

# Report

*by* Col Sandeep Tripathi

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Internship Training

at

6

International Institute of Health Management Research, New Delhi

Review and Restructuring of Modules of First Year and Second Year (Health Stream) of

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Post Graduate Diploma in Health and Hospital Management at IIHMR, New Delhi

by

Col Sandip Tripathi

Enroll No. PG/017/51

Under the guidance of

Dr Pradeep Panda

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Post Graduate Diploma in Hospital and Health Management

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2017-19



International Institute of Health Management Research

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## **ABSTRACT**

### **Introduction**

Healthcare, the world over and similarly in India is a rapidly growing facet of human need which requires largescale deployment of professionals to ensure a healthy population. Universally healthcare is visualized as the consequence of an interplay between the doctor and his patient but is actually the consequence of the contribution of an assembly of professionals, both medical and non-medical, key amongst who are the professionals exclusively trained to handle the managerial obligations of health, health IT and hospitals. However, there exists a gap between the need and supply of such professionals bridging which is an urgent necessity, and shall only grow with time. In India, a number of institutes/universities offer courses on health management/administration. <sup>9</sup> International Institute of Health Management Research, New Delhi established in 2008 is one of the few institutes in the country which is uniquely positioned to contribute to bridging this short supply of professionals due to its exclusivity in meeting this particular requirement in its exactitude. However, since healthcare managerial education is dynamic and evolving particularly because of the ever increasing health needs of the people, new technologies and the strong impetus to health in a resurgent India, there is a need to review and restructure the curricula of the innstitute. This paper endeavours to review the various modules of first year and second year health stream offered at <sup>6</sup> International Institute of Health Management Research, New Delhi by identifying whether the curricula offered is up to date with the requirement of the sector, is comparable/better than that offered by other institutes/universities in the country and to restructure the curricula, should a requirement exist.

## **Methods**

The review was carried out by undertaking a study of the course objective, learning objective and syllabus plan of each of the modules weighing these inter se, confirming that the health care sector requirement is being met and formulating a sequence of flow to ensure its lucidity and comprehension by the students. In doing so informal interaction was carried out with students, telephonic inputs were obtained from placement interviewers of certain organisations and an online secondary data review was conducted to compare the syllabus with that of certain Indian and foreign universities offering health management/administration, to ascertain the viability and vitality of the Institute's curricula.

## **Results**

The review of the curricula content brought out that the curricula at <sup>31</sup>International Institute of Health Management Research, New Delhi largely met the requirements that a health manager should have. Certain additional modules have been recommended for greater competence endowment of students.

## **Conclusion**

This work reviews the curricula offered at <sup>9</sup>International Institute of Health Management Research, New Delhi and recommends restructuring of the syllabus which is up to date with the requirements of the health sector and has a smooth flowing comprehensive structure to enable students to contribute to the betterment of the health of the country and its consequent its economic growth.

<sup>2</sup>  
The certificate is awarded to

**Col Sandip Tripathi**

in recognition of having successfully completed his/her

Internship at IIHMR, New Delhi

**Review and Restructuring of Modules of First Year and Second Year (Health Stream) of**

<sup>8</sup>  
**Post Graduate Diploma in Health and Hospital Management** at IIHMR, New Delhi

and has successfully completed his/her Project on

**Review and Restructuring of Modules of First Year and Second Year (Health Stream) of**

<sup>8</sup>  
**Post Graduate Diploma in Health and Hospital Management** at <sup>6</sup>  
**IIHMR, New Delhi**

Date \_\_\_\_\_

**International Institute of Health Management Research, <sup>2</sup>  
New Delhi**

He comes across as a committed, sincere & diligent person who has a

strong drive and zeal for learning.

We wish him all the best for future endeavors.

**Training & Development**

**Head-Human Resources**

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**TO WHOMSOEVER IT MAY CONCERN**

8

This is to certify that Col Sandip Tripathi student of Post Graduate Diploma in Hospital and Health Management (PGDHM) from International Institute of Health Management Research, New Delhi has undergone internship training at International Institute of Health Management Research, New Delhi from February 1, 2019 to April 30, 2109.

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The Candidate has successfully carried out the study designated to him during internship training and his/her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish him all success in all his/her future endeavors.

**Dr Pradeep K Panda**  
**Dean, Academics and Student Affairs and Mentor**  
**IIHMR, New Delhi**

**Certificate of Approval**

The following dissertation titled **“Review and Restructuring of Modules of First Year and Second Year (Health Stream) of Post Graduate Diploma in Health and Hospital Management at IIHMR, New Delhi”** at **“International Institute of Health Management Research, New Delhi”** is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **Post Graduate Diploma in Hospital and Health Management** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation.

Name

Signature

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### Certificate from Dissertation Advisory Committee

This is to certify that Col Sandip Tripathi, a graduate student of the Post Graduate Diploma in Hospital and Health Management has worked under our guidance and supervision. He is submitting this dissertation titled “Review and Restructuring of Modules of First Year and Second Year (Health Stream) of Post Graduate Diploma in Health and Hospital Management at IIHMR, New Delhi” at “International Institute of Health Management Research, New Delhi” in partial fulfillment of the requirements for the award of the Post Graduate Diploma in Hospital and Health Management.

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

Dr Pradeep Panda,  
Dean,  
IIHMR, New Delhi

**INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT  
RESEARCH, NEW DELHI**

**CERTIFICATE BY SCHOLAR**

This is to certify that the dissertation “Review and Restructuring of Modules of First Year and Second Year (Health Stream) of Post Graduate Diploma in Health and Hospital Management at IIHMR, New Delhi” submitted by Col Sandip Tripathi, Enrollment No. PG/17/51 under the supervision of Dr Pradeep Panda for award of Postgraduate Diploma in Hospital and Health Management of the Institute carried out during the period February 1, 2019 to April 30, 2019 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

**Col Sandip Tripathi  
PG/17/51**



## **FEEDBACK FORM**

<b>Name of the Student:</b>	<b>Col Sandip Tripathi</b>
<b>Dissertation Organisation:</b>	<b>IIHMR, New Delhi</b>
<b>Area of Dissertation:</b>	<b>PGDHM Curriculum</b>
<b>Attendance:</b>	<b>06 Feb to 30 Apr 2019</b>
<b>Objectives achieved:</b>	<b>Yes</b>
<b>Deliverables:</b>	<b>Paper on review and restructuring of PGDHM Curriculum</b>
<b>Strengths:</b>	<b>Astute, diligent and punctual</b>
<b>Suggestions for Improvement:</b>	<b>Nil</b>

**Signature of the Officer-in-Charge/ Organisation Mentor (Dissertation)**

**Date:**  
**Place:**

## **ACKNOWLEDGEMENT**

Nothing in this paper, whether its content or its completion itself, would have been possible but for the unflinching support, indulgent guidance and immense patience of Dr Pradeep Panda, Dean Academics and Student Affairs, IIHMR New Delhi, who remained steadfast in his belief in me, though I myself may have waived at times.

At the same time, it would be amiss of me to not acknowledge his immense insight and hand holding which was singularly responsible for how this paper has been finally presented.

A warm thanks is also due to Shri Tarun Nagpal, Academic Officer, IIHMR, New Delhi who was always willing and present to assist me in any which way that I requested.

**Col Sandip Tripathi**  
**PG/17/51**

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## **PART II**

### **CHAPTER 1**

#### **OBEJCTIVES AND METHODOLOGY**

##### **Introduction**

1.1 India is a country of 1.3 billion people which is growing each day. We are a country that faces all the seasons and weathers and has a geography that is conducive to several diseases. This coupled with the fact that our large population lives in conditions that are mostly unhealthy, generates the requirement of a complex health care system to meet health needs which are diverse from several countries and are ever evolving due to globalization and migration. The challenge therefore is to ensure the protection and promotion of public health by not only keeping abreast with the health needs but also to plan for the future to cater for new and emerging health requirements as they arise.

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1.2 Public health is concerned with prevention and control of disease and promotion of health of the population. While the word 'health' per se evokes a close relationship between a doctor and his patients, it is much more complex and involves multifarious players, equal in importance amongst them being the manager who in addition to attending to health care, coordinates with medical and non-medical agencies to ensure a smooth operation. The manager plays the role of a leader who not only has an in depth knowledge of management skills but is also well aware of

health policies and issues, as well as, the intricacies of health care and is able to synergies management skills with effective health care delivery which is both cost effective and qualitatively supreme. This is feasible only through health focused management education which imparts training in public health and business so as to generate leaders who can meet the health management challenges of the twenty first century.

1.3 IIHMR, New Delhi established in 2008, is a premier institute which prepares health care managers through a syllabus specifically tailored to impart a concomitant health and management education. While management involves planning, organizing, accounting, staffing, marketing, public relations, human resource management, epidemiology, biostatistics etc health care is oriented towards ensuring the good health of the population. An amalgamation of the two at IIHMR intends to produce leaders who can play an effective role in ensuring public health through hospitals, clinics, nursing homes, insurance companies and organisations undertaking health research, health related IT development or health related data collection. Though the syllabus at IIHMR, New Delhi is focused to meeting this end, the increased focus on public health in India due to the missed Millennium Development Goals, commitment to achieving the Sustainable Development Goals, emerging new technologies in health care and renewed government focus on meeting the health needs of the neglected and impoverished population, an increasing geriatric population requiring special health care focus, increasing health awareness and changing disease pattern coupled with increasing medical tourism has necessitated a review of the curricula and restructuring the same to meet the emerging demands and challenges of the Indian health care sector which by 2022 shall be worth 77 billion dollar by growing at an annual rate of 23% per annum <sup>[1]</sup> and as per one study has a requirement of estimated 19,930 qualified professionals to

function as health care managers<sup>[2]</sup> which is set to grow to 44,936 by 2030, an assessment made based on benchmark analysis <sup>[3]</sup>.

1.4 A secondary data search for the number of colleges in India offering health/hospital management/administration in India revealed 475 academic programs with 6963 seats as of 2017<sup>[3]</sup>. Out of these the programs offered exclusively to medical students was 302 with 1044 seats while the balance was for both medical and or non-medical students. While a 2010 study<sup>[2]</sup> identified 51 institutes which offered courses in health management/administration, a paper on Masters in Public Health in 2018 found that despite an increase of seats for Masters in Public Health by 107%, the enrolment had declined from 75% in 2010 to 59% by 2016 <sup>[4]</sup>. The proposal by National Health Policy 2017 of creating <sup>18</sup> a public health management cadre in all states comprising of both medical, as well as, professionals from diverse non-medical backgrounds <sup>[5]</sup> is a right fillip to a better enrolment status for graduation of the required number of health care managers in the public sector. The next few years shall therefore see an increasing requirement of trained health care managers. To give the students at IIHMR an edge over others so as to be able to meet this increasing demand, it is essential that the course syllabus at IIHMR, New Delhi should be reviewed.

### **Aim**

1.5 To prepare health care management leaders to meet the health challenges of the twenty first century by developing an innovative program through review and merit based restructuring of the curricula of <sup>36</sup> Post Graduate Diploma in Hospital and Health Management at IIHMR, New Delhi.

## **Objective**

1.6 To critically analyse the Modules of <sup>6</sup> Post Graduate Diploma in Hospital and Health Management being imparted by IIHMR, New Delhi with a view to: -

1.6.1 Suggest addition of new modules/deletion of existing modules, keeping in mind the current health management policy and practices separately for First Year and Second Year Health stream.

1.6.2 Review the modules and identify overlapping topics across modules separately for First Year and Second Year Health stream for deletion/retention.

1.6.3 Review and suggest addition and deletion of topics for each module, separately for First Year and Second Year Health stream for deletion/retention.

1.6.4 Suggest appropriate sequencing of modules separately for First Year and Second Year Health stream for deletion/retention.

## **Methodology**

1.7 The review of the curricula involved a multi-pronged approach. It entailed an interaction with various stake holders i.e. the students and the agencies/organisations that employ them after graduation. Additionally, the curriculum of institutes providing MPH or MBA in Health Care Management or Public Health was also reviewed. The following was undertaken: -

1.7.1 Informal interaction with students of First year and Second PGDHM at IIHMR, New Delhi so as to obtain their view on the syllabus.

1.7.2 Ascertaining the requirements that would better prepare the students to meet the challenges of the industry through a telephonic interaction with placement interviewers of certain select organisations who had taken placement interviews of second year.

1.7.3 A comparison of the syllabus with that of certain select institutes who provide similar or near similar training was also carried out so as to ensure that IIHMR, New Delhi is not only observing the trend of the sector but is also providing the students with that something extra which provides them an edge over others.

1.7.4 In order to understand the trend in the world and how IIHMR stands in comparison, a review of <sup>26</sup> Masters in Health Care Management at Harvard T.H Chan School of Public Health and Masters in <sup>40</sup> Public Health in Health Care Management at Yale School of Management vis-à-vis the curricula offered at IIHMR, New Delhi was also carried out.

1.7.5 Carrying out a detailed study of the current curricula which was obtained from IIHMR, New Delhi with a view to identify overlap of topics, recommend proper sequencing of modules, deletion of topics no longer relevant and addition of new ones as required within each module and recommending addition/deletion of modules.



## **CHAPTER 2**

### **MODULE ADDITION/DELETION**

#### **PGDHM Curriculum at IIHMR, New Delhi**

2.1. PGDHM syllabus at IIHMR, New Delhi is covered over two years with the first year being dedicated to topics that are common to all students. While certain topics which are pertinent for all three or two of the three specialization streams are conducted in the second year too, the second year is dedicated to specialization in health management, hospital management and health IT. This review shall restrict itself to the syllabus of the first year and second year health management stream only. Broadly the syllabus can be classified into topics related to management and another set of topics which deals with health <sup>[6]</sup>. These are as under: -

**Table 2.1:** First year and Second Year (Health Stream) Syllabus at IIHMR, New Delhi

Ser	First Year	Second Year (Health Stream)
2.1.1	Health and Development	Operations Research
2.1.2	Health Policy and Health Care Delivery System	National Health Programs with one day field visit
2.1.3	Essentials of Hospital Services	Applied Epidemiology
2.1.4	Essentials Epidemiology	Health Insurance and Managed Care
2.1.5	Research Methodology	Health Survey and Research Methods with field visit
2.1.6	Health Information Management	Program Planning, Implementation, Monitoring and Evaluation
2.1.7	Biostatistics	Strategic Planning
2.1.8	Demography and Population Science	Logistics and Supply Chain Management with one day field visit

Ser	First Year	Second Year (Health Stream)
2.1.9	Principles of Management	Quality Management and Patient Safety in Hospitals
2.1.10	Human Resource Management	Global Health
2.1.11	Financial Management & Accounting	Health Management Information System
2.1.12	Marketing Management	Population Program Management
2.1.13	Organizational Behavior	Data Management and Analysis
2.1.14	Essentials of Health Economics	Global Health
2.1.15	Communication Planning and Management	Disaster Management
2.1.16	-	Legal Framework in Health Care

2.2. In addition to the above, the following is also offered: -

2.2.1 **Non-Graded Induction Courses.**

2.2.1.1 Human Process Lab.

2.2.1.2 Communication Lab.

2.2.2.3 Essentials of Computer Technology.

2.2.2 **Electives.** Students can opt for two out of the following: -

<sup>30</sup>  
2.2.2.1 Corporate Social Responsibility.

2.2.2.2 Entrepreneurship.

2.2.2.3 Big Data Analysis.

2.2.2.4 Business Ethics.

2.2.2.5 Urban Health.

2.3 **Comparison.** A comparison of the syllabus with the syllabus of other institutes in India and reputed foreign institutes providing similar course is as below: -

**Table 2.2:** Comparison of Curriculum at Various Institutes/Universities

Ser No	IHMR (PGDHM Health and Hospital Management) <sup>[6]</sup>	TISS (Masters of Public Health Administration) <sup>[7]</sup>	Symbiosis Institute of Health Sciences (MBA Healthcare and Hospital Management) <sup>[8]</sup>	Yale School of Public Health (MPH in Health Care Management) <sup>[9]</sup>	Harvard School of Public Health (Masters in Health Care Management) <sup>[10]</sup>
<b>First Year</b>					
2.3.1	Essentials of Computer Services	Foundation Course	Organizational Behaviour	Biostatistics in Public Health I	Organisational Behaviour
2.3.2	Communication Lab	Philosophy of Research	Human Resource Management	Foundations of Epidemiology for Public Health	Transitioning to Physician Leadership
2.3.3	Human Process Lab	Social Science Perspective on Health	Management Accounting	Health Policy & Health Care Systems	Operations Management
2.3.4	Health and Development	Basic economics & Health economics	%Materials Management	Professional Skills Series	Health Care Negotiation and Conflict resolution
2.3.5	Essentials of Hospital Services	Research Methodology (Quantitative Method)	Business Communication	Ethics and Public Health: An Introduction	Marketing
2.3.6	Health Policy and Health Care Delivery System	Research Methodology (Qualitative Method)	Fundamentals of Hospital Planning and Engineering Issues	Fundamentals of Accounting and Valuation	Environmental health and Epidemiology
2.3.7	Principles of Management	Financial Management and Accounting	%Planning & Management of Hospital Clinical Services	Microeconomics for Health Policy and Health Management	Social and Behavioural determinants of health

Ser No	IIHMR (PGDHM Health and Hospital Management) <sup>[6]</sup>	TISS (Masters of Public Health Administration) <sup>[7]</sup>	Symbiosis Institute of Health Sciences (MBA Healthcare and Hospital Management) <sup>[8]</sup>	Yale School of Public Health (MPH in Health Care Management) <sup>[9]</sup>	Harvard School of Public Health (Masters in Health Care Management) <sup>[10]</sup>
2.3.8	Financial Management and Accounting	Organisational Behaviour	11 Planning & Management of %Hospital Supportive Services	Health Care Leadership Seminar(half semester)	Communication Skills for Managers
2.3.9	Research Methodology	Introduction to Public Health	Principles and Practices of Management	Social, Environmental, and Biological Determinants of Major Health Threats	Financial Accounting and Analysis
2.3.10	Communication Planning & Management	Introduction to Epidemiology	IT Applications for Healthcare	Methods in Health Services Research	Cost Accounting and Analysis
2.3.11	Bio Statistics	Evolution and Administration of Health Services	Research Methodology	Health Care Finance, Policy and Economics	Marketing Health Services
2.3.12	Human Resource Management	Introduction to Biostatistics	Biostatistics & Basic Epidemiology	Health Care Leadership Seminar(half semester)	-
2.3.13	Essentials of Epidemiology	Health Financing Including Health Insurance	Community Project	Competitive Strategy	-
2.3.14	Marketing Management	Management of National Health Programs	Integrated Disaster Management	Managing Marketing	-
2.3.15	Essential of Health Economics	Elective foundation	Essentials of Marketing Management	Elective	-
2.3.16	Organisational Behaviour	Open Elective	Introduction to Financial Management	-	-
2.3.17	Demography and Population Sciences	-	An Overview of Pharmaceutical Sector	-	-
2.3.18	Introduction to 11 Health Information Management	-	An Overview of Health Insurance	-	-

