health insurance
- Recent developments in health insurance in developed and developing countries

Unit 2: Operations and Management of Health Insurance

- Risk assessment, production, premium setting, tax planning, underwriting, rate making, claims management, settlement, nature of claims from various classes of insurance
- Investment, financing and financial management of Health Insurance
- Accounting and Record Keeping
- Marketing and servicing of health insurance: elements of insurance marketing, uniqueness of insurance markets, distribution, selling insurance, agents and brokers professionalism, remuneration, responsibilities, classification, appointment and capital adequacy norms for broker
- Role of regulatory authority in supervising promotional activities, IRDA and legal framework in Health Insurance and ethical issues
- Third Party Administrators
- Applications of information technology in health insurance
- Government's role in health insurance: need for government intervention in- price controls, prevention and control of monopoly, protection of consumers' interest, economic liberalization, disinvestment

Unit 3: Forms of Health Insurance in India

- Social Health Insurance and non-profit social insurance scheme in India
- Mandatory health insurance schemes and provident fund
- Central Government Health Schemes (CGHS) and Employee and State Insurance Schemes (ESIS), Health insurance initiatives by the state government
- Actuarial Insurance and Employer based Scheme
- Voluntary health insurance schemes or private-for-profit schemes

- Case studies – BSKY, PM-JAY, DR YSR Arogyasri etc.
- Micro insurance in India

Text Books & Key Readings:

1. Dwivedi, D.N.: Micro Economic Theory, Vikas Publications, New Delh, 1996.
2. James Henderson: Health Economics and policy – South Western College publishing, International Thamson Publishing, USA 1999.
3. Kenneth Black,Jr. Ilarold D.Skipper,Jr, Lire and Health Insurance, thirteenth edition, Pearson Education Pte. Ltd., Delhi, 2003.
4. Principles Of Insurance Management: A Special Focus On Developments In Indian Insurance Sector Pre And Post Liberalisation-By Neelam C. Gulati. 2009. Excel Books
5. Insurance Chronicle, ICFAI Publications, Hyderabad.
6. National Insurance - Monographs on Insurance Management Programme documents of PM-JAY, BSKY, and DR YSR Arogyasri
7. UNDP: Human Development report (recent three Years)
8. IRDA Guidelines on Health Insurance - Govt. of India
9. Provident Fund Act 1952
10. Employees State Insurance Act 1948

Module Code: HE78001 **Credits: 02**

Module Name: Field Visit and Seminar

Objectives of field visit: The participant is expected to spend considerable amount of time in the field (slum/disadvantaged population) to apply the theoretical learning in real life settings. A seminar presentation of the field visit will be made at the end of the field visit before the designated committee/faculty for evaluation.

SEMESTER IV

Module Code: HE77002 **Credits: 12**

Dissertation

Learning Objectives:

After completion of the dissertation work, the students will able to:

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

Each candidate is required to carry out a dissertation study or project work 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 with prior approval of the Director, KSPH. A co-guide can be opted wherever required with prior permission from the Director, KSPH.

Candidates need to submit their research proposal for technical as well as ethical review of respective committees of the school. The schedule for completion of literature review, tool development, research proposal for technical review and ethical review will be notified in the 2nd semester.

The dissertation work is spread over 2nd (conception & topic finalization), 3rd (finalization of tools, research committee & ethical clearance and field work) and 4th semester (additional field work, revision and submission). Each candidate has to conceptualize and finalize research topic in consultation with his/her guide and co-guide and submit the same to the school academic division during the 2nd semester.

Technical Review and Ethical Review:

Each proposing candidate 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 dissertations complete in all respects and duly certified by the Guide, Co-Guide and Head/Director will be submitted to the School which will be then forwarded to the External Examiner for evaluation.
Module Code: HE78002 **Credits: 06** **Internship**
The student will undertake an internship in an organization as decided by the Institute and agreed by the organization with allotment of an external supervisor from the organization where the internship will be conducted. At the end of the internship period, an internship report of not less than 10000 words comprising of (a) diary (log book) duly signed by the local supervisor from the organization; (b) internship report; and (c) attendance sheet duly signed by the local supervisor will be submitted to the allotted guide and finally to the Head of the School.

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KIIT School of Public Health (KSPH)

KALINGA INSTITUTE OF INDUSTRIAL TECHNOLOGY (KIIT)

Deemed to be University

(Established U/S 3 of UGC Act, 1956)

Bhubaneswar, Odisha, India

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