Ser No	IHMR (PGDHM Health and Hospital Management) <sup>[6]</sup>	TISS (Masters of Public Health Administration) <sup>[7]</sup>	Symbiosis Institute of Health Sciences (MBA Healthcare and Hospital Management) <sup>[8]</sup>	Yale School of Public Health (MPH in Health Care Management) <sup>[9]</sup>	Harvard School of Public Health (Masters in Health Care Management) <sup>[10]</sup>
2.3.19	-	-	Health Regulatory Environment	-	-
2.3.20	-	-	MIS for Hospitals	-	-
2.3.21	-	-	Business Statistics	-	-
2.3.22	-	-	Operations Research	-	-
2.3.23	-	-	An Overview of Operational Research	-	-
2.3.24	-	-	Non Profit Sector in Healthcare	-	-
2.3.25	-	-	Study Report :Public health Sector Undertakings /Healthcare Govt. agencies	-	-
2.3.26	-	-	Conceptualization & Management of Events	-	-
Second Year					
2.3.27	Operations Research	Community Engagement in Health	Strategic Management	Social Justice and Health Equity	Managing Information in Health Care
2.3.28	National Health Programs with one day field visit	Supply Chain Management	Financial Management	Negotiations	Quality Improvement in Health Care
2.3.29	Applied Epidemiology	Health Management Information System	Operations Research	Elective	Financial Management of Health Care Institutions



Ser No	IHMR (PGDHM Health and Hospital Management) <sup>[6]</sup>	TISS (Masters of Public Health Administration) <sup>[7]</sup>	Symbiosis Institute of Health Sciences (MBA Healthcare and Hospital Management) <sup>[8]</sup>	Yale School of Public Health (MPH in Health Care Management) <sup>[9]</sup>	Harvard School of Public Health (Masters in Health Care Management) <sup>[10]</sup>
2.3.30	Health Insurance and Managed Care	Health Planning	Health Economics	Elective	Health Care Management Practicum
2.3.31	Health Survey and Research Methods with field visit	Gender Health and Rights	Organisation & Administration of Super Specialty Hospitals	Elective	Competitive Strategy
2.3.32	Program Planning, Implementation, Monitoring and Evaluation	Human Resource for Health	Project Management	Elective	Provider Payment Systems and Policy
2.3.33	Strategic Management	Health Legislation	Community Health	Health Care Operations	Field Project in Quality Improvement
2.3.34	Logistics and Supply Chain Management with one day field visit	Disciplinary Elective (Any Two) Elective - Mental Health	Introduction to Operations Management	Sustainable Innovation in Health Care	Innovative Problem Solving and Design Thinking
2.3.35	Quality Management and Patient Safety in Hospitals	Elective - Urban Health	National Health Program	Creating Health Care and Life Sciences Ventures(Optional)	-
2.3.36	Global Health	Elective - Health Insurance	Comparative Health Systems	Elective	-
2.3.37	Health Management Information System	Elective - Advanced Biostatistics	Conceptualization and Management of events - II	Elective	-
2.3.38	Population Program Management	Elective - Strategic Management in Health Care	Business Analytics	Elective	-

Ser No	IHMR (PGDHM Health and Hospital Management) <sup>[6]</sup>	TISS (Masters of Public Health Administration) <sup>[7]</sup>	Symbiosis Institute of Health Sciences (MBA Healthcare and Hospital Management) <sup>[8]</sup>	Yale School of Public Health (MPH in Health Care Management) <sup>[9]</sup>	Harvard School of Public Health (Masters in Health Care Management) <sup>[10]</sup>
2.3.39	Data Management and Analysis	Elective - Operations Management and Organisational Development	Healthcare IT - I	Elective	-
2.3.40	Disaster Management	-	Healthcare Insurance	-	-
2.3.41	Legal Framework in Health Care	-	Pharmaceutical Management - I	-	-
2.3.42	Elective - CSR/ Business Ethics	-	Quality & Accreditation in Healthcare Sector	-	-
2.3.43	Elective – Entrepreneurship/ Urban Health	-	Corporate Governance and Business Ethics	-	-
2.3.44	Elective – Big Data Analytics	-	Introduction to Entrepreneurship	-	-
2.3.45	-	-	Emerging Trends in Healthcare Sector	-	-
2.3.46	-	-	Industrial Regulatory Environment	-	-
2.3.47	-	-	Elective (Choose I)- Health Care IT - II	-	-
2.3.48	-	-	Elective - Health Care Insurance -- II	-	-
2.3.49	-	-	Elective - Pharmaceutical Management - II	-	-

Ser No	IIHMR (PGDHM Health and Hospital Management) <sup>[6]</sup>	TISS (Masters of Public Health Administration) <sup>[7]</sup>	Symbiosis Institute of Health Sciences (MBA Healthcare and Hospital Management) <sup>[8]</sup>	Yale School of Public Health (MPH in Health Care Management) <sup>[9]</sup>	5 Harvard School of Public Health (Masters in Health Care Management) <sup>[10]</sup>
2,3,50	Internships – One in 1 <sup>st</sup> Year Internship and Dissertation in 2 <sup>nd</sup> Year	Internships – 2 1 <sup>st</sup> Year – Rural Health Agency 2 <sup>nd</sup> Year – Rural NGO	One Project and One Dissertation both in 2 <sup>nd</sup> Year	Internships – One in 1 <sup>st</sup> Year	One Field Project One Capstone Project

**Note**

- ✓ Same colours indicate similarity of syllabus amongst the compared universities/institutes
- ✓ Use of the symbol for percentage (%) implies that the topic is covered in Hospital Stream
- ✓ IIHMR, New Delhi conduct certain un-graded modules viz Essential of Computer Service, Human Process Lab and Communication Lab over a fifteen-day period with five days earmarked for each



2.4 Johns Hopkins University, Carey Business School offers a one year full time or <sup>10</sup> a two year part time Master of Science in Health Care Management. This too was reviewed but has not been tabled primarily because it <sup>29</sup> is a one year full time or two year part time course where as all the courses under consideration in the Table above are two year courses. A perusal of the curricula reveals that the university offers subjects as per Table below: -

**Table 2.3:** Course Syllabus MS in Health Care Management at Johns Hopkins University<sup>[11]</sup>

Core Credits (20 Credits)	Health Care Depth Electives (Choose 4 Credits/2 Course Set)	Non-Health Care Depth Electives (Choose a maximum of 4 credits/2 Courses)
<ul style="list-style-type: none"> <li>Accounting for Decision Making in Health Care</li> <li>Frameworks for Analyzing Health Care Markets</li> <li>Fundamentals of Health Care Operations</li> <li>Fundamentals of <sup>4</sup> Health Care Systems</li> <li>Health Care Law and Regulation</li> <li>Health Innovation and Evaluation</li> <li>Health Marketing and Access</li> <li>Health Care Organizations and Management</li> <li>Providers and Payers</li> <li>The U.S. Health Care System: Past, Present, and Future</li> </ul> <p><b><u>Action Based Learning (Choose 4 Credits/One Set)</u></b></p>	<ul style="list-style-type: none"> <li>Applied and Behavioral Economics in Health Care</li> <li>Biotechnology and Pharmaceuticals</li> <li>Emerging Frontiers in Health Technologies and Strategies</li> <li>Health Care Financing and Financial Management</li> <li>Medical Devices and Diagnostics</li> <li>Negotiation in Health Care Settings</li> <li>Research and Policy Seminars in Health Care</li> <li>The Wire: Business Solutions for Community Health Improvement</li> </ul>	<ul style="list-style-type: none"> <li>Accounting and Financial Reporting</li> <li>Big Data Machine Learning</li> <li>Consumer Behavior</li> <li>Corporate Finance</li> <li>Data Analytics</li> <li>Decision Models</li> <li>Managing Complex Project</li> <li>Pricing Analysis</li> <li>Strategic Human Capital</li> </ul>

Core Credits (20 Credits)	Health Care Depth Electives (Choose 4 Credits/2 Course Set)	Non-Health Care Depth Electives (Choose a maximum of 4 credits/2 Courses)
<ul style="list-style-type: none"> <li>• Client Consulting Practicum I and II</li> <li>• Biomedical Innovations Commercializing I and II</li> <li>• Health Policy Design and Implementation I and II</li> <li>• Improvement of Health Services I and II</li> </ul>		

2.5 Carey Business School does offer a two year Masters in Health Administration <sup>[12]</sup> which has in its curriculum modules which are similar to those in the curriculum of IIMMR, New Delhi. These include Statistics, Legal and Ethical Issues in Health Services Management, Managed Care and Health Insurance, Fundamentals of Management for Health Care Organizations, Budgeting and Financial Management in Healthcare Organisations, Quantitative Tools for Managers, Organizational Leadership, Financial Accounting, Strategic Planning, Health Management Information Systems, Human Resources in Health Organizations, Marketing in Health Care Organizations, Medical Practice Management, Healthcare Quality and Patient Safety, Current Topics <sup>39</sup> in Public Health, Health Economics and Epidemiologic Inference in Public Health.

2.6 Before proceeding any further it is essential to examine whether a nationally or internationally prescribed curriculum for health management exists and if so does it meet the needs of the 21<sup>st</sup> century? In 2012, a conference, “21<sup>st</sup> Century Health Care Management Education: Confronting Challenges for Innovation with a Modern Curriculum”, <sup>4</sup> <sup>[13]</sup> was held

at Harvard Business School, as a first step in reshaping health management education to meet the challenges of 21<sup>st</sup> century health care viz unsustainable economics, erratic quality, and unequal access. To address these challenges, the conference recommended an education specifically designed to prepare health care managers who can innovate delivery of health care in a manner as to control costs and improving both quality and access. It acknowledged the inability of the current curricula to develop this innovative capability for which skills in change management, communication, and team building; a more holistic curriculum that mirrors real-life situations; broad-based knowledge of how health care works—including financing, organizational structures, technology, and public policy—and how to apply that knowledge for innovating delivery of health care is essential. The conference recommended curricular content, pedagogical tools and professional values, key amongst which were knowledge of innovation and entrepreneurship, quantitative expertise, change management skills, project based learning, case studies particularly those of failure, field based learning, interactive learning and building ethical and moral dimensions appropriate to science and medicine into all managerial courses.

2.7 At the national level in India, consequent to the working of a Joint Indo – UK Working Group formulated in 2014, MoHFW, Government of India recommended a model curriculum for Masters in Public Health [14] as part of which 15 core modules and 5 Electives (one to be taken) were recommended to be conducted by Indian institutes/universities. The modules included of the following: -

#### 2.7.1 **Core Modules.**

##### 2.7.1.1 Principles and practice of Public Health

- 2.7.1.2 <sup>1</sup> Introduction to health system and policy in Developing countries
- 2.7.1.1 Health Management: Management Principles and practices
- 2.7.1.4 Basic Epidemiology
- 2.7.1.5 Basic Biostatistics
- 2.7.1.6 Demography and population sciences
- 2.7.1.7 Introduction to health economics
- 2.7.1.8 Health promotions approaches and methods and evaluation
- 2.7.1.9 Introduction to financial management and budgeting
- 2.7.1.10 Social and behaviour change, effective communication in health care
- 2.7.1.11 Reproductive, Maternal, Neonatal, Child Health and Adolescent Health (RMNCH+A) also to include Family Planning
- 2.7.1.12 Introduction to health program evaluation
- 2.7.1.13 Principles of social research methods
- 2.7.1.14 Environment and occupational health
- 2.7.1.15 Law and ethics in public health

2.7.2 **Elective Modules.**

- 2.7.2.1 Epidemiology

2.7.2.2 Health system

2.7.2.3 Health Program Policy

2.7.2.4 RMNCH+A

2.7.2.5 Institutes could also offer elective modules in other thematic areas such as Advanced Health Economics and Financing, Advanced Health Informatics, Demography and Population sciences, Advanced Environmental and Occupational health, Global health security and International Policies, Advanced Health Promotions, Human Resources for Health etc

#### **View of Employing Organisations/Agencies**

2.8 An interaction was carried out with certain agencies/organisations which had undertaken placement interview for placement of students in their agencies/organisations. These included of NHSRC, ZS Associates, Helpage India and Apollo Munich. The organisations were of the opinion that while the students had knowledge the application was lacking and improvement in certain aspects would help them perform better professionally. The reasons ascribed by them were as under: -

2.8.1 The knowledge was bookish and expression at times was weak.

2.8.2 Students lacked self-confidence.

2.8.3 Students lacked the ability to apply their knowledge practically for e.g. How to establish a Health Camp?

2.8.4 Students were unable to handle situational leadership requirements i.e. they were unable to think and apply themselves to handling tight, suddenly emerging situations through innovative/ out of box solutions.

2.8.5 Students were lacking in general awareness about the health care sector and were unaware and not up to date with the latest developments

2.8.6 Students were weak in Biostatistics and basic understanding of Epidemiology.

## **Results**

2.9 A comparison of the curricula above shows that the course content of PGDHM at IIHMR, New Delhi is a focused syllabus as compared to others in India and indeed is better structured since it is dedicated to three different streams of health care management viz health, hospital and health IT management (the latter two have not been compared due to the scope of this report). Health IT management is infact not offered as a specialization by anyone. When we consider TISS which conducts a two year course of MPH in Health Administration, the course covers aspects of Health Management but unlike IIHMR, New Delhi does not give a student the foundation of hospital administration primarily because TISS runs a different course on Hospital Management there by restricting a student's employability in a particular stream only. Symbiosis Institute of Health Sciences offers a two year MBA in Health and Hospital Management. A scrutiny of the syllabus shows that it is quite exhaustive. This is mainly because Symbiosis is offering a combined Health and Hospital Management curriculum

which in IIHMR, New Delhi is divorced during the second year. The result is a large number of modules to be covered (49 including electives), which appears to be far too many. Within this microcosm of Indian institutes offering a course in health management/administration, a commonality of syllabus does not exist.

2.10 When the course syllabus at IIHMR is equated with that being imparted by <sup>14</sup> Harvard T.H Chan School of Public Health and Yale School of Public Health, a difference emerges with a number of courses being conducted at Yale and Harvard not being conducted at IIHMR, New Delhi. This can be attribute primarily to both striking a balance to catering to their national requirements, while at the same time being viable enough to suit the large number of international students who attend these courses. Interestingly the syllabus offered at Johns Hopkins University is quite similar to the one being offered at IIHMR, New Delhi whether in the one year full time or <sup>10</sup> two year part time Master of Science in Health Care Management or Masters in Health Administration though not in totality. For e.g. their two year Masters in Health Administration covers nearly all the topics that are covered at IIHMR except for Research Methodology while the same is offered in the Master of Science in Health Care Management albeit as an elective.

2.11 Globally, identifying a curricula which prepares health care managers to meet the challenges of the 21<sup>st</sup> Century is a matter of concern. An ongoing effort initiated by Harvard Business School has identified development of innovative ability amongst health care professionals as significant to meeting these challenges and has made certain recommendations as regards the curricula. MoHFW, Government of India too in a collaborative effort with NHS, UK has recommended a model guideline for the syllabus of Masters in Public Health which is largely followed by IIHMR, New Delhi. Infact more modules have been added including the

Electives, some of which are offered as Core modules while the others as topics within modules.

2.12 A comparison of the modules, without comparing the topics that are covered within the modules, resonates the similarity of core modules across institutes whether national or international although not in all cases. For e.g. Yale conducts modules of Epidemiology and Research Methodology, as well as, Biostatistics, but Harvard only conducts the modules of Epidemiology whereas Johns Hopkins does not cover Research Methodology. TISS covers Research Methodology in great detail followed by Biostatistics (two modules Introduction to Biostatistics and Advanced Biostatistics) and Epidemiology whereas Symbiosis covers Research Methodology, with Epidemiology and Biostatistics being covered as one module (module on Research preceding that of Epidemiology and Biostatistics). Yale (which offers modules on Research Methodology, as well as, Epidemiology) conducts Epidemiology before Research Methodology. Amongst the modules which are common in the compared institutes but are not conducted at IIHMR, New Delhi include of Negotiation and Conflict Resolution, Emerging Trends/ Current Happenings in Health Care and Innovative Problem Solving and Design Thinking.

2.13 When the comments of various placement interviewers at Para 2.8 above is considered, it is evident that they have experienced a lack of some skills amongst the students that they interviewed, ingraining which, they felt would contribute to students performing better in their professional life.



## **Discussion**

2.14 The topics covered at IIHMR, New Delhi indicated in Tables 2.2 and 2.3 are comprehensive and meet the current requirements of educating and skilling Health Care Managers so that they can perform. The curricula in fact is better than other institutes in India as shown in Table 2.2 and is indeed better structured and focused since it is dedicated to three different streams of health, hospital and health IT management while at the same time establishing a base knowledge of hospital functioning which is not so in many others. At the same time the focus remains on building leaders and management skills. TISS conducts a course in Masters in Health Administration, which also covers some aspects of Health Management but not as comprehensively as done at IIHMR and none of Health IT Management. This could also be because it offers courses on Hospital Administration, Epidemiology and Health Policy as independent masters programs. The two year MBA in Health and Hospital Management offered by Symbiosis Institute of Health Sciences though comprehensive and in great detail, since it covers various aspects of both health and hospital management, does not offer Health IT as a separate stream of management which today owing to the IT interface requirement for smoother work performance and timely as well as better health care delivery is a must, and is a stream offered as a stream for specialization in the second year at IIHMR, New Delhi. Also, the 46 modules and three Electives on offer (one to be chosen) which totals to 47 modules besides internship and project, appears to be content heavy and makes comprehension tenuous.

2.15 The international universities under comparison in Table 2.2 viz University of <sup>14</sup>Harvard, T.H Chan School of Public Health and University of Yale, School of Public Health, offer a syllabus which is understandably quite different from that being offered at IIHMR, New Delhi

owing to both these universities striking a balance between meeting their country's requirement while at the same time being appealing to International Students. Also, they are following the recommendations of the conference under mention at Para 2.6. But unlike at IIHMR, nothing which is related to Hospital is covered for the reason that the course under comparison is for health care. The syllabus of MS in Health Care Management at Johns Hopkins University covers a variety of topics from health care policy to financing and health care systems. A question arises as to what is it that the foreign universities do differently. Firstly, the course content is less which implies that education is in depth and comprehension is better since there is greater time available because of the lesser number of modules. Secondly, the practicum offered by them is more both within a module, as well as, industry based. Finally, since they also cater to international students, who it is assumed shall be going back to their countries, certain interesting modules being offered are Determinants of Health, Ethics in Public Health, Negotiation in Health Care Settings, Emerging Trends in Healthcare Sector (also offered by Symbiosis Institute of Health Sciences), Innovative Problem Solving and Design Thinking, Leadership, Social Justice and Health Equity. These modules are not in vogue in Indian institutes. All or few can be included not because they are being offered at Yale or Harvard Universities or at Johns Hopkins but because their applicability is true to the Indian health milieu, particularly modules like Leadership, Innovative Thinking, Negotiation and Emerging Trends in Health Care. Modules of Determinants of Health, Ethics in Public Health and Social Justice and Health Equity too are significant in our national setting but have to be weighed against leadership etc. for conduct and also against whether including them would make the course, syllabus intensive. When the comments of various placement interviewers at Para 2.8 above is considered, they have highlighted few aspects in which our students lack viz situational leadership and knowledge of current happenings in health care sector. Inclusion of the modules of Leadership, Negotiation and Emerging Trends/ Current Happenings in the

Health Care Sector will help tide over these issues and help the students at IIHMR, New Delhi to be better managers in their professional life. Including these however, would imply that the existing curricula has to be finely sieved to eliminate modules/topics which are not viable any longer or are repetitive in nature so as to cull time for covering these topics while ensuring that the syllabus remains India centric, India being a country with diverse needs different from those in developed countries. Nevertheless, if the syllabus at IIHMR, New Delhi is scrutinised in light of the recommendations of the conference at Para 2.6, these have been implemented and are covered as topics within modules, though there is a requirement for enforcing the implementation of the recommended pedagogical tools.

2.16 The syllabus at IIHMR, New Delhi largely follows Guidelines for Masters in Public Health issued by the MoHFW, Government of India with variations owing to the fact the at the Guidelines are for Masters in Public Health where as IIHMR, New Delhi offers a PGD in Health Management which covers various leadership and managerial aspects because the course is that of management of Public Health, different from a Masters in Public Health by nature. Extract of the guidelines giving the topics to be covered within each module is placed as Appendix A. The syllabus of the one year PGD in Health and Family Welfare Management by NIHFW (refer Appendix B) formulated nearly absolutely as per the Guidelines of the Joint Working Group is also similar to an extent to the modules offered by IIHMR, New Delhi.

2.17 From amongst the modules being conducted at IIHMR, New Delhi, the modules of Health Information Management and Principles of Management can be deleted, the former since its topics can be covered as part of Health Management Information System or as part of the new module of Emerging/Current Trends in the Health Care Sector. Principles of Management can be deleted because its topics, except Introduction to Management and

Evolution of Management, can be covered in other modules such as Human Resource Management, Strategic Management, Leadership and Supply Chain Management or are being covered in them. The topics of these modules which can be deleted and others which are required to be shifted to other modules or are already being covered in them shall be indicated in Chapter 3 and 4. Furthermore, the ungraded modules viz Essential of Computer Service, Human Process Lab and Communication Lab should be deleted since they are more in the nature of an ice breaker amongst students, enlighten students about the basics of computers which most students today are already aware of and undertaking certain exercises which being ungraded have no record and are thus of no consequence to the students personal development and progression owing to the fact that in the absence of individual grading, the Professors handling the students after these ungraded modules have no available pre-assessment about the capabilities and qualities of the students and have to arrive at individual deductions, which would be mostly correct, given their experience, but may not necessarily be so.

2.18 The lack of self-confidence in students and their restricted ability to express themselves, highlighted by interviewers, can only be applicable to some students and not everybody. Nevertheless, it is essential that this lacunae is addressed. One way of doing so could be by ensuring that students individual present a topic of at least two to three slides or while making a group presentation (as part of presentations during modules) within the first few weeks of the course so that their verbal expression and tentativeness during public speaking can be ascertained. This should be graded and should be accessible by subsequent Professors so that they can focus upon the weak students by affording them more opportunities than others through the duration of the course and marking the improvement. Another option is to include a five day module of Mock Interview at the beginning of the course where after those identified as weak can be interviewed again and again through the duration of the course. Additionally, while the ungraded modules have been recommended to be deleted, instead of them a Student

Induction program primarily to ascertain their communication capabilities can be conducted within the first few weeks or in the first week itself for a suitable duration but of not more than five days. The present syllabus of Communication Process Lab should be pruned to being 90% practical with 10% lectures on topics such as how to make a presentation. This should be graded so that the professors are able to identify students with weak communication skills/comprehension/analytical ability who can then be honed through mock interview and greater attention to through repeated opportunities for class participation and presentations. The methodology of conducting this exercise shall be discussed in a subsequent Chapter.

2.19 Electives offer students the opportunity to learn a topic that is of interest to them. The five electives offered at IIHMR, New Delhi limit the choices available to the students. More number of electives should be offered by weighing these against the availability of Professors for conducting these Electives. If required Adjunct Professors or industry experts can be involved. The present five day duration for conduct of the Electives is adequate for all except Big Data Analytics. The class on Big Data Analytics, held presently, gives little time for practice and is therefore unsuitable for learning primarily because the content requires a modicum of knowledge/developing an understanding of programming which may not be possible for technically disinclined students. Proper comprehension shall require more number of days which given the current schedule is not possible. As such therefore it should not be conducted. Additional Electives which could be offered are: -

2.19.1 Health Care Entrepreneurship <sup>[15]</sup>

2.19.2 Health Care Quality and Reliability <sup>[16]</sup>

2.19.3 Innovation in Healthcare <sup>[17]</sup>

2.19.4 Project Management for Health Care Professionals<sup>[18]</sup>

2.19.5 Transforming Health Care Delivery <sup>[19]</sup>

2.19.6 Change Management in Dynamic Health Care Systems <sup>[20]</sup>

2.19.7 Managing Health Care Organisations <sup>[21]</sup>

2.20 The topics to be covered under the new modules recommended to be offered shall be covered subsequently.

## **CHAPTER 3**

### **OVERLAPPING TOPICS ACROSS MODULES**

3.1 The syllabus of PGDHM at IIHMR, New Delhi mentioned at Para 2.1 and 2.2 can actually be grouped under the heads of health, finance, managerial functions and so on. In order to ascertain which topics, if any, in the various modules are overlapping, it would only be prudent that the core curriculum is well categorised for some modules can be classified under more than one category. For e.g. health insurance can be categorized under both health and finance.

3.2 **Categorisation of Modules**. The various modules can be classified into categories as under: -

**Table 3.1:** Categorisation of Modules at IIHMR, New Delhi

Ser No	Category	First Year	Second Year (Health Stream)
3.2.1	<b>Leadership</b>		
3.2.1.1		Organizational Behavior	Strategic Management
3.2.1.2		Communication Planning and Management	-
3.2.2	<b>Managerial</b>		
3.2.2.1		Principles of Management	Logistics and Supply Chain Management
3.2.2.2		Human Resource Management	-
3.2.2.3		Marketing Management	-
3.2.2.4		Health Information Management	-
3.2.3	<b>Financial</b>		
3.2.3.1		Essentials of Health Economics	Health Insurance and Managed Care
3.2.3.2		Financial Management and Accounting	-

Ser No	Category	First Year	Second Year (Health Stream)
3.2.4	<b>Public Health</b>		
3.2.4.1		Health and Development	National Health Programs
3.2.4.2		Health Policy and Health Care Delivery System	Global Health
3.2.4.3		Essentials of Hospital Services	Disaster Management
3.2.4.4		-	Population Program Management
3.2.4.5		-	Health Management Information System
3.2.4.6		-	Quality Management and Patient Safety in Hospitals
3.2.4.7		-	Legal Framework in Health Care
3.2.5	<b>Analytical Studies</b>		
3.2.5.1		Essentials of Epidemiology	Applied Epidemiology
3.2.5.2		Research Methodology	Health Survey and Research Methods
3.2.5.3		Biostatistics	Program Planning, Implementation, Monitoring and Evaluation
3.2.5.4		Demography and Population Science	Data Management and Analysis
3.2.5.5			Operations Research

3.3 The above modules are conducted for a number of days which can be a week or two weeks. Module wise syllabus (less Assignments, case studies and group activities though they are planned for every module) is given in the tables below: -

**Table 3.2:** Syllabus of Modules under Leadership Category

Ser No	Category	First Year	Second Year (Health Stream)
3.3.1	<b>Leadership</b>		
3.3.1.1		<b><u>Organizational Behavior (3)</u></b> • Introduction to OB • Changing Context	<b><u>Strategic Planning and Management in Health Care (3)</u></b>



		<ul style="list-style-type: none"> <li>• Attitudes and Job Satisfaction</li> <li>• Personality</li> <li>• Work Motivation</li> <li>• Perception</li> <li>• Roles and Role Effectiveness</li> <li>• Transactional Analysis</li> <li>• Foundations of Group Behaviour</li> <li>• Understanding Work Teams</li> <li>• Conflict management</li> <li>• Leadership styles and Theories</li> <li>• Communication at workplace</li> <li>• Organizational Culture and Climate</li> <li>• Learning Process</li> </ul>	<ul style="list-style-type: none"> <li>• Strategic Management Introduction</li> <li>• Leadership Concepts and Skills</li> <li>• Mission and Vision</li> <li>• Environment Analysis</li> <li>• External Analysis</li> <li>• Internal Analysis</li> <li>• Business Level Strategy</li> <li>• Corporate Strategy</li> <li>• Blue Ocean Strategy</li> <li>• Strategic Evaluation and Control</li> <li>• Strategy Implementation</li> <li>• Value Chain Analysis</li> </ul>
3.3.1.2		<p><b><u>Communication Planning and Management (3)</u></b></p> <ul style="list-style-type: none"> <li>• What is Communication?</li> <li>• Shanon Weaver Model of communication</li> <li>• Health Belief Model (Berlo's Model)</li> <li>• Health Communication Model (Self Theory)</li> <li>• Understanding non-verbal communication</li> <li>• Behavioural change communication</li> <li>• Interpersonal communication</li> <li>• Intrapersonal communication</li> <li>• Types of Counselling</li> <li>• P Process</li> <li>• Johari Window</li> <li>• Media Advocacy</li> <li>• Memo Writing</li> <li>• E-Mail Writing</li> <li>• Public Speaking</li> <li>• Effective Listening</li> </ul>	-

**Table 3.3:** Syllabus of Modules under Managerial Category

Ser No	Category	First Year	Second Year (Health Stream)
3.3.2	Managerial		
3.3.2.1		<b><u>Principles of Management (3)</u></b> <ul style="list-style-type: none"> <li>• Introduction to Management</li> <li>• Evolution of Management</li> <li>• Planning</li> <li>• Organising</li> <li>• Controlling</li> <li>• Human Resource Management</li> <li>• Supply Change Management</li> <li>• Types of Leadership</li> <li>• Motivation</li> <li>• Management by Objective</li> <li>• Movie – Evolution of Management Thought</li> </ul>	<b><u>Logistics and Supply Chain Management (3)</u></b> <ul style="list-style-type: none"> <li>• Materials Management</li> <li>• Policies and Procedures of Purchase of goods</li> <li>• Purchase</li> <li>• Materials Receipt Storage, Distribution, Handling &amp; Preservation of Stores</li> <li>• Inventory Control</li> <li>• Codification and Standardisation</li> <li>• Value Analysis</li> <li>• Hospital equipment Management</li> <li>• Global Tender Enquiry</li> <li>• Central Drugs Standard Control Organisation</li> <li>• Foreign Purchase and Import Substitution</li> <li>• Quality Control</li> <li>• Legal and Ethical aspects of Management of Materials</li> <li>• Rational Use of Drugs and Evidence Based Medicine</li> <li>• Role of IT in Supply Chain Management</li> <li>• Transportation</li> <li>• Ware Housing</li> </ul>
3.3.2.2		<b><u>Marketing Management (3)</u></b> <ul style="list-style-type: none"> <li>• Understanding of Marketing Management, Concepts of Marketing</li> <li>• CRM - Role Play</li> </ul>	-

Ser No	Category	First Year	Second Year (Health Stream)
		<ul style="list-style-type: none"> <li>• Marketing Strategic Planning</li> <li>• Marketing Planning</li> <li>• MIS and Market Research</li> <li>• Consumer Market and Buying Decision Process</li> <li>• Business Markets</li> <li>• Competitive Strategies</li> <li>• Product</li> <li>• Price</li> <li>• Place</li> <li>• Promotion</li> </ul>	
3.3.2.3		<b><u>Health Information Management (3)</u></b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Standards for HIE</li> <li>• Health Information Management</li> <li>• EHR / PHR / PHI</li> <li>• M Health, Tele-home care, IoT</li> <li>• Change Management and Capacity Building</li> <li>• Safety and Ethics related to Digital Health</li> <li>• Regulations and User Demand</li> <li>• Career Options</li> </ul>	-
3.3.2.4		<b><u>Human Resource Management (3)</u></b> <ul style="list-style-type: none"> <li>• Introduction to HRM</li> <li>• Human Resource Planning (HRP)</li> <li>• HRP activity</li> <li>• Job Analysis</li> <li>• Recruitment</li> <li>• Selection</li> <li>• Induction, Placement, Internal Mobility and Separations</li> <li>• Training and Development</li> <li>• Career and Succession Planning</li> <li>• Compensation Administration</li> </ul>	-

Ser No	Category	First Year	Second Year (Health Stream)
		<ul style="list-style-type: none"> <li>• Incentives and Employee Benefits</li> <li>• Employee Grievances and Discipline</li> <li>• Collective Bargaining</li> <li>• Employee empowerment and participation</li> <li>• Strategic HRM</li> <li>• Personnel records and administration</li> <li>• Work Life balance</li> <li>• New concepts in HRM</li> </ul>	

**Table 3.4:** Syllabus of Modules under Financial Category

Ser No	Category	First Year	Second Year (Health Stream)
3.3.3	Financial		
3.3.3.1		<u><b>Essentials of Health Economics (3)</b></u> <ul style="list-style-type: none"> <li>• Health Economics: An Introduction</li> <li>• The Production of Health</li> <li>• Overview of Medical Care sector</li> <li>• Demand for Health Care</li> <li>• Health Financing in India</li> <li>• National Health Insurance <sup>24</sup> forms</li> <li>• Economic Evaluation of Public Health Interventions</li> <li>• Cost of Health Services: Concepts and Estimations</li> <li>• Costs vs. revenues: Break-even Analysis</li> <li>• Market Failure and Government Intervention</li> </ul>	<u><b>Health Insurance and Managed Care (1.5)</b></u> <ul style="list-style-type: none"> <li>• Introduction to Health Insurance</li> <li>• Social Health Insurance</li> <li>• Pricing in Hospitals and Insurance</li> <li>• Employee State Insurance Scheme in India</li> <li>• Health Insurance in India, including IRDA and Regulatory Framework</li> <li>• Community Health Insurance</li> <li>• Corporate Business and Insurance <sup>13</sup></li> <li>• RSBY and Ayushman Bharat National Health Protection Scheme (AB-NHPS)</li> <li>• Managed Healthcare</li> <li>• Advertising/ Promotion in Healthcare and Insurance</li> </ul>

Ser No	Category	First Year	Second Year (Health Stream)
			<ul style="list-style-type: none"> <li>• Public Relations in Healthcare and Insurance</li> <li>• Private Health Insurance in India</li> <li>• TPA</li> <li>• Sales/Marketing in Healthcare and Insurance</li> <li>• International Experiences in Healthcare and Insurance</li> </ul>
3.3.3.2		<b><u>Financial Management and Accounting (3)</u></b> <ul style="list-style-type: none"> <li>• Overview</li> <li>• Techniques of Capital Budgeting</li> <li>• Marginal Cost</li> <li>• Break Even and CVP Analysis</li> <li>• Working Capital Management</li> <li>• Standard Costing and Variance Analysis</li> </ul>	-

**Table 3.5:** Syllabus of Modules under Public Health Category

Ser No	Category	First Year	Second Year (Health Stream)
3.3.4	<b>Public Health</b>		
3.3.4.1		<b><u>Health and Development (1.5)</u></b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Concepts of Health and Well Being</li> <li>• Health Indicators</li> <li>• Determinants of Health</li> <li>• Development and Health</li> <li>• Human Development Index</li> <li>• Concept of Disease</li> <li>• Levels of Prevention &amp; Modes of Intervention</li> </ul>	<b><u>National Health Programs (3)</u></b> <ul style="list-style-type: none"> <li>• Health Care Systems Overview</li> <li>• Health Care Systems – Four Basic Models</li> <li>• Health systems in India</li> <li>• Health Planning</li> <li>• IDSP</li> <li>• Control, Elimination and Eradication</li> <li>• Indicators, Monitoring and Evaluation</li> <li>• Program Evaluation</li> </ul>

Ser No	Category	First Year	Second Year (Health Stream)
		<ul style="list-style-type: none"> <li>• Health in International Development Agenda</li> <li>• MDGs to SDGs</li> <li>• Organization of Health Care Delivery in India</li> </ul>	<ul style="list-style-type: none"> <li>• The Project Life Cycle</li> <li>• NHP Implementation Problems and Challenges</li> <li>• 20 National health Programs</li> </ul>
3.3.4.2		<p><b><u>Health Policy and Health Care Delivery System (3)</u></b></p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Definition of health system</li> <li>• Health system components and functions</li> <li>• Building blocks of health care system</li> <li>• Current status of health human resources and infrastructure and related issues</li> <li>• Health management information system and relevant issues</li> <li>• Evolution of health care delivery system in India – glimpse of health care in British India</li> <li>• Lessons learnt from health services in British India</li> <li>• Health care delivery system in post independent India – key features</li> <li>• Health care delivery system in rural India – SC, PHC, CHC, District hospitals – roles and responsibilities of health functionaries</li> <li>• Organizational set up of health care in India</li> <li>• Different stakeholders in provision of health care.</li> <li>• Financing for health and out of pocket expenditure</li> <li>• Concept of universal health coverage and related issues</li> </ul>	<p><b><u>Global Health (1.5)</u></b></p> <ul style="list-style-type: none"> <li>• Introduction to Global Health</li> <li>• Health in International Development Agenda</li> <li>• Health in All Policies</li> <li>• MDGs to SDGs</li> <li>• Health Systems Framework</li> <li>• UN Agencies in India</li> </ul>



Ser No	Category	First Year	Second Year (Health Stream)
		<ul style="list-style-type: none"> <li>• Different committees on health</li> <li>• National Health Policy- 2017</li> <li>• Nutrition Policy and National Population Policy</li> <li>• National Health Mission (NRHM/ NUHM)</li> <li>• NUHM and urban health in India</li> <li>• Challenges posed by urban health and special features of NHM</li> <li>• National Programs – Rationale and Overview</li> <li>• NVBDCP, NACO, RNTCP, NLEP</li> <li>• NPCDCS</li> <li>• Universal Health Coverage (UHC) – concepts and overview</li> <li>• Financing for UHC, National Health Protection Scheme</li> <li>• Health in All Policies (HiAP) – rationale and overview</li> </ul>	
3.3.4.3		<b><u>Essentials of Hospital Services (1.5)</u></b> <ul style="list-style-type: none"> <li>• Hospitals and Hospital as a System</li> <li>• Overview of Health Sector</li> <li>• Role of Hospital Administrator</li> <li>• Planning and Organization of Out Patient Services</li> <li>• Accident and Emergency Services</li> <li>• Progressive Patient Care</li> <li>• Planning and Organizing ICU</li> <li>• Planning and Organization of Hospital Laboratory Services</li> <li>• Planning and Organization of Hospital Imaging Services</li> </ul>	<b><u>Disaster Management (1.5)</u></b> <ul style="list-style-type: none"> <li>• Overview</li> <li>• Disaster Management in India</li> <li>• Planning during Disaster Response</li> <li>• Disease Management</li> <li>• Food and Nutrition</li> <li>• Water and Sanitation</li> <li>• Incident Command System</li> <li>• Mass Casualty Management</li> <li>• Disaster Management in Hospitals</li> <li>• Leadership for Disaster and Health</li> <li>• Planning during Disaster Response</li> <li>• Disease Management</li> <li>• Communications</li> <li>• Mass Casualty Management</li> </ul>

Ser No	Category	First Year	Second Year (Health Stream)
		<ul style="list-style-type: none"> <li>• Planning and Organization of Medical Records Department</li> <li>• Hospital Monthly Statistical Bulletin</li> <li>• Inpatient Services</li> <li>• Nursing Care and Ward Management</li> <li>• Operation Theater</li> </ul>	
3.3.4.4		-	<b><u>Population Program Management (1.5)</u></b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Population Policy</li> <li>• RMNCH+ Strategy</li> <li>• Evaluation of Family Planning Program</li> <li>• RMNCH+A Dashboard</li> <li>• Use of Large Scale Data in Management</li> <li>• Gender Issues and Health</li> <li>• Sex Ratio</li> <li>• Domestic Violence and Demographic Variation</li> <li>• Women's Empowerment</li> <li>• Aging and Public Health</li> <li>• HIV/AIDS and Demography</li> <li>• Urbanisation Measures</li> <li>• Urbanisation and Health</li> </ul>
3.3.4.5		-	<b><u>Health Management Information System (3)</u></b> <ul style="list-style-type: none"> <li>• Concepts in Information Management</li> <li>• Basics of Computer</li> <li>• Data and Database Management</li> <li>• HMIS – Organization and Structure</li> <li>• HMIS – Decision Making</li> <li>• Information Needs and Indicators</li> </ul>



Ser No	Category	First Year	Second Year (Health Stream)
			<ul style="list-style-type: none"> <li>• Data Collection and Generation</li> <li>• Data Transmission and Flow of Information</li> <li>• Data Processing</li> <li>• Data Quality</li> <li>• Applications and Use of HMIS</li> <li>• Evaluation of MIS</li> <li>• Overview of EMR, EHR &amp; HIS</li> </ul>
3.3.4.6		-	<b><u>Quality Management and Patient Safety in Hospitals(3)</u></b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Approach to Quality Management</li> <li>• Quality Improvement</li> <li>• Tools for Quality Improvement</li> <li>• Clinical Governance</li> <li>• NQAS</li> <li>• Never Events</li> <li>• Developing a Quality Culture</li> <li>• Patient Safety</li> <li>• NABH Standards</li> <li>• Accreditation National and International</li> </ul>
3.3.4.7		-	<b><u>Legal Framework in Health Care (1.5)</u></b> <ul style="list-style-type: none"> <li>• Legal Issues in Medical Care</li> <li>• Legal Issues in Hospitals and Management of Medico Legal Cases</li> <li>• Day to Day Problems in Dealing with Patients</li> <li>• Industrial and Food and Drug Acts Applicable to Hospitals</li> <li>• Classification of Offences</li> <li>• Consent</li> <li>• Confidentiality</li> <li>• Criminal Trials in India</li> </ul>

Ser No	Category	First Year	Second Year (Health Stream)
			<ul style="list-style-type: none"> <li>• Professional Ethics</li> <li>• Consumer Protection Act</li> <li>• RTI Act</li> <li>• Medical Termination of Pregnancy Act</li> <li>• Clinical establishment Act</li> <li>• Mental Health Care Act</li> <li>• Sexual Harassment of Women at Work Place</li> <li>• Violence Against Medical Profession</li> </ul>

**Table 3.6:** Syllabus of Modules under Analytical Studies Category

Ser No	Category	First Year	Second Year (Health Stream)
3.3.5.1		<u><b>Essentials of Epidemiology (3)</b></u> <ul style="list-style-type: none"> <li>• What is Epidemiology</li> <li>• Types of Epidemiology Studies</li> <li>• Cross Sectional Design</li> <li>• Cohort</li> <li>• Case Control</li> <li>• Introduction to Surveillance</li> <li>• Surveillance and IDSP</li> <li>• Evaluation of Surveillance</li> <li>• Clinical Epidemiology</li> <li>• Strobe</li> <li>• Outbreak Investigation</li> </ul>	<u><b>Applied Epidemiology (3)</b></u> <ul style="list-style-type: none"> <li>• Overview</li> <li>• Epidemiology Basics</li> <li>• Epidemiology Measurements- Case Studies and Discussion</li> <li>• Measurements: Morbidity and Mortality</li> <li>• Study Designs – Descriptive Study</li> <li>• Study Designs- Case Control Study</li> <li>• Study Designs- Cohort Study</li> <li>• Study Designs- Experimental Study</li> <li>• Estimation of Risk: Associations and Cause – Effect Relationships</li> <li>• Bias in Epidemiological Studies</li> </ul>

Ser No	Category	First Year	Second Year (Health Stream)
			<ul style="list-style-type: none"> <li>• Screening for Diseases – Case Study and Group Discussion</li> <li>• Validity and Reliability of Screening Tests</li> <li>• Evaluation of Screening Programs</li> <li>• Epidemiological Approach to Evaluation of Health Programs</li> <li>• Developing a Disease Surveillance Program</li> <li>• Epidemic Management</li> </ul>
3.3.5.2		<b>Research Methodology (3)</b> <ul style="list-style-type: none"> <li>• Foundations of Research</li> <li>• Problem Identification &amp; Formulation - Research Question</li> <li>• The Review of Literature</li> <li>• Research Design and Types of Research</li> <li>• Methods of Research</li> <li>• Sampling and Sampling Design</li> <li>• Ethical issues in research</li> <li>• Methods of Data Collection</li> <li>• Data Analysis</li> <li>• Interpretation of Data and Report Writing</li> </ul>	<b>Health Survey and Research Methods (3)</b> <ul style="list-style-type: none"> <li>• Introduction to Health Research</li> <li>• Identifying Research Problem</li> <li>• Ethical Issues in the Research</li> <li>• Developing a Research Proposal</li> <li>• Overview of Research Design</li> <li>• Research Tools and Data Collection Methods</li> <li>• Sampling Methods</li> <li>• Designing Survey Tools</li> <li>• Bias and confounding</li> <li>• Introduction to Program Evaluation</li> <li>• Gender Health Research</li> <li>• Data Management</li> <li>• Analyze Information for Drawing Inferences</li> <li>• Report writing</li> <li>• Content, coverage and design of NHFS 4</li> </ul>
3.3.5.3		<b>Biostatistics (3)</b> <ul style="list-style-type: none"> <li>• Introduction to Statistics and Biostatistics</li> <li>• Data Sources</li> <li>• Types of Variable</li> <li>• Common Measurements: Rates, Ratio, Proportion, Percentage and Index</li> </ul>	<b>Program Planning, Implementation, Monitoring and Evaluation (3)</b> <ul style="list-style-type: none"> <li>• Concept of Planning</li> <li>• Concept of Program Planning and Health Planning Cycle</li> </ul>

Ser No	Category	First Year	Second Year (Health Stream)
		<ul style="list-style-type: none"> <li>• Presentation of data</li> <li>• Descriptive statistics</li> <li>• Concept, Purpose and Type of Sampling</li> <li>• Sample Size Determination</li> <li>• Correlation &amp; Regression</li> <li>• Simple &amp; Multiple Regression Analysis</li> <li>• Concept of Basic Probability</li> <li>• Probability Distribution</li> <li>• Confidence Interval</li> <li>• Testing of Hypothesis</li> <li>• Test of Significance: Chi Square &amp; T Test</li> </ul>	<ul style="list-style-type: none"> <li>• Situational Analysis- Concepts and Approaches</li> <li>• Health Problems and 23 oritisation</li> <li>• Problem Tree Analysis and Objective Tree Analysis</li> <li>• Stakeholder Analysis</li> <li>• Concept of Log Frame and Approach</li> <li>• Development of LF Matrix</li> <li>• Activity and Time Scheduling (Gantt Chart)</li> <li>• CPM and Activity Network</li> <li>• Monitoring and Evaluation</li> <li>• Budgeting</li> <li>• Budget Preparation</li> </ul>
3.3.5.4		<p><b><u>Demography &amp; Population Science (3)</u></b></p> <ul style="list-style-type: none"> <li>• Intro Population Science and Demography including sources of demographic data</li> <li>• Demographic Transition (Population structure and composition, Age sex pyramid)</li> <li>• Population Characteristics (Age dependency and implications, Quality of data and data appraisal)</li> <li>• Concept of fertility (Basic measures of fertility, Divorce and remarriage)</li> <li>• Mortality Definition (Sex and age patterns of mortality, basic measures of mortality)</li> <li>• Life Table techniques</li> <li>• Migration Type, Pattern, Consequences, Migration and health</li> </ul>	<p><b><u>Data Management and Analysis (1.5)</u></b></p> <ul style="list-style-type: none"> <li>• Public Health Data</li> <li>• Public Health Data Sources</li> <li>• Introduction to Database</li> <li>• Data Coding, Editing and Transformation</li> <li>• Data Quality</li> <li>• Preparing Data for Analysis</li> <li>• Tabular Presentation</li> <li>• Graphic Presentation</li> <li>• Introduction to SPSS</li> <li>• Data Entry and Database Creation</li> <li>• Importing Database and Overview to Database Management Options</li> <li>• Descriptive Analysis</li> <li>• Cross Tab and Chi Square Test</li> <li>• T Test</li> <li>• Correlation Analysis</li> </ul>

Ser No	Category	First Year	Second Year (Health Stream)
		<ul style="list-style-type: none"> <li>• Ratios, rates and Proportion</li> <li>• Population Growth rates</li> </ul>	<ul style="list-style-type: none"> <li>• Simple Linear Regression</li> <li>• Analysis</li> </ul>
3.3.5.5		-	<b><u>Operations Research (3)</u></b> <ul style="list-style-type: none"> <li>• Introduction to Operations Research</li> <li>• Concepts and Definition of Operations Research</li> <li>• Linear Programming</li> <li>• Solution by Graphical Method</li> <li>• Special Cases and Limitations</li> <li>• Transportation Problems</li> <li>• Assignment Problems</li> <li>• Integer and Goal Programming</li> <li>• EOQ Models</li> <li>• Quantity Discount Models</li> <li>• ABC Analysis</li> <li>• PERT</li> <li>• CPM</li> <li>• Queueing Theory</li> <li>• Waiting Time</li> </ul>

### **Results**

3.4 From Tables 3.2 to 3.6 above it is discernible that the PGDHM Course at IIHMR, New Delhi covers a total of 30 modules, of which 15 are conducted in the first year and another 15 are conducted in the second year. In addition, there are electives and certain non-graded topics whose syllabus have not been discussed above. These modules can be categorized under the heads of those related to leadership, managerial, finance, public health and analytical. Considering that the scope of the paper is restricted to first year and second year health stream

only, other modules concerning Hospital Management and Health IT Management have not been included. The topics that are covered in each module show that except for a very few modules such as Legal Framework in Health, <sup>37</sup> Marketing Management, Human Resource Management and Supply Chain Management there are topics within other modules that are overlapping in nature either in whole or as part of a topic. The modules with overlapping topics are as under: -

**Table 3.7:** Overlapping Topics in Modules

Ser	Topic	Overlapping Module	Covered as
3.4.1	Leadership Related		
		Organisational Behaviour (I <sup>st</sup> Year)	Leadership Styles and Theories
		Strategic Planning (I <sup>st</sup> Year)	Leadership Concepts and Skills
		Principles of Management (I <sup>st</sup> Year)	Types of Leadership
		International Health (II <sup>nd</sup> Year)	Role of Leadership
		Disaster Management (II <sup>nd</sup> Year)	Leadership for Disaster
		Strategic Management (II <sup>nd</sup> Year)	Capacity Development for Leadership Skills
3.4.2	Communication		
3.4.2.1		Organisational Behaviour (I <sup>st</sup> Year)	Communication at Work Place (includes of topics mentioned in next row)
		Communication Planning and Management (I <sup>st</sup> Year)	<ul style="list-style-type: none"><li>• What is Communication?</li><li>• Understanding non-verbal communication</li><li>• Interpersonal communication</li><li>• E-Mail Writing</li><li>• Effective Listening</li></ul>
3.4.2.2		International Health (II <sup>nd</sup> Year)	Role of leadership (includes of enhancing listening skills)
		Strategic Management (II <sup>nd</sup> Year)	Capacity Development for Leadership Skills (includes of enhancing listening skills)



Ser	Topic	Overlapping Module	Covered as
3.4.3	Research and Epidemiology		
3.4.3.1		Research Methodology (I <sup>st</sup> Year)	Problem Identification & Formulation - Research Question
		Health Survey and Research Methods (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>Identifying Research Problem</li> <li>Developing a Research Proposal</li> </ul>
3.4.3.2		Research Methodology (I <sup>st</sup> Year)	<ul style="list-style-type: none"> <li>Ethical issues in research</li> </ul>
		Health Survey and Research Methods (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>Ethical issues in research</li> </ul>
3.4.3.3		Applied Epidemiology (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>Study Design Descriptive Studies</li> <li>Study Design Experimental Studies</li> <li>Study Design Case Control</li> <li>Study Design Cohort</li> </ul>
		Epidemiology (I <sup>st</sup> Year)	Various Study Designs
3.4.3.4		Research Methodology (I <sup>st</sup> Year)	Interpretation of Data and Report Writing
		Health Survey and Research Methods (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>Analyze Information for Drawing Inferences</li> <li>Report writing</li> </ul>
3.4.4		Health Survey and Research Methods (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>Bias and confounding</li> <li>Sensitivity, Validity and Reliability (as part of Research Design)</li> </ul>
	Sampling	Epidemiology	<ul style="list-style-type: none"> <li>Bias and confounding</li> <li>Sensitivity, Validity and Reliability (as part of Research Design)</li> </ul>
		Applied Epidemiology	<ul style="list-style-type: none"> <li>Bias in Epidemiology</li> <li>Validity and Reliability of Screening Tests</li> </ul>
3.4.5			
		Biostatistics (I <sup>st</sup> Year)	<ul style="list-style-type: none"> <li>Concept, Purpose and Type of Sampling</li> <li>Sample Size Determination</li> </ul>
		Research Methodology (I <sup>st</sup> Year)	Sampling and Sampling Design
		Health Survey and Research Methods (II <sup>nd</sup> Year)	Sampling Method
3.4.6	Data		
3.4.6.1		Biostatistics (I <sup>st</sup> Year)	Data Sources

Ser	Topic	Overlapping Module	Covered as
3.4.6.2		Data Management and Analysis (II <sup>nd</sup> Year)	Public Health Data Sources
		Biostatistics (I <sup>st</sup> Year)	<ul style="list-style-type: none"> <li>• Types of Variable</li> <li>• Rates, Ratio, Proportion, Percentage and Index</li> </ul>
		Data Management and Analysis (II <sup>nd</sup> Year)*	Preparing Data for Analysis
		Health Survey and Research Methods (II <sup>nd</sup> Year)	Analysing Data
		Demography (I <sup>st</sup> Year)	Rates, Ratio, Proportion, Percentage and Index
3.4.6.3		Biostatistics (I <sup>st</sup> Year)	<ul style="list-style-type: none"> <li>• Correlation &amp; Regression</li> <li>• Simple &amp; Multiple Regression Analysis</li> <li>• Testing of Hypothesis</li> <li>• Test of Significance: Chi Square &amp; T Test</li> </ul>
		Data Management and Analysis (II <sup>nd</sup> Year)*	<ul style="list-style-type: none"> <li>• Cross Tab and Chi Square Test</li> <li>• T Test</li> <li>• Correlation Analysis</li> <li>• Simple Linear</li> <li>• Regression Analysis</li> </ul>
		Health Survey and Research Methods (II <sup>nd</sup> Year)	Analysing Data
3.4.6.4		Data Management and Analysis (II <sup>nd</sup> Year)*	Data Quality
		Health Management Information System	Data Collection/Processing (Data Quality covered as a part of this topic)
3.4.6.5		Research Methodology (I <sup>st</sup> Year)	Methods of Data Collection
		Health Survey and Research Methods (II <sup>nd</sup> Year)	Research Tools and Data Collection Methods
3.4.7	Graphic Presentation Tabular Presentation	Biostatistics (I <sup>st</sup> Year)	Descriptive Statistics (Types of Graph), Presentation of Data (Tabular Presentation)
		Data Management and Analysis (II <sup>nd</sup> Year)*	Graphic Presentation, Tabular Presentation
		Health Survey and Research Methods (II <sup>nd</sup> Year)	Analysing Data
3.4.8	NHFS4	Demography (I <sup>st</sup> Year)	Content, coverage and design of NHFS4



Ser	Topic	Overlapping Module	Covered as
		Health Survey and Research Methods (II <sup>nd</sup> Year)	Content, coverage and design of NHFS4
		Population Program Management (II <sup>nd</sup> Year)	Use of Large Scale Data
3.4.9	Demographic Transition	Demography (I <sup>st</sup> Year)	Demographic Transition - India
		Population Program Management (II <sup>nd</sup> Year)	Aging and Public Health
3.4.10	Health Program	National Health Programs (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>• NRHM</li> <li>• NUHM</li> <li>• NVBDCP, NACO, RNTCP, NLEP</li> <li>• NPCDCS</li> </ul>
		Health Policy and Health Care Delivery System (I <sup>st</sup> Year)	<ul style="list-style-type: none"> <li>• NRHM</li> <li>• NUHM</li> <li>• NVBDCP, NACO, RNTCP, NLEP</li> <li>• NPCDCS</li> </ul>
		National Health Programs (II <sup>nd</sup> Year)	RMNCHA+
		Population Program Management (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>• RMNCHA+ Strategy</li> <li>• NPHCE as part of Aging and Public Health</li> <li>• Evaluation of Family Planning Program (Only RCH and NPP 2000)</li> </ul>
3.4.11	Health in All Policies	Health Policy and Health Care Delivery System (I <sup>st</sup> Year)	Health in All Policies (HiAP) – Rationale and Overview
		International Health (II <sup>nd</sup> Year)	Health in All Policies
3.4.12	Health Management Information System	Health Policy and Health Care Delivery System (I <sup>st</sup> Year)	Health Management Information System and Relevant Issues
		Health Management Information System (II <sup>nd</sup> Year)	Above topic covered in various parts in Health Management Information System
3.4.13	Financing for health and out of pocket expenditure	Health Policy and Health Care Delivery System (I <sup>st</sup> Year)	Financing for health and out of pocket expenditure
		Essentials of Health Economics in India (I <sup>st</sup> Year)	Health Financing in India
3.4.14	Disease Concept	Health and Development (I <sup>st</sup> Year)	Concept of Disease

Ser	Topic	Overlapping Module	Covered as
		Epidemiology (I <sup>st</sup> Year)	Types of Epidemiological Study (Above topic covered as a part of this topic)
3.4.15	Health Care Delivery Organisation	Health and Development (1 <sup>st</sup> Year)	Organization of Health Care Delivery in India
		Health Policy and Health Care Delivery System (I <sup>st</sup> Year)	<ul style="list-style-type: none"> <li>• Health care delivery system in rural India – SC, PHC, CHC, District hospitals – roles and responsibilities of health functionaries</li> <li>• Organizational set up of health care in India</li> </ul>
		National Health Program (II <sup>nd</sup> Year)	Health System in India
		Essentials of Hospital and Hospital Services (I <sup>st</sup> Year)	Overview of Health Sector
3.4.16	MDG and SDG	Health and Development (I <sup>st</sup> Year)	MDGs to SDGs
		International Health (II <sup>nd</sup> Year)	MDGs to SDGs
3.4.17	Health Planning and Related Aspects	National Health Program (II <sup>nd</sup> Year)	Health Planning
		Program Planning, Implementation, Monitoring and Evaluation (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>• Concept of Planning</li> <li>• Concept of Program</li> <li>• Planning and Health Planning Cycle</li> <li>• Situational Analysis- Concepts and Approaches</li> <li>• Health Problems and Prioritisation</li> <li>• Problem Tree Analysis and Objective Tree Analysis</li> </ul>
3.4.18	Monitoring and Evaluation	Program Planning, Implementation, Monitoring and Evaluation (II <sup>nd</sup> Year)	Monitoring and Evaluation
		National Health Program (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>• Indicators, Monitoring and Evaluation</li> <li>• Program Evaluation</li> </ul>
3.4.19	Disease Surveillance Program	Epidemiology (I <sup>st</sup> Year)	Integrated Disease Surveillance Program and Surveillance
		Applied Epidemiology (II <sup>nd</sup> Year)	Developing a Disease Surveillance Program

Ser	Topic	Overlapping Module	Covered as
		National Health Program (II <sup>nd</sup> Year)	Integrated Disease Surveillance Program
3.4.20	CPM	Operations Research (II <sup>nd</sup> Year)	CPM
		Program Planning, Implementation, Monitoring and Evaluation (II <sup>nd</sup> Year)	CPM and Activity Network
3.4.21	Ayushman Bharat	Health Insurance and Managed Care	RSBY and Ayushman Bharat National Health Protection Scheme (AB-NHPS)
		National Health Program (II <sup>nd</sup> Year)	Ayushman Bharat
		Health Policy and Health Care Delivery System (I <sup>st</sup> Year)	Financing for UHC, National Health Protection Scheme
3.4.22	Motivation	Principles of Management (I <sup>st</sup> Year)	Motivation
		Organisational Behaviour (II <sup>nd</sup> Year)	Work Motivation
3.4.23	Prevention & Intervention	Health and Development (I <sup>st</sup> Year)	Levels of Prevention & Modes of Intervention
		Essentials of Epidemiology (I <sup>st</sup> Year)	What is Epidemiology (includes of Levels of Prevention and Modes of Intervention as a sub part)
3.4.24	Universal Health Coverage	Health Policy and Health Care Delivery System (I <sup>st</sup> Year)*	Universal Health Coverage (UHC) – concepts and overview
			Universal Health Coverage Concepts
			* Topics at Ser 3.4.23 are repeated within the module

**Note :** \* Topics of Data Management and Analysis though similar to Biostatistics cannot be deleted since they are the computer based application of the topics covered in Biostatistics

### **Discussion**

3.5 The curricula at IIHMR, New Delhi has a large number of topics in different modules over the first year and second year (Health Stream) which are overlapping. While in some cases the topics overlap because the topic in the second year is related to the previous year's module (for e.g. Epidemiology in first year is related to Applied Epidemiology in second year health stream or for instance Research Methodology in the first year is related to Health Survey Research Methods in the second year health stream) but is repeated probably to enable the students to recall and therefore better comprehend the related topic, there are some topics within the first year and some within the second year health stream where despite the modules being unrelated i.e. one module is not a precursor to the other, there is an overlap of topics. For e.g. Health Policy and Health Care Delivery System (I<sup>st</sup> Year) and Essentials of Health Economics in India (I<sup>st</sup> Year) are unrelated modules, yet there is an overlap of topics.

3.6 The overlap of topics should be seen from the perspective of their impact on the course duration. The PGDHM at IIHMR New Delhi has a two-year schedule from July to May of the next to next year. This affords a total of 730 days (considering PGDHM 18 being conducted from 02 Jul 18 to 30 Jun 2020) for the course. The time which is available for imparting instructions either in class (whether theoretically or practically) or through visits is as under: -

**Table 3.8 : PGDHM Course Class Based Duration for Education**

Ser No	Event	Number of Days	Cumulative Reducing Balance (Days)
3.6.1	Total Duration	730	-

Ser No	Event	Number of Days	Cumulative Reducing Balance (Days)
3.6.2	Non-working Saturday and Sunday	208	522 (Working Days)
3.6.3	Holidays 2018, 19 and 20 (2018 – From 02 Jul; 3 Days 2019 – 7 Days 2020 – Up till 31 Jan; 01 days)	11	511 (Working Days)
3.6.4	Diwali Break 2018, 19 and 20 (2018 – 5 days 2019 – 1 day but on Sunday 2020 – Not applicable)	05	506
3.6.5	Sports Week (over Two Years)	10 (Working Days)	496 (Working Days)
3.6.6	Alumni Conference (over Two Years)	0 Working Day, since held on Saturday	496 (Working Days)
3.6.7	Term and Supplementary Exams (1 <sup>st</sup> Year)	30 Working Days excluding one holiday and including 07 days no work after Supplementary exams	466 (Working Days)
3.6.8	Term, Elective and Supplementary Exams (2 <sup>nd</sup> Year)	28 Working days excluding one holiday	438 (Working Days)
3.6.9	Summer Internship (1 <sup>st</sup> Year)	51 Working Days from 01 Apr to 05 Jun including 03 days no work after Summer Internship and before Supplementary exams	387 (Working Days)
3.6.10	Dissertation Internship (2 <sup>nd</sup> Year)	80 Working Days excluding 5 days of elective and supplementary exams	307 (Working Days)
3.6.11	Scientific Paper	22 (Working Days)	<b>285</b>
3.6.12	Number of Working Days Available		<b>285 Working Days including for ungraded and elective modules</b>

**Note.**

- Ser 3.6.3 onwards is excluding Saturdays and Sundays
- Ten days between supplementary exams and commencement of summer internship is unutilised. Can be used as mentioned in Para 5.4.1.4

3.7 From Table 3.8 above, it is discernible that there are in actual a total of 285 working days only which are available over a 730 days course. This may reduce/ increase by a few days due to some additional holidays/ depending upon leap year or if the course is started/ finished on different days than that taken into consideration for the purpose of calculation at Table 3.8 above. Thus, in Table 4.1 the number of days works out to 290 but the classes are actually held for 285 days because of holidays within the schedule. Besides, the days accounted in Table 3.8 as being available, the disruption during the placement interviews, although not reducing the number of working days effects the comprehension of the topics covered by those students who are unavailable since they are involved in facing the placement interviews. When this is considered in light of the overlapping topics, it can be stated with conviction that though the topics are all of significance, if they have been already taught once they should not be taught again. Thus, the time duration of a module could be reduced or more practice could be undertaken in a particular module or a new topic could be covered within the same duration.

## **CHAPTER 4**

### **ADDITION/DELETION OF TOPICS ACROSS MODULES AND THE SEQUENCE OF MODULES**

4.1 The addition/ deletion of topics across the modules can be decided based on the contents of Table 3.7 in Chapter 3, the discussion at Para 3.5 to 3.7 of Chapter 3, the view of placement interviewers at Para 2.8 of Chapter 2 and the views of the students themselves. The views of the students are significant because they are an important stakeholder since what they learn and how they use their learning in their professional life will not only lead to their professional growth and result in an effective performance but also create a name for the institute i.e. IIHMR, New Delhi which is their alma matter.

4.2 **Views of Students.** The views of students regarding the syllabus at IIHMR, New Delhi based on inputs from them can be reduced to the following: -

4.2.1 Topics which are similar should follow each other.

4.2.2 Modules which cover topics from which questions are usually framed during an interview, should be covered in the latter part of the first year and the early part of the second year, so that the topics are relatively fresh. Since the topics will be relatively fresh, the students shall be able to pay attention to the modules that are underway during the placements and not neglect them because of the unavoidable requirement of

spending time on relearning things owing to the modules having been conducted in the early part of the first year.

4.2.3 There should be a class on how to face an interview and if feasible mock interviews should be included in the syllabus.

4.2.4 Two modules should be imparted simultaneously, so that one module is covered pre-lunch and the other module is covered post-lunch. This would help break the monotony generated by the same module being covered through the day and through the week or two weeks.

4.2.5 The syllabus of modules with 1.5 Credit Score should facilitate learning. At present the syllabus of some modules is vast and not conducive to learning.

4.2.6 Duration of some modules such as National Health Planning, Biostatistics, Research Methodology and Epidemiology was less.

4.2.7 The module's books should be available on the day the module starts. Additional study material/ reference material should be a part of the book itself. The slides should be in consonance with the contents of the module book with the latter being an amplification of the slides.

4.2.8 As far as possible the lecturers should not be changed. If unavoidable the slides should not be as per the lecturer deputed instead but should be the same one as would have been covered by the original lecturer.

4.2.9 Although several topical case studies, assignments, group activities and some field visits (not in all modules) were planned, not all were conducted. This was particularly true in case of field studies.



4.3 The views of the students when considered in context of the views of placement interviewers at Para 2.8 viz lack of self-confidence and general awareness in the students about the health care sector, not being up to date with the latest developments, and Table 3.7 show that there are a number of topics that should be added/ deleted.

4.4 It also flows from the requirement projected by the students, as well as, the fact that better comprehension shall be facilitated if the modules follow a sequence where in related topics are concomitantly covered while at the same time ensuring that such topics which are required for all three streams should be, as far as possible, covered in the first year. The present sequence of modules is as under: -

**Table 4.1 : Existing Sequence of Conduct of Modules**

Ser	First Year Modules	Second Year Health Stream Modules	Remarks
4.4.1	Essentials of Computer Services *	Operations Research (3)	*Un-graded
4.4.2	Communication Lab*	National Health Programs (3) ^	Un-graded * ^ Related Modules
4.4.3	Human Process *	Applied Epidemiology (3)%	Un-graded * % Related Modules
4.4.4	Health and Development (1.5)	Health Survey and Research Methods (3) \$	\$ Related Modules
4.4.5	Essentials of Hospital Services (1.5) &	Health Insurance and Managed Care (1.5) **	& Related Modules ** Combined Module for all three streams
4.4.6	Health Policy and Health Care Delivery System (3)	Program Planning, Implementation, Monitoring and Evaluation (3) ^	^ Related Modules
4.4.7	Principles of Management (3)	Strategic Planning (3)	

Ser	First Year Modules	Second Year Health Stream Modules	Remarks
4.4.8	Financial Management and Accounting (3)	Logistics and Supply Chain Management (3)	
4.4.9	Research Methodology (3) \$	Quality Management and Patient Safety in Hospitals (3) & @	& Related Modules @ Combined Module for Health and Hospital Streams
4.4.10	Communication Planning and Management (3)	Global Health (1.5)	
4.4.11	Bio Statistics (3)#	Health Management Information System (3)	# Related Modules
4.4.12	Human Resource Management (3)	Population Program Management (1.5)	
4.4.13	Essentials of Epidemiology (3)%	Data Management and Analysis (1.5) # \$\$	# Related Modules \$\$ Combined Module for Health and Hospital Streams
4.4.14	Marketing Management (3)	Disaster Management (1.5) \$%	\$% Combined Module for Health and Hospital Streams
4.4.15	Essential of Health Economics (3)	Legal Framework in Health Care (1.5)	
4.4.16	Organisational Behaviour (3)	-	
4.4.17	Demography and Population Sciences (3)#	-	# Related Modules
4.4.18	Health Information Management (3)	-	

**Note:** 8 (1.5 Credit Modules) x 5 Working Days Modules = 40 Days

22 (3 Credit Modules) x 10 Working Days Modules = 220 Days

03 Un-Graded Modules x 5 Working Days = 15 Working Days

03 Elective Modules x 5 Working Days = 15 Working Days

Total 1<sup>st</sup> Year = 155 Working Days (including Un-Graded Modules); 42 Credits

Total 2<sup>nd</sup> Year = 135 Working Days (including Elective Modules not graded); 36 Credits

Total = 290 Working Days (actually 285 days due to holidays) and 78 Credits less summer internship and dissertation internship

## **Results and Discussion**

4.5 **Topics for Addition/ Deletion.** The following aspects need to be kept in mind while deleting or adding topics: -

4.5.1 The *topic* that is *being deleted* from a particular module *should not affect the understanding. If this is so, all such topics should be re-capped within a duration of not more than one period.*

4.5.2 Several topics which have been already covered in other topics either in full or as part of the topic, have been recommended to be deleted. However, it is likely that the entire topic that is being deleted has not been covered in sum total in the topic of which it is an overlap. Thus, it is essential that when deleting a topic, *the topic is reviewed to ensure that, its content not covered in the topic of which it is an overlap should be included in the topic concerned, if relevant/applicable.*

4.6 The topics that can be deleted and those which can be added by shifting are given below: -

**Table 4.1** : Topics for Deletion and Addition (Latter by Shifting)

Ser	Module Topic to be Deleted From/Added to	Covered as/ Duplicated in	Topic to be Added to/Covered in Module/Remarks
4.6.1	<b>Leadership</b>		
	Organisational Behaviour (I <sup>st</sup> Year)	Leadership Styles and Theories	Leadership Added to new Module by shifting
	Strategic Planning (II <sup>nd</sup> Year)	Leadership Concepts and Skills	

Ser	Module Topic to be Deleted From/Added to	Covered as/ Duplicated in	Topic to be Added to/Covered in Module/Remarks
	Principles of Management (I <sup>st</sup> Year)	Types of Leadership	* Covered in the other topics in this row
	International Health (II <sup>nd</sup> Year)	Role of Leadership	
	Disaster Management (II <sup>nd</sup> Year)	Leadership for Disaster*	
	Strategic Management (II <sup>nd</sup> Year)	Capacity Development for Leadership Skills	
4.6.2	<b>Communication</b>		
4.6.2.1	Organisational Behaviour (I <sup>st</sup> Year)	Communication at Work Place (includes of topics mentioned in next row)	Topics at Ser 4.6.2.1. and 4.6.2.2 be covered in Communication Planning and Management module only.  Topics at Ser 4.6.2.2 are recommended to be covered in Leadership Module. The portion of these topics related to communication should not be covered in these topics.
	Communication Planning and Management (I <sup>st</sup> Year)	<ul style="list-style-type: none"> <li>• What is Communication?</li> <li>• Understanding non-verbal communication</li> <li>• Interpersonal communication</li> <li>• E-Mail Writing</li> <li>• Effective Listening</li> </ul>	
4.6.2.2	International Health (II <sup>nd</sup> Year)	Role of leadership (includes of enhancing listening skills)	
	Strategic Management (II <sup>nd</sup> Year)	Capacity Development for Leadership Skills (includes of enhancing listening skills)	
4.6.3	<b>Research and Epidemiology</b>		
4.6.3.1	Research Methodology (I <sup>st</sup> Year)	Problem Identification & Formulation - Research Question	Overlapping but different content
	Health Survey and Research Methods (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>• Identifying Research Problem</li> <li>• Developing a Research Proposal</li> </ul>	
4.6.3.2	Research Methodology (I <sup>st</sup> Year)	<ul style="list-style-type: none"> <li>• Ethical issues in research</li> <li>• Methods of Data Collection</li> </ul>	Cover in Research Methodology. Delete from Health Survey and Research Method.
	Health Survey and Research Methods (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>• Ethical issues in research</li> <li>• Research Tools and Data Collection Methods</li> </ul>	Data Collection Methods have different content

Ser	Module Topic to be Deleted From/Added to	Covered as/ Duplicated in	Topic to be Added to/Covered in Module/Remarks
4.6.3.3	Research Methodology (I <sup>st</sup> Year)	<ul style="list-style-type: none"> <li>Research Design and Types of Research</li> </ul>	Cover under Epidemiology. Delete from the rest. In Research Methodology only cover How a Research is Designed?
	Applied Epidemiology (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>Study Design Descriptive Studies</li> <li>Study Design Experimental Studies</li> <li>Study Design Case Control</li> <li>Study Design Cohort</li> </ul>	
	Epidemiology (I <sup>st</sup> Year)	<ul style="list-style-type: none"> <li>Types of Epidemiological Studies</li> <li>Study Designs</li> </ul>	
4.6.3.4	Research Methodology (I <sup>st</sup> Year)	Interpretation of Data and Report Writing	Cover under Research Methodology. Delete from Health Survey and Research Methods
	Health Survey and Research Methods (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>Analyze Information for Drawing Inferences</li> <li>Report writing</li> </ul>	
4.6.3.5	Epidemiology	<ul style="list-style-type: none"> <li>Bias and confounding</li> <li>Sensitivity, Validity and Reliability (as part of Research Design)</li> </ul>	Cover these topics under Epidemiology and delete from the rest.
	Applied Epidemiology	<ul style="list-style-type: none"> <li>Bias in Epidemiology</li> <li>Validity and Reliability of Screening Tests</li> </ul>	
	Health Survey and Research Methods (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>Bias and confounding</li> <li>Sensitivity, Validity and Reliability (as part of Research Design)</li> </ul>	
4.6.4	<b>Sampling</b>		
	Biostatistics (I <sup>st</sup> Year)	<ul style="list-style-type: none"> <li>Concept, Purpose and Type of Sampling</li> <li>Sample Size Determination</li> </ul>	Material on Concept, Purpose and Type of Sampling and Sample Size Determination should be covered under Biostatistics and only
	Research Methodology (I <sup>st</sup> Year)	Sampling and Sampling Design	

Ser	Module Topic to be Deleted From/Added to	Covered as/ Duplicated in	Topic to be Added to/Covered in Module/Remarks
	Health Survey and Research Methods (II <sup>nd</sup> Year)	Sampling Method	material not related to them be covered in the other modules
4.6.5	<b>Data</b>		
4.6.5.1	Biostatistics (I <sup>st</sup> Year)	Data Sources	Cover under Biostatistics only
	Data Management and Analysis (II <sup>nd</sup> Year)	Public Health Data Sources	* Delete Census, SRS and NSS script only
	Population Program Management (II <sup>nd</sup> Year)	Use of Large Scale Data in Management*	
4.6.5.2	Biostatistics (I <sup>st</sup> Year)	<ul style="list-style-type: none"> <li>Types of Variable</li> <li>Rates, Ratio, Proportion, Percentage and Index</li> </ul>	Cover under Biostatistics.
	Health Survey and Research Methods (II <sup>nd</sup> Year)	Analysing Data&	& Cover only portion not covered in Biostatistics
	Data Management and Analysis (II <sup>nd</sup> Year)	Preparing Data for Analysis@	
4.6.5.3	Biostatistics (I <sup>st</sup> Year)	<ul style="list-style-type: none"> <li>Correlation &amp; Regression</li> <li>Simple &amp; Multiple Regression Analysis</li> <li>Testing of Hypothesis</li> <li>Test of Significance: Chi Square &amp; T Test</li> </ul>	Cover topic under Biostatistics
	Health Survey and Research Methods (II <sup>nd</sup> Year)	Analysing Data	
4.6.5.4	Health Management Information System (II <sup>nd</sup> Year)	Data Collection and Processing	Cover topic under Health Management Information System
	Data Management and Analysis (II <sup>nd</sup> Year)	Data Quality	except Validation Tests which shall be covered under Data Management and Analysis
	<b>Graphic Presentation &amp; Tabular Presentation</b>		
4.6.6	Biostatistics (I <sup>st</sup> Year)	Descriptive Statistics (Types of Graph), Tabular Presentation	Cover topic under Biostatistics
	Health Survey and Research Methods (II <sup>nd</sup> Year)	Analysing Data (Graphic presentation is a part of this topic)	

Ser	Module Topic to be Deleted From/Added to	Covered as/ Duplicated in	Topic to be Added to/Covered in Module/Remarks
	Data Management and Analysis (II <sup>nd</sup> Year)	Graphic Presentation & Tabular Presentation	
	<b>NHFS4</b>		
4.6.7	Demography (I <sup>st</sup> Year)	Content, coverage and design of NHFS4	Cover under Demography and delete but not from Population Program management since the context is different
	Health Survey and Research Methods (II <sup>nd</sup> Year)	Content, coverage and design of NHFS4	
	Population Program Management (II <sup>nd</sup> Year)	Use of Large Scale Data	
	<b>Demographic Transition</b>		
4.6.8	Demography (I <sup>st</sup> Year)	Demographic Transition – India	Cover under Demography and delete from the other Module
	Population Program Management (II <sup>nd</sup> Year)	Aging and Public Health	
	<b>Health Program</b>		
4.6.9	National Health Programs (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>• NRHM</li> <li>• NUHM</li> <li>• NVBDCP, NACO, RNTCP, NLEP</li> <li>• NPCDCS</li> <li>• NPHCE</li> <li>• RMNCHA+</li> </ul>	Cover under National Health Programs and delete from the rest.  #From Evaluation of Family Planning Program delete RCH and NPP 2000
	Health Policy and Health Care Delivery System (I <sup>st</sup> Year)	<ul style="list-style-type: none"> <li>• NRHM</li> <li>• NUHM and Urban Health</li> <li>• NVBDCP, NACO, RNTCP, NLEP</li> <li>• NPCDCS</li> </ul>	
	Population Program Management (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>• RMNCHA+ Strategy</li> <li>• NPHCE as part of Aging and Public Health</li> <li>• Evaluation of Family Planning Program #</li> </ul>	
	<b>Health in All Policies</b>		
4.6.10	Health Policy and Health Care Delivery System (I <sup>st</sup> Year)	Health in All Policies (HiAP) – Rationale and Overview	Cover under International Health
	International Health (II <sup>nd</sup> Year)	Health in All Policies	
	<b>Health Management Information System</b>		

Ser	Module Topic to be Deleted From/Added to	Covered as/ Duplicated in	Topic to be Added to/Covered in Module/Remarks
4.6.11	Health Policy and Health Care Delivery System (I <sup>st</sup> Year)	Health Management Information System and Relevant Issues	Cover under Health Management Information System and delete from the other Module
	Health Management Information System (II <sup>nd</sup> Year)	Above topic covered in various parts in Health Management Information System	
	<b>Financing for Health and Out of Pocket Expenditure</b>		
4.6.12	Essentials of Health Economics in India (I <sup>st</sup> Year)	<ul style="list-style-type: none"> <li>•Health Financing in India</li> <li>•National Health Insurance Reforms</li> </ul>	Cover under Essentials of Health Economics and delete from the other Module
	Health Policy and Health Care Delivery System (I <sup>st</sup> Year)	Financing for health and out of pocket expenditure	
	<b>Disease Concept</b>		
4.6.13	Health and Development (I <sup>st</sup> Year)	Concept of Disease	Concept of disease covered as a part of Epidemiology. No deletion since context is different
	Epidemiology (I <sup>st</sup> Year)	Types of Epidemiological Study	
	<b>Health Care Delivery Organisation</b>		
4.6.14	Health and Development (I <sup>st</sup> Year)	Organization of Health Care Delivery in India	Cover under Health Policy and Health Care Delivery System and delete from the other
	Health Policy and Health Care Delivery System (I <sup>st</sup> Year)	<ul style="list-style-type: none"> <li>• Health care delivery system in rural India – SC, PHC, CHC, District hospitals – roles and responsibilities of health functionaries</li> <li>• Organizational set up of health care in India</li> </ul>	
	National Health Program (II <sup>nd</sup> Year)	Health System in India	
	Essentials of Hospital and Hospital Services (I <sup>st</sup> Year)	Overview of Health Sector	
	<b>MDG and SDG</b>		
4.6.15	Health and Development (I <sup>st</sup> Year)	MDGs to SDGs	Cover under Health and Development and delete from International Health
	International Health (II <sup>nd</sup> Year)	MDGs to SDGs	



Ser	Module Topic to be Deleted From/Added to	Covered as/ Duplicated in	Topic to be Added to/Covered in Module/Remarks
	<b>Health Planning and Related Aspects</b>		
4.6.16	National Health Program (II <sup>nd</sup> Year)	Health Planning	Cover under National Health Program delete from the other Module except the last three bullets as covered in greater detail
	Program Planning, Implementation, Monitoring and Evaluation (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>• Concept of Planning</li> <li>• Concept of Program</li> <li>• Planning and Health Planning Cycle</li> <li>• Situational Analysis- Concepts and Approaches</li> <li>• Health Problems and Prioritisation</li> <li>• Problem Tree Analysis and Objective Tree Analysis</li> </ul>	
	<b>Monitoring and Evaluation</b>		
4.6.17	National Health Program (II <sup>nd</sup> Year)	<ul style="list-style-type: none"> <li>• Indicators, Monitoring and Evaluation</li> <li>• Program Evaluation</li> </ul>	Cover under National Health Program delete from the other Module
	Program Planning, Implementation, Monitoring and Evaluation (II <sup>nd</sup> Year)	Monitoring and Evaluation	
	<b>Disease Surveillance Program</b>		
4.6.18	Epidemiology (I <sup>st</sup> Year)	Integrated Disease Surveillance Program and Surveillance	Cover under Epidemiology and delete from the rest
	Applied Epidemiology (II <sup>nd</sup> Year)	Developing a Disease Surveillance Program	
	National Health Program (II <sup>nd</sup> Year)	Integrated Disease Surveillance Program	
	<b>CPM</b>		
4.6.19	Operations Research (II <sup>nd</sup> Year)	CPM	Cover under Operations Research and delete from the other Module
	Program Planning, Implementation, Monitoring and Evaluation (II <sup>nd</sup> Year)	CPM and Activity Network	
	<b>Ayushman Bharat</b>		

Ser	Module Topic to be Deleted From/Added to	Covered as/ Duplicated in	Topic to be Added to/Covered in Module/Remarks
4.6.20	Health Insurance and Managed Care (II <sup>nd</sup> Year)	RSBY and Ayushman Bharat National Health Protection Scheme (AB-NHPS)	Cover under Health Insurance and Managed Care and delete from the rest
	National Health Program (II <sup>nd</sup> Year)	Ayushman Bharat	
	Health Policy and Health Care Delivery System (I <sup>st</sup> Year)	Financing for UHC, National Health Protection Scheme	
	<b>Motivation</b>		
4.6.21	Organisational Behaviour (II <sup>nd</sup> Year)	Work Motivation	Cover under Leadership (new module) and delete from the rest
	Principles of Management (I <sup>st</sup> Year)	Motivation	
	<b>Topics of Module - Principles of Management (1<sup>st</sup> Year)</b>		
4.6.22	Introduction to Management		Delete.
	Evolution of Management		Delete
	Planning		Delete. Cover under Strategic Management
	Organising		Delete. Cover under Organisational Behaviour
	Controlling		
	Human Resource Management		Delete since covered in a dedicated Module
	Supply Change Management		
	Types of Leadership		Delete. Cover under Leadership (new module)
	Motivation		
	Management by Objective		Delete. Cover under Organisational Behaviour
Movie – Evolution of Management Thought		Delete	
	<b>Topics of Module - Health Information Management (1<sup>st</sup> Year)</b>		
4.6.23	Introduction		Delete
	Standards for HIE		
	Health Information Management		Cover under Health Management Information System

Ser	Module Topic to be Deleted From/Added to	Covered as/ Duplicated in	Topic to be Added to/Covered in Module/Remarks
	EHR / PHR / PHI		Cover under Health Management Information System
	M Health, Tele-home care, IoT		Cover under Emerging Trends in Health Care Sector
	Change Management and Capacity Building		Delete
	Safety and Ethics related to Digital Health		
	Regulations and User Demand		
	Career Options		
	<b>Progressive Patient Care</b>		
4.6.24	Essentials of Hospital Services	Progressive Patient Care	Delete
	<b>Hospital Imaging Services</b>		
4.6.25	Essentials of Hospital Services	Planning and Organization of Hospital Imaging Services	Reduce content to imaging devices in vogue
	<b>Conflict</b>		
4.6.26	Organisational Behaviour	Conflict and Conflict Redressal	Delete. Cover under Negotiation and Conflict Resolution (new module)
	<b>Rational Use of Drug</b>		
4.6.27	Logistics and Supply Chain Management	Rational Use of Drugs and Evidence Based Medicine	Delete. Not Relevant to the Module
	<b>Prevention and Intervention</b>		
4.6.28	Health and Development (1 <sup>st</sup> Year)	Levels of Prevention & Modes of Intervention	Cover under health and Development and delete from Essentials of Epidemiology
	Essentials of Epidemiology (1 <sup>st</sup> Year)	What is Epidemiology (includes of Levels of Prevention and Modes of Intervention as a sub part)	
	<b>Universal Health Coverage</b>		
4.6.29	Health Policy and Health Care Delivery System (1 <sup>st</sup> Year)	Universal Health Coverage (UHC) – concepts and overview	Topics are repeated within the module. Probably a typo error. Else should be covered only once
		Universal Health Coverage Concepts	

Ser	Module Topic to be Deleted From/Added to	Covered as/ Duplicated in	Topic to be Added to/Covered in Module/Remarks
	<b>Data Collection Methods</b>		
4.6.30	Research Methodology (I <sup>st</sup> Year)	Methods of Data Collection	Cover under Research Methodology. Only that portion not covered in Research Methodology should be covered in Health Survey and Research Methods
	Health Survey and Research Methods (II <sup>nd</sup> Year)	Research Tools and Data Collection Methods	
	<b><u>Topics of Module : Health Insurance and Managed Care</u></b>		
4.6.31	Health Insurance and Managed Care	Advertising/ Promotion in Healthcare and Insurance	Delete since not core to understanding Health Insurance. Also, the number of topics are too many to cover within a one week module
		Public Relations in Healthcare and Insurance	
		Sales/Marketing in Healthcare and Insurance	
		International Experiences in Healthcare and Insurance	
	<b>Criminal Trial</b>		
4.6.32	Legal Framework in Health Care	Criminal Trials in India	Delete

#### **Addition of New Topics and Reason for the Same**

4.6 **Artificial Intelligence.** Artificial Intelligence should be included as a topic as part of the modules on Evolving Trends in the Health Care Sector. Addition of this topic is made essential since Artificial Intelligence is set to revolutionise the health care sector and is already doing so. While medical applications such as robotic surgery, diagnosis etc are already happening another field of application is in virtual nursing and work flow and administrative tasks. As such therefore it can be introduced as a topic so that students are aware of its significant inroad into the health sector and how it can be exploited for effective health care.

4.7 **Manpower Audit in Hospital.** This topic should be added to Human Resource Management since like recruitment, another important function which the Hospital Manager has to undertake is to carry out a periodic review of the justification for employment of every employee of the hospital and if required shed the manpower that is not required either due to better employment of others or due to incorrect initial estimation of the requirement of recruitment. This is a skill more essential for those who get employed as managers in the private sector.

4.8 **Communication Planning and Management.** Two of the learning objectives of this module are **17** Develop a Health Communication Plan and Strategy and Develop Matrix of Targeted Behaviour, Audience, Key Messages, Media Choice, Indicators of Change. These are however, not covered and should be included for an important role of the health care manager is the ability to communicate with the population which becomes all the more important particularly during a disaster or an epidemic. These topics can be covered as under: -

**4.8.1 Planning Health Promotion Campaigns**

- 4.8.1.1 Knowledge gap hypothesis
- 4.8.1.2 Ethical implications of health campaigns
- 4.8.1.3 Defining the situation and potential benefits
- 4.8.1.4 Analyzing and segmenting the audience
- 4.8.1.5 Establishing campaign goals and objectives
- 4.8.1.6 Selecting channels of communication
- 4.8.1.7 Assignment – Team Project

**4.8.2 Designing and Implementing Health Campaigns**

- 4.8.2.1 Designing campaign messages
- 4.8.2.2 Piloting and implementing
- 4.8.2.3 Evaluating and maintaining a campaign
- 4.8.2.4 Assignment – Team Project

4.8.3 To the topic of Memo and E Mail writing add writing of Business Letters Minutes, Notices and Reports

4.9 **Laws of Contract and its Management.** An important task of the Manager is to ensure that the contract that is entered into with an employee or a supplying agency or a servicing agency and the Management of the contract can withstand legal scrutiny so that the establishment can stoutly and correctly defend itself against incorrect legal suits. As such therefore, this topic should be included as part of the modules on Legal Framework in Health Care.

4.10 Topics shall also be included on account of new modules of Leadership, Negotiations and Conflict Resolution and Emerging Trends in Health Care. These are indicated in Chapter 5.

4.11 **Syllabus of Modules with 1.5 Credit Score.** The point raised by students with reference to the syllabus of Modules with 1.5 Credit Score is owing to the content vs the duration. Modules with a 1.5 Credit Score are covered over five working days or a total of 28 hours (5 hours and 30 minutes per day). In a day four periods (two periods of 1 hour 30 minutes and another two of one hours and 15 minutes) are conducted. If one period, every day of 1 hour 15 minutes is for practical, the total time available for theory classes then are 21 hours and 45 minutes. Considering this, it is ascertained that the syllabus of all existing modules, which are of 1.5 Credit Score, can be conducted within the available time frame since the syllabus have been pruned either because of being duplicated or because of relevance or because they can be covered within the available teaching duration without the requirement of any intervention. The syllabus of Legal Framework in Health Care is however vast. Although the syllabus has

been covered within the time period of 5 days, nevertheless better comprehension would be enabled by a syllabus which is more precise by taking action as recommended below:-

**Table 4.2 :** Syllabus of Modules with Credit Score 1.5

Ser	First Year Modules	Second Year Health Stream Modules	Remarks
4.11.1	-	<p><b><u>Legal Framework in Health Care (1.5)</u></b></p> <ul style="list-style-type: none"> <li>• Legal Issues in Medical Care</li> <li>• Legal Issues in Hospitals and Management of Medico Legal Cases</li> <li>• Day to Day Problems in Dealing with Patients</li> <li>• Industrial and Food and Drug Acts Applicable to Hospitals</li> <li>• Classification of Offences</li> <li>• Consent</li> <li>• Confidentiality</li> <li>• Criminal Trials in India</li> <li>• Professional Ethics</li> <li>• Consumer Protection Act</li> <li>• RTI Act</li> <li>• Medical Termination of Pregnancy Act</li> <li>• Clinical establishment Act</li> <li>• Mental Health Care Act</li> <li>• Sexual Harassment of Women at Work Place</li> <li>• Violence Against Medical Profession</li> </ul>	<p>✓ The topics should be reviewed for greater preciseness. For e.g. ethics, negligence, duties of doctors, Consumer Protection Act etc which are repeated under different topic heads should be covered only once.</p> <p>✓ Duties of doctors, negligence of doctors can be handled over as a written or group assignment so as to reduce the content which is vast for a five working day schedule</p> <p>✓ Criminal Trials in India should be deleted and instead sections of IPC and CrPC which too should be restricted to those applicable to medico legal cases/ medical profession only</p> <p>✓ The topics of consent and confidentiality forms a part of Ethics/Legal Issues in Medical care and should be covered as sub topics there in by recuing the content rather than as a separate topic each</p>

Ser	First Year Modules	Second Year Health Stream Modules	Remarks
			✓ Mental Health Act should be covered in lesser details  ✓ Violence against doctors should be covered as part of Day to Day Problem in Dealing with patients

4.12 Owing to the deletion of modules, as indicated in Table 4.1, modules viz Principles of Management and Health Information Management are no longer required to be conducted. Furthermore, Modules of Program Planning, Implementation, Monitoring and Evaluation; Applied Epidemiology; Data Management and Analysis; Health Survey and Research Methods and Demography and Population Studies have been so curtailed, due to the deletion of topics, that the number of topics to be covered have become lesser.

4.13 The addition/deletion of modules will result in the requirement of the duration of some modules to be reduced while that of a few others are required to be increased so as to facilitate better comprehension (refer to view of interviewers and views of students). This also implies that the credit score shall accordingly increase or decrease. The modules whose duration is required to be increased or decreased are given in the table below: -

**Table 4.3 : Change in Module Duration and Credit Score**

Ser	Increase/Decrease	Increase/Decrease in Credit Score	Duration
4.13.1	National Health Programs (3)	Increase to 4.5	15 Working Days
4.13.2	Health Policy and Health Care Delivery System (3)	Increase to 4.5	15 Working Days
4.13.3	Bio Statistics (3)	Increase to 4.5	15 Working Days



Ser	Increase/Decrease	Increase/Decrease in Credit Score	Duration
4.13.4	Essentials of Epidemiology (3)	Increase to 4.5	15 Working Days
4.13.5	Health Survey and Research Methods (3)	Decrease to 1.5 due to deletion of topics	5 Working Days
4.13.6	Program Planning, Implementation, Monitoring and Evaluation (3)	Decrease to 1.5 due to deletion of topics	5 Working Days
4.13.7	Applied Epidemiology (3)	Decrease to 1.5 due to deletion of topics	5 Working Days

**Note:** If increasing the Credit Score is not as per AICTE guidelines, the Credit Score can remain the same with the module duration being enhanced

### **Sequence of Modules**

4.14 The 15 topics each to be covered in the first and second year (Health stream) should be so sequenced that topics which are common to all are covered within the first year as far as possible with the least number of common topics being covered in the second year. Also, common topics that may be required to be covered in the second year should preferably be covered in the early part of the second year so that students of Health and Hospital Management who attend placement interviews in the second year towards the middle of the training cycle are aware of the topics which shall enable them to face the interview for both Health and Hospital related employment. This shall meet the point projected by students in their view at Para 4.2 above.

4.15 Another important facet is to determine which module precedes the other. There are certain topics such as Strategic Management, Human Resource Management etc which are topics that can be covered in isolation provided the leadership related topics have been covered.

At the same time there are other topics which ought to be conducted in a proper sequence for better flow and making students erudite. For e.g. Communication, Negotiation and conflict Management should be positioned consequent to module on Leadership for both of these flow out of or as a result of a leader's role. In case of modules of Analytical Studies, Research Methodology, Health Survey and Research Methods and Program Planning, Implementation, Monitoring and Evaluation; Epidemiology and Applies Epidemiology, Biostatistics, Demography and Data Management and Analysis are closely interrelated or are offshoots. A major question begging response is with regards to the Research related modules and Epidemiology related modules. The question is whether Research should be covered before Epidemiology or vice versa. Currently Research Methodology precedes Epidemiology in the first year where as in the second year (health stream) the order is reversed with Applied Epidemiology preceding Health Survey and Research Methods. In the Indian institutes that have been compared at Table 2.2 Research precedes Epidemiology where as in the international institutes compared only one offers both Research Methodology and Epidemiology where in Epidemiology precedes Research Methodology. If observed academically and practically, Research Methodology lays out how to research a problem where as epidemiology specifies the tool with which to research a problem. Therefore, Epidemiology should be covered before Research. In as far as Applied Epidemiology and Health Survey and Research Method are concerned, following the same sequence, the latter should be conducted before the former. Preferably they should be covered towards the end of the first year or at the very beginning of the second year for these are skills that employer expect the students to be knowledgeable about and therefore the closer that they are covered to the placement dates the better shall it be for the students in terms of retention. The sequence of modules should be as proposed below: -

**Table 4.4:** Recommended Sequence of Modules

**Option 1**

	<b>First Year Modules</b>	<b>Second Year (Health Stream) Modules</b>	<b>Remarks</b>
	Student Induction (5 Working Days)	-	
4.15.1	Leadership and Innovative Thinking (3)	Global Health (1.5)	
4.15.2	Communication Planning and Management (3)	National Health Programs (4.5) ^	^Conduct for 15 Working Days
4.15.3	Negotiation and Conflict Resolution (1.5)	Program Planning, Implementation, Monitoring and Evaluation (1.5) @	@Combined class Health and Hospital Management
4.15.4	Health and Development (1.5)	Research Methodology (3) *@	*@Combined class Health, IT and Hospital Management
4.15.5	Essentials of Hospital Services (1.5)	Health Survey and Research Methods (1.5)	
	Mock Interviews (5 Working Days)	Emerging Trends/Current Happening in the Health Sector (1.5)	
	-	Mock Interviews an hour each every alternate week or as required after class for a minimum of five times)	
	45 Working Days 10.5 Credit Score	45 Working Days 13.5 Credit Score	
	<b>Term Exam</b>	<b>Term Exam</b>	
4.15.6	Health Policy and Health Care Delivery System (4.5)*	Operations Research (3)	* Conduct for 15 Working Days
4.15.7	Financial Management and Accounting (3)	Strategic Planning (3)	
4.15.8	Human Resource Management (3)	Health Insurance and Managed Care (1.5) #@	#@Combined class Health, IT

	First Year Modules	Second Year (Health Stream) Modules	Remarks
			and Hospital Management
4.15.9	Essential of Health Economics (3)	Quality Management and Patient Safety in Hospitals (3) \$	#Combined class Health and Hospital Management
4.15.10	Marketing Management (3)	Logistics and Supply Chain Management (3)	
4.15.11	-	Elective (5 Working days)	
	Mock Interviews an hour each every alternate week or as required after class for a minimum of five times)	Mock Interviews an hour each every alternate week or as required after class for a minimum of five times)	
	55 Working Days 16.5 Credit Score	50 Working Days 13.5 Credit Score	
	<b>Term Exam</b>	<b>Term Exam</b>	
4.15.12	Bio Statistics (4.5)#	Health Management Information System (3)	#Conduct for 15 Working Days
4.15.13	Demography and Population Sciences (1.5)	Population Program Management (1.5)\$	C\$%ombined class Health and Hospital Management
4.15.14	Data Management and Analysis (1.5)	Elective	
4.15.15	Essentials of Epidemiology (4.5)%	Elective	%Conduct for 15 Working Days
4.15.16	Applied Epidemiology (1.5)	Disaster Management (1.5) %&	%&Combined class Health and Hospital Management
4.15.17	Organisational Behaviour (3)	Legal Framework in Health Care (1.5)	
	55 Working Days 16.5 Credit Score	35 Working Days 7.5 Credit Score	
	<b>Term Exam</b>	<b>Term Exam</b>	
	Mock interviews in the ten days between supplementary exams and	-	

	<b>First Year Modules</b>	<b>Second Year (Health Stream) Modules</b>	<b>Remarks</b>
	commencement of summer internship		
Total	155 Working Days	130 Working Days	<b>285 Days</b>
	43.5 Credits	34.5 Credits	<b>78 Credit</b>

**Option 2**

<b>Ser</b>	<b>First Year Modules</b>	<b>Second Year Health Stream Modules</b>	<b>Remarks</b>
	Student Induction (5 Working Days)	-	
4.15.1	Leadership and Innovative Thinking (3)	Global Health (1.5)	
4.15.2	Communication Planning and Management (3)	Health Survey and Research Methods (1.5)	
4.15.3	Negotiation and Conflict Resolution (1.5)	National Health Programs (4.5) ^	^Conduct for 15 Working Days
4.15.4	Health and Development (1.5)	Program Planning, Implementation, Monitoring and Evaluation (1.5)#@	#@Combined class Health and Hospital Management
4.15.5	Essentials of Hospital Services (1.5)	Essential of Health Economics (3) @	@ Combined class Health and Hospital Management
	Mock Interviews (5 Working Days)	Emerging Trends in Health Care Sector (1.5)	
	45 Working Days 10.5 Credit Score	45 Working Days 13.5 Credit Score	
	<b>Term Exam</b>	<b>Term Exam</b>	

Ser	First Year Modules	Second Year Health Stream Modules	Remarks
4.15.6	Health Policy and Health Care Delivery System (4.5)*	Operations Research (3)	* Conduct for 15 Working Days
4.15.7	Financial Management and Accounting (3)	Strategic Planning (3) \$	\$Combined class Health and Hospital Management
4.15.8	Human Resource Management (3)	Health Insurance and Managed Care (1.5) &	&Combined class Health, IT and Hospital Management
4.15.9	Organisational Behaviour (3)	Quality Management and Patient Safety in Hospitals (3) !	! Combined class Health and Hospital Management
4.15.10	Marketing Management (3)	Logistics and Supply Chain Management (3)	
4.15.11	-	Elective (5 Working days)	
4.15.12	Mock Interviews an hour each every alternate week or as required after class for a minimum of five times)	Mock Interviews an hour each every alternate week or as required after class for a minimum of five times)	
	55 Working Days 16.5 Credit Score	50 Working Days 13.5 Credit Score	
	<b>Term Exam</b>	<b>Term Exam</b>	
4.15.13	Bio Statistics (4.5)#	Health Management Information System (3)	#Conduct for 15 Working Days
4.15.14	Demography and Population Sciences (1.5)	Population Program Management (1.5)	
4.15.15	Data Management and Analysis (1.5)	Elective	
4.15.16	Essentials of Epidemiology (4.5)%	Elective	%Conduct for 15 Working Days
4.15.17	Applied Epidemiology (1.5)	Disaster Management (1.5) *@	*@Combined class Health and Hospital Management
4.15.18	Research Methodology (3)	Legal Framework in Health Care (1.5)	

Ser	First Year Modules	Second Year Health Stream Modules	Remarks
	55 Working Days 16.5 Credit Score	34.5 Working Days 7.5 Credit Score	
	<b>Term Exam</b>	<b>Term Exam</b>	
	Mock interviews in the ten days between supplementary exams and commencement of summer internship	-	
Total	155 Working Days	130 Working Days	<b>285 Days</b>
	43.5 Credits Score	34.5 Credits	<b>78 Credit</b>

### Option 3

Ser	First Year Modules	Second Year Health Stream Modules	Remarks
	Student Induction (5 Working Days)	-	
4.15.1	Leadership and Innovative Thinking (3)	Global Health (1.5)	
4.15.2	Communication Planning and Management (3)	Negotiation and Conflict Resolution (1.5)	
4.15.3	Health and Development (1.5)	National Health Programs (4.5) ^	^Conduct for 15 Working Days
4.15.4	Essentials of Hospital Services (1.5)	Program Planning, Implementation, Monitoring and Evaluation (1.5)@#	@#Combined class Health and Hospital Management
4.15.5	-	Essential of Health Economics (3) @	Combined class Health and Hospital Management
4.15.6	-	Emerging Trends in Health Care Sector (1.5)	
	Mock Interviews (5 Working Days)	Mock Interviews (5 Working Days)	
	40 Working Days 9 Credit Score	45 Working Days 13.5 Credit Score	
	<b>Term Exam</b>	<b>Term Exam</b>	

Ser	First Year Modules	Second Year Health Stream Modules	Remarks
4.15.7	Health Policy and Health Care Delivery System (4.5)*	Operations Research (3)	* Conduct for 15 Working Days
4.15.8	Financial Management and Accounting (3)	Strategic Planning (3) \$	\$ Combined class Health and Hospital Management
4.15.9	Human Resource Management (3)	Health Insurance and Managed Care (1.5) &	& Combined class Health, IT and Hospital Management
4.15.10	Organisational Behaviour (3)	Quality Management and Patient Safety in Hospitals (3) *@	*@Combined class Health and Hospital Management
4.15.11	Marketing Management (3)	Logistics and Supply Chain Management (3)	
4.15.12	-	Elective (5 Working days)	
	Mock Interviews an hour each every alternate week or as required after class for a minimum of five times)	Mock Interviews an hour each every alternate week or as required after class for a minimum of five times)	
	55 Working Days 16.5 Credit Score	50 Working Days 13.5 Credit Score	
	<b>Term Exam</b>	<b>Term Exam</b>	
4.15.13	Bio Statistics (4.5)#	Health Management Information System (3)	#Conduct for 15 Working Days
4.15.14	Demography and Population Sciences (1.5)	Population Program Management (1.5)	
4.15.15	Data Management and Analysis (1.5)	Elective	
4.15.16	Research Methodology (3)	Elective	%Conduct for 15 Working Days
4.15.17	Health Survey and Research Method (1.5)	Disaster Management (1.5) #	#\$Combined class Health and Hospital Management
4.15.18	Essentials of Epidemiology (4.5)%	Legal Framework in Health Care (1.5)	



Ser	First Year Modules	Second Year Health Stream Modules	Remarks
4.15.19	Applied Epidemiology (1.5)	-	
	60 Working Days 18 Credit Score	35 Working Days 7.5 Credit Score	
	<b>Term Exam</b>	<b>Term Exam</b>	
	Mock interviews in the ten days between supplementary exams and commencement of summer internship		
Total	155 Working Days	130 Working Days	<b>285 Days*</b>
	43.5 Credits	34.5 Credits	<b>78 Credit</b>

4.16 Pedagogical Tools form the basis of effective learning. Classroom training is an important pre-requisite to learning but if left divorced from pedagogical tools fail to impart real education since the experience gained from assignments, group activities, case studies (particularly of failures), paper writing, field visits and filed work give real life experience that fosters better understanding than mere imparting of syllabus. Every module should therefore have a series of them (keeping in mind the module requirement) and these should be conducted to impart real life experience to the students.

## **CHAPTER 5**

### **CONCLUSION: REVIEW AND RESTRUCTURING OF THE CURRICULA OF PGDHM AT IIHMR, NEW DELHI**

5.1 The preceding chapters are a study of the curricula of PGDHM at IIHMR, New Delhi. They consider the first year syllabus and the second year syllabus (only of Health Management) with a view to validate the syllabus viability to the industry trend so that the students passing out from IIHMR, New Delhi not only meet the current requirement of the health care sector but are also geared to meet the emerging requirements and in addition have an edge over their compatriots by being trained to perform better than them.

5.2 While the current syllabus is up to the mark when compared with various institutes in India such as Tata Institute of Social Sciences and some foreign universities such as Yale, Harvard and Johns Hopkins, there never the less are certain modules/topics which merit deletion and a few which should be added. Furthermore, when the views of stakeholders viz the students and the industry which employs them is taken into consideration, there is a pressing need to ensure that the requirements projected by them are met.

5.3 With the foregoing requirement, the review was done to suggest addition/deletion of modules; to identify topics that are overlapping across the various modules; carry out addition/deletion of topics; and recommend a sequence for conduct of modules.

5.4 **Modules Recommended to be Added/ Deleted.** The PGDHM syllabus is covered over 730 days, but having provided for internships, exams, co-curricular activities and holidays, in actual only 285 working days are available to cover the 78 Credit Score syllabus. Any addition/deletion of modules or topics should not only ensure that the timeline is adhered to but also that doing so should not erode the comprehension of the module/topic. The modules that can be added/ deleted are as under: -

5.4.1 **Modules Recommended to be Added.**

5.4.1.1 **Leadership and Innovative Thinking.** This topic be included as a separate module to contain topics pertaining to leadership theory, challenges to the leader as a professional and personal challenges; operational challenges and opportunities and the leader's role in governance and health care. Leadership related topics in the various modules should be culled and then collated under this common module. Topics related to innovative thinking to train the future leaders in making decisions based on the available team ability, time constraints and resource situation should be covered. This shall also bridge the gap of Situational Leadership which placement interviewers found students to be weak in. The topics to be covered within the module are mentioned in Table 5.2

5.4.1.2 **Negotiation and Conflict Resolution.** The importance of this module is in the fact that organisational conflict is a given and the manager ought to be able to handle it in a manner as to not adversely affect organisational functioning and patient care. The students should be imparted theoretical and practical knowledge of negotiation and conflict resolution with particular emphasis on analytical skills, negotiation techniques and conflict resolution so

that they can identify the causes of conflict, analyse disputes and use methods to prevent and resolve conflict. The topics to be covered within the module are mentioned in Table 5.2

#### 5.4.1.3 **Emerging Trends/Current Happenings in the Health Sector.**

Health care is continuously evolving for the fight against disease and to maintain good health is eternal. Thus, it is essential that the students are up to date with what is happening in the health care sector. While they should inculcate the habit of staying abreast through personal readings, a structured module shall bring all the students at par. This should also meet the requirement of employers who found the students lacking in this aspect. The course content shall be dynamic for changes are ever occurring. However, some topics such as Artificial Intelligence, new technologies in hospital care etc can be included. The topics to be covered within the module are mentioned in Table 5.2

#### 5.4.1.4 **Mock Interviews.**

Most students undertaking the course have usually not faced an interview and do so for the first time when they face their first placement interview. As such students are beset with trepidation and tentativeness which invariably effects their performance and selection prospects. It is thus essential that a class be taken on How to face an Interview? Further, all the students should be made to undergo at least one mock interview in the early part of the first year. Those who have been identified as being weak should undergo more such interviews through the first year once in a week for

an hour (for a minimum of five hours between term exams and after the class duration) and also in the second year. The gap of ten days between supplementary exams and commencement of summer internship can also be used for mock interview, thus ensuring that this time is utilised.

5.4.1.5        **Student Induction.**    The Student Induction is the first activity undertaken. It should be conducted for a period of not more than five days and should be graded. Besides being an ice breaker, the induction program can help identify a student's communication and analytical ability and grade it. Those who are good can be mentors to those who are not. For this purpose, students can be divided into batches. Each batch should have a Conducting Professor and an Observing Professor with both scoring each student on a scale of ten. Depending upon the number of professors available the batch can be a minimum of 10 students. To instill seriousness amongst students they should be informed of the aim behind the exercise and that they shall be graded. Each student should have his/her roll number clearly mentioned on a piece of paper pinned to the chest to enable the professor to identify the student (since if the exercise is conducted at the very outset of the course, the professors shall not be aware of the name of the students). A batch should undergo two exercises. In the first exercise aimed at identifying the ability of the students to understand a topic, formulate their thoughts and express themselves, a student should be asked to pick out a topic from a common pool of hand written topics kept with the Conducting Professor, think for a minute and speak on the topic for two minutes. A professor, whether Conducting or Observing, can ask a question or

two if required. The topic can be something as simple as Salt or the National Flag. Timings should be strictly adhered to and a bell be used to identify the time. In the second exercise aimed to identify the ability of a student to work as and in a team and to identify his/her state of tentativeness/inhibition, a team should be offered a topic from a batch of hand written topics kept with the conducting professor. Each student should agree to the topic. If one out of ten does not agree, another topic can be picked till such time a consensus on the topic is reached. The topics on offer should not be more than five and a time of not more than 10 minutes should be given to arrive at a consensus. This will also help identify leaders and followers. Each student should be permitted to speak on the topic as part of a discussion for not more than three minutes. Those who are dominating the conversation should be asked to not speak any longer and others who have not spoken or have spoken less should be called out to speak. The Conducting and Observing Professors can then tally up the score given by them individually and independently to arrive at a common score for each student. Other activities that can be included are speaking about a changing/enabling/rememberable personal experience, making a group presentation or two, team work based problem solving and submitting a written report or two or writing a letter on a health related topic. All of these should be graded.

#### 5.4.2 **Modules Recommended to be Deleted.**

5.4.2.1 The non-graded induction courses of Essentials of Computers, Human Process Lab and Communication Lab can be done away with for they

mainly serve the purpose of breaking ice amongst the students, making them self-aware and imparting to them basic knowledge of computers which in today's world most students have. As it is Basics of Computers is also covered in the module on Health Management Information System.

5.4.2.2 Modules of Principles of Management which covers Human resource, Strategic, Marketing and Logistic Management and other management related topics should be deleted from the syllabus since these topics are covered as independent modules or should be shifted to other modules to which they are relevant.

5.4.2.3 In addition the module of Health Information Management can also be deleted by assessment of relevance and shifting of topics to other modules.

5.4.3 Once the modules have been added/deleted the PGDHM curricula shall be as under: -

**Table 5.1:** PGDHM Curricula after Addition/Deletion of Modules

Ser No	Category	First Year	Second Year (Health Stream)
5.5.1	<b>Leadership</b>		
5.5.1.1		Leadership and Innovative Thinking (3)	Strategic Management (3)
5.5.1.2		Negotiation and Conflict Resolution (1.5)	-
5.5.1.3		Communication Planning and Management (3)	-
5.5.1.4		Organizational Behavior (3)	-

Ser No	Category	First Year	Second Year (Health Stream)
5.5.2	<b>Managerial</b>	32	
5.5.2.1		Human Resource Management (3)	Logistics and Supply Chain Management (3)
5.5.2.2		Marketing Management (3)	-
5.5.3	<b>Financial</b>		
5.5.3.1		Essentials of Health Economics (3)	Health Insurance and Managed Care (1.5)
5.5.3.2		Financial Management and Accounting (3)	-
5.5.4	<b>Public Health</b>		
5.5.4.1		Health and Development (1.5)	Global Health (1.5)
5.5.4.2		Health Policy and Health Care Delivery System (4.5)	National Health Programs (4.5)
5.5.4.3		Essentials of Hospital Services (1.5)	Quality Management and Patient Safety in Hospitals (3)
5.5.4.4		-	Legal Framework in Health Care (3)
5.5.4.5		-	Health Management Information System (3)
5.5.4.6		-	Disaster Management (1.5)
5.5.4.7		-	Population Program Management (1.5)
5.5.5	<b>Analytical Studies</b>		
5.5.5.1		Essentials of Epidemiology (4.5)	Program Planning, Implementation, Monitoring and Evaluation (1.5)
5.5.5.2		Applied Epidemiology (1.5)	Research Methodology
5.5.5.3		Biostatistics (4.5)	Health Survey and Research Methods (1.5)
5.5.5.4		Demography and Population Science (1.5)	Operations Research (3)
5.5.5.5		Data Management and Analysis (3)	-
5.5.6	<b>Miscellaneous</b>		
5.5.6.1		-	Emerging Trends/Current Happenings in the Health Sector (1.5)
5.5.6.2		Mock Interviews	Mock Interviews
5.5.7	<b>Electives</b>		
5.5.7.1		-	Corporate Social Responsibility
5.5.7.2		-	Health Care Entrepreneurship



Ser No	Category	First Year	Second Year (Health Stream)
5.5.7.3		-	Business Ethics
5.5.7.4		-	Urban Health
5.5.7.5		-	Health Care Quality and Reliability
5.5.7.6		-	Innovation in Healthcare
5.5.7.7		-	Project Management for Health Care Professionals
5.5.7.8		-	Transforming Health care Delivery
5.5.7.9		-	Change Management in Dynamic Health Care Systems
5.5.7.10		-	Managing Health Care Organisations

5.6 **Overlapping Topics.** The PGDHM curricula has a number of modules which are related and therefore an overlap of topics exists. While the overlap is because they enable comprehension of the topic, the fact also is that the overlap is the consequence of related modules not being conducted in succession but with a time gap in between, which therefore necessitates that the topics are covered again. The overlapping topics are, as identified at Table 3.7.

5.7 **Addition/Deletion of Topics and Sequencing of Modules.** From Para 5.5 it follows that the topics which are overlapping should be taught only once and in the beginning itself so that the modules that follow and in which these topics overlap can refer to the topic having been already covered, do a re-cap (if required) and proceed forward. When the same topic is covered in various modules, but the subparts are different, then the different portion only should be covered in the module with the overlapping topic which is held later than the module in which the topic was first covered. As far as possible, however, even this should be avoided by re-preparing the topic such that it covers all the requirements of each of the module in which the topic

is, thus ensuring that the topic is covered holistically in the first instance itself, provided time is not a constraint. Such topics that are overlapping should then be deleted from one or more module in which it is overlapping. This besides saving on time for addition of new modules or for conduct of practical, would also invariably result in lesser number of topics being covered in the module from which the topic is deleted to the extent that a module in itself may require being deleted. Principles of Management is thus no longer needed to be conducted as a module, as already brought out at Para 5.4 above. Comprehension can also be ensured through conducting modules in a sequence such that related modules are conducted concomitantly. Also modules from which interview questions are usually likely for the students should be conducted towards the end of the first year and the beginning of the second year so as to ensure easier recall during interviews, more so when the students are during the period also undergoing second year modules/preparing to take their term tests and thus are unable to focus on the second year module or their test. The sequence of modules is given at Table 4.4. Three options are possible given the number of days available per year and the sequence that needs to be followed to ensure that related topics follow each other. Module wise topics consequent to deletion/addition of topics is given in the Table below: -

**Table 5.2:** Module Wise Topics to be Covered in First and Second Year (as per categorization and not sequence)

Ser No	Category	First Year	Second Year (Health Stream)
5.6.1	<b>Leadership</b>		
5.6.1.1			

Ser No	Category	First Year	Second Year (Health Stream)
		<u><b>Leadership and Innovative Thinking (3)</b></u> <sup>[6][22]</sup> <ul style="list-style-type: none"> <li>• Leadership Styles and Theories</li> <li>• Leadership Concepts and Skills</li> <li>• Types of Leadership</li> <li>• Role of Leadership (excluding enhancing listening skills)</li> <li>• Ethical Leadership</li> <li>• Motivation Concepts and Application including Work Motivation</li> <li>• Capacity Development for Leadership Skills (excluding enhancing listening skills)</li> <li>• Situational Leadership</li> <li>• Personal Development</li> <li>• Stress and Stress Management</li> <li>• Participative Management and Delegation</li> <li>• Team Leadership/Group development</li> <li>• Effective Decision Making and its Framework</li> <li>• Problem Solving, its Identification and Structuring</li> <li>• Investigating Ideas and Solution</li> </ul>	<u><b>Strategic Planning and Management in Health Care (3)</b></u> <ul style="list-style-type: none"> <li>• Strategic Management Introduction</li> <li>• Planning</li> <li>• Mission and Vision</li> <li>• Environment Analysis</li> <li>• External Analysis</li> <li>• Internal Analysis</li> <li>• Business Level Strategy</li> <li>• Corporate Strategy</li> <li>• Blue Ocean Strategy</li> <li>• Strategic Evaluation and Control</li> <li>• Strategy Implementation</li> <li>• Value Chain Analysis</li> </ul>
5.6.1.2		<u><b>Negotiation and Conflict Resolution (1.5)</b></u> <sup>[23][24][25]</sup> <ul style="list-style-type: none"> <li>• What is Negotiation?</li> <li>• Scope, Types, Styles, Tactics and Strategies of Negotiation</li> <li>• Distributive and Integrative Negotiation</li> <li>• Cultural Differences in Negotiation</li> <li>• Conflict and Conflict Resolution</li> </ul>	

Ser No	Category	First Year	Second Year (Health Stream)
		<ul style="list-style-type: none"> <li>• Persuasion Principles, Strategies and Influencing Others</li> <li>• Conciliation and Mediation</li> <li>• Arbitration and Dealing with a Difficult Person</li> <li>• Win Win Negotition</li> <li>• Ethics in Negotiation</li> </ul>	
5.6.1.3		<p><b><u>Organizational Behavior (3)</u></b></p> <ul style="list-style-type: none"> <li>• What is OB?</li> <li>• Organising and Controlling</li> <li>• Diversity in</li> <li>• 20 gansiations</li> <li>• Attitudes and Job Satisfaction</li> <li>• Personality and Values</li> <li>• Perception and Individual decision making</li> <li>• Foundations of Group Behaviour</li> <li>• Understanding Work Teams</li> <li>• Management by Objective</li> <li>• Foundations of Organisation Structure</li> <li>• Performance Management</li> <li>• Organizational Culture and Climate</li> <li>• Organisational Change</li> <li>• Organisational Behavior and Changing Context</li> </ul>	
5.6.1.4		<p><b><u>Communication Planning and Management (3)</u></b></p> <ul style="list-style-type: none"> <li>• What is Communication?</li> <li>• Shanon Weaver Model of communication</li> <li>• Health Belief Model (Berlo's Model)</li> <li>• Health Communication Model (Self Theory)</li> <li>• Understanding non-verbal communication</li> <li>• Public Speaking</li> </ul>	

Ser No	Category	First Year	Second Year (Health Stream)
		<ul style="list-style-type: none"> <li>• Effective Listening</li> <li>• Interpersonal communication</li> <li>• Intrapersonal communication</li> <li>• P Process</li> <li>• Behavioural Change Communication</li> <li>• Planning Health Promotion Campaigns</li> <li>• Designing and Implementing Health Campaigns</li> <li>• Types of Counselling</li> <li>• Johari Window</li> <li>• Media Advocacy</li> <li>• Memo Writing, E-Mail Writing, Business Letters Minutes, Notices and Report Writing</li> </ul>	
5.6.2	<b>Managerial</b>		
5.6.2.1		<b><u>Marketing Management (3)</u></b> <ul style="list-style-type: none"> <li>• Understanding of Marketing Management, Concepts of Marketing</li> <li>• Marketing Strategic Planning</li> <li>• Marketing Planning</li> <li>• MIS and Market Research</li> <li>• Consumer Market and Buying Decision Process</li> <li>• Business Markets</li> <li>• Competitive Strategies</li> <li>• Product</li> <li>• Price</li> <li>• Place</li> <li>• Promotion</li> </ul>	<b><u>Logistics and Supply Chain Management (3)</u></b> <ul style="list-style-type: none"> <li>• Materials Management</li> <li>• Policies and Procedures of Purchase of goods</li> <li>• Purchase</li> <li>• Materials Receipt Storage, Distribution, Handling &amp; Preservation of Stores</li> <li>• Inventory Control</li> <li>• Codification and Standardisation</li> <li>• Value Analysis</li> <li>• Hospital Equipment Management</li> <li>• Global Tender Enquiry</li> <li>• Central Drugs Standard Control Organisation</li> <li>• Foreign Purchase and Import Substitution</li> <li>• Quality Control</li> <li>• Legal and Ethical aspects of Management of Materials</li> <li>• Role of IT in Supply Chain Management</li> <li>• Transportation</li> </ul>

Ser No	Category	First Year	Second Year (Health Stream)
5.6.2.2		<b><u>Human Resource Management (3)</u></b> <ul style="list-style-type: none"> <li>• Introduction to HRM</li> <li>• Human Resource Planning (HRP)</li> <li>• HRP activity</li> <li>• Manpower Audit in Hospital</li> <li>• Job Analysis</li> <li>• Recruitment</li> <li>• Selection</li> <li>• Induction, Placement , Internal Mobility and Separations</li> <li>• Training and Development</li> <li>• Career and Succession Planning</li> <li>• Compensation Administration</li> <li>• Incentives and Employee Benefits</li> <li>• Employee Grievances and Discipline</li> <li>• Collective Bargaining</li> <li>• Employee empowerment and participation</li> <li>• Strategic HRM</li> <li>• Personnel Records and Administration</li> <li>• Work Life balance</li> <li>• New Concepts in HRM</li> </ul>	<ul style="list-style-type: none"> <li>• Ware Housing</li> </ul>
5.6.3	<b>Financial</b>		
5.6.3.1		<b><u>Essentials of Health Economics (3)</u></b> <ul style="list-style-type: none"> <li>• Health Economics: An Introduction</li> <li>• The Production of Health</li> <li>• Demand for Health Care</li> <li>• Economic Evaluation of Public Health Interventions</li> <li>• Cost of Health Services: Concepts and Estimations</li> <li>• Costs vs. revenues: Break-even Analysis</li> </ul>	<b><u>Health Insurance and Managed Care (1.5)</u></b> <ul style="list-style-type: none"> <li>• Introduction to Health Insurance</li> <li>• Social Health Insurance</li> <li>• Pricing in Hospitals and Insurance</li> <li>• Employee State Insurance Scheme in India</li> <li>• Health Insurance in India, including IRDA and Regulatory Framework</li> <li>• Community Health Insurance</li> </ul>



Ser No	Category	First Year	Second Year (Health Stream)
		<ul style="list-style-type: none"> <li>Market Failure and Government Intervention</li> </ul>	<ul style="list-style-type: none"> <li>Corporate Business and Insurance <sup>13</sup></li> <li>RSBY and Ayushman Bharat National Health Protection Scheme (AB-NHPS)</li> <li>Managed Healthcare</li> <li>Private Health Insurance in India</li> <li>TPA</li> </ul>
5.6.3.2		<b><u>Financial Management and Accounting (3)</u></b> <ul style="list-style-type: none"> <li>Overview</li> <li>Techniques of Capital Budgeting</li> <li>Marginal Cost</li> <li>Break Even and CVP Analysis</li> <li>Working Capital Management</li> <li>Standard Costing and Variance Analysis</li> </ul>	
5.6.4	<b>Public Health</b>		
5.6.4.1		<b><u>Health and Development (1.5)</u></b> <ul style="list-style-type: none"> <li>Introduction</li> <li>Concepts of Health and Well Being</li> <li>Concept of Disease</li> <li>Health Indicators</li> <li>Determinants of Health</li> <li>Development and Health</li> <li>Human Development Index</li> <li>Levels of Prevention &amp; Modes of Intervention</li> <li>Health in International Development Agenda</li> <li>MDGs to SDGs</li> </ul>	<b><u>National Health Programs (4.5)</u></b> <ul style="list-style-type: none"> <li>Health Care Systems – Four Basic Models</li> <li>Health Planning</li> <li>Control, Elimination and Eradication</li> <li>Indicators, Monitoring and Evaluation</li> <li>Program Evaluation</li> <li>The Project Life Cycle</li> <li>NHP Implementation Problems and Challenges</li> <li>20 National health Programs excluding Ayushman Bharat</li> </ul>
5.6.4.2		<b><u>Health Policy and Health Care Delivery System (4.5)</u></b> <ul style="list-style-type: none"> <li>Introduction</li> <li>Definition of health system</li> <li>Health system components and functions</li> </ul>	<b><u>Global Health (1.5)</u></b> <ul style="list-style-type: none"> <li>Introduction to Global Health</li> <li>Health in International Development Agenda</li> <li>Health Systems Framework</li> <li>UN Agencies in India</li> </ul>

Ser No	Category	First Year	Second Year (Health Stream)
		<ul style="list-style-type: none"> <li>• Building blocks of health care system</li> <li>• Current status of health human resources and infrastructure and related issues</li> <li>• Committees on Health Care in India</li> <li>• Health care delivery system in post independent India – key features</li> <li>• Health care delivery system in rural India – SC, PHC, CHC, District hospitals – roles and responsibilities of health functionaries</li> <li>• Organizational set up of health care in India</li> <li>• Different stakeholders in provision of health care.</li> <li>• Concept of universal health coverage and related issues</li> <li>• Different committees on health</li> <li>• National Health Policy- 2017</li> <li>• Nutrition Policy and National Population Policy</li> <li>• Challenges posed by urban health and special features of NHM</li> <li>• National Programs – Rationale and Overview</li> </ul>	<ul style="list-style-type: none"> <li>• Review HIAP &amp; Social Development of Health</li> </ul>
5.6.4.3		<b><u>Essentials of Hospital Services (1.5)</u></b> <ul style="list-style-type: none"> <li>• Hospitals and Hospital as a System</li> <li>• Role of Hospital Administrator</li> <li>• Planning and Organization of Out Patient Services</li> <li>• Accident and Emergency Services</li> </ul>	<b><u>Quality Management and Patient Safety in Hospitals (3)</u></b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Approach to Quality Management</li> <li>• Quality Improvement</li> <li>• Tools for Quality Improvement</li> <li>• Clinical Governance</li> <li>• NQAS</li> <li>• Never Events</li> </ul>



Ser No	Category	First Year	Second Year (Health Stream)
		<ul style="list-style-type: none"> <li>• Planning and Organizing ICU</li> <li>• Planning and Organization of Hospital Laboratory Services</li> <li>• Planning and Organization of Hospital Imaging Services (reduce to in vogue technology)</li> <li>• Planning and Organization of Medical Records Department</li> <li>• Hospital Monthly Statistical Bulletin</li> <li>• Inpatient Services</li> <li>• Nursing Care and Ward Management</li> <li>• Operation Theater</li> </ul>	<ul style="list-style-type: none"> <li>• Developing a Quality Culture</li> <li>• Patient Safety</li> <li>• NABH Standards</li> <li>• Accreditation National and International</li> </ul>
5.6.4.4			<p><b><u>Legal Framework in Health Care (1.5)</u></b></p> <ul style="list-style-type: none"> <li>• Legal Issues in Medical <sup>9</sup>are</li> <li>• Legal Issues in Hospitals and Management of Medico Legal Cases</li> <li>• Day to Day Problems in Dealing with Patients</li> <li>• Industrial and Food and Drug Acts Applicable to Hospitals</li> <li>• Classification of Offences</li> <li>• Professional Ethics</li> <li>• Consumer Protection Act</li> <li>• RTI Act</li> <li>• Medical Termination of Pregnancy Act</li> <li>• Clinical establishment Act</li> <li>• Mental Health Care Act</li> <li>• Sexual Harrasment of Women at Work Place</li> <li>• Violence Against Medical Profession</li> <li>• Laws of Contract and its Management</li> </ul>
5.6.4.5			<ul style="list-style-type: none"> <li>• <b><u>Health Management Information System (3)</u></b></li> <li>• Concepts in Information Management</li> </ul>

Ser No	Category	First Year	Second Year (Health Stream)
			<ul style="list-style-type: none"> <li>• Basics of Computer</li> <li>• Data and Database Management</li> <li>• HMIS – Organization and Structure</li> <li>• HMIS – Decision Making</li> <li>• Health Information Management</li> <li>• Information Needs and Indicators</li> <li>• Data Collection and Generation</li> <li>• Data Transmission and Flow of Information</li> <li>• Data Processing</li> <li>• Data Quality</li> <li>• Applications and Use of HMIS</li> <li>• Evaluation of MIS</li> <li>• Overview of EMR, EHR/, PHR/PHI &amp; HIS</li> </ul>
5.6.4.6			<b><u>Disaster Management (1.5)</u></b> <ul style="list-style-type: none"> <li>• Overview</li> <li>• Disaster Management in India</li> <li>• Risk and Vulnerability Analysis and Mitigation Planning during Disaster</li> <li>• Disease Management</li> <li>• Food and Nutrition</li> <li>• Water and Sanitation</li> <li>• Incident Command System</li> <li>• Mass Casualty Management</li> <li>• Disaster Management in Hospitals</li> <li>• Disease Management</li> <li>• Communications</li> <li>• Mass Casualty Management</li> </ul>
5.6.4.7			<b><u>Population Program Management (1.5)</u></b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Population Policy</li> <li>• Evaluation of Family Planning Program (Less RCH and NPP 2000)</li> <li>• RMNCH+A Dashboard</li> </ul>

Ser No	Category	First Year	Second Year (Health Stream)
			<ul style="list-style-type: none"> <li>• Use of Large Scale data in Management (Delete Census, SRS and NSS script only)</li> <li>• Gender Issues and Health</li> <li>• Sex Ratio</li> <li>• Domestic Violence and Demographic Variation</li> <li>• Women's Empowerment</li> <li>• HIV/AIDS and Demography</li> <li>• Urbanisation Measures</li> <li>• Urbanisation and Health</li> </ul>
5.6.5	Analytical Studies		
5.6.5.1		<u><b>Essentials of Epidemiology (4.5)</b></u> <ul style="list-style-type: none"> <li>• What is Epidemiology (less Levels and Modes of Prevention)</li> <li>• Types of Epidemiology Studies (including Bias and Confounding, Sensitivity, Validity and Reliability)</li> <li>• Various Study Designs</li> <li>• Introduction to Surveillance</li> <li>• Surveillance and IDSP</li> <li>• Evaluation of Surveillance</li> <li>• Clinical Epidemiology</li> <li>• Strobe</li> <li>• Outbreak Investigation</li> </ul>	<u><b>Applied Epidemiology (1.5)</b></u> <ul style="list-style-type: none"> <li>• Overview</li> <li>• Epidemiology Basics</li> <li>• Epidemiology Measurements- Case Studies and Discussion</li> <li>• Measurements: Morbidity and Mortality</li> <li>• Estimation of Risk: Associations and Cause – Effect Relationships</li> <li>• Evaluation of Screening Programs</li> <li>• Epidemiological Approach to Evaluation of Health Programs</li> <li>• Epidemic Management</li> </ul>
5.6.5.2		<u><b>Research Methodology (4.5)</b></u> <ul style="list-style-type: none"> <li>• Foundations of Research</li> <li>• Methods of Research</li> <li>• Problem Identification &amp; Formulation - Research Question including</li> <li>• Research Design (only cover How a Research is Designed?)</li> <li>• Review of Literature</li> </ul>	<u><b>Health Survey and Research Methods (1.5)</b></u> <ul style="list-style-type: none"> <li>• Introduction to Health Research</li> <li>• Developing a Research Proposal</li> <li>• Overview of Research Design</li> <li>• Research Tools and Data Collection Methods (only portion not covered in Research Methodology)</li> </ul>

Ser No	Category	First Year	Second Year (Health Stream)
		<ul style="list-style-type: none"> <li>• Sampling and Sampling Design (only portion not covered in Biostatistics)</li> <li>• Ethical issues in Research</li> <li>• Methods of Data Collection</li> <li>• Data Analysis</li> <li>• Interpretation of Data and Report Writing</li> </ul>	<ul style="list-style-type: none"> <li>• Sampling Methods (only portion not covered in Biostatistics)</li> <li>• Designing Survey Tools</li> <li>• Gender Health Research</li> <li>• Data Management</li> <li>• Analyze Information for Drawing Inferences (only portion not covered in Biostatistics)</li> </ul>
5.6.5.3		<b><u>Biostatistics (4.5)</u></b> <ul style="list-style-type: none"> <li>• Introduction to Statistics and Biostatistics</li> <li>• Data Sources</li> <li>• Types of Variable</li> <li>• Common Measurements: Rates, Ratio, Proportion, Percentage and Index</li> <li>• Presentation of data</li> <li>• Descriptive statistics</li> <li>• Concept, Purpose and Type of Sampling</li> <li>• Sample Size Determination</li> <li>• Correlation &amp; Regression</li> <li>• Simple &amp; Multiple Regression Analysis</li> <li>• Concept of Basic Probability</li> <li>• Probability Distribution</li> <li>• Confidence Interval</li> <li>• Testing of Hypothesis</li> <li>• Test of Significance: Chi Square &amp; T Test</li> </ul>	<b><u>Program Planning, Implementation, Monitoring and Evaluation (1.5)</u></b> <ul style="list-style-type: none"> <li>• Situational Analysis- Concepts and Approaches</li> <li>• Health Problems and Prioritisation</li> <li>• Problem Tree Analysis and Objective Tree Analysis</li> <li>• Stakeholder Analysis</li> <li>• Concept of Log Frame and Approach</li> <li>• Development of LF Matrix</li> <li>• Activity and Time Scheduling (Gantt Chart)</li> <li>• Budgeting</li> <li>• Budget Preparation</li> </ul>
5.6.5.4		<b><u>Demography &amp; Population Science (3)</u></b> <ul style="list-style-type: none"> <li>• Intro Population Science and Demography including sources of demographic data</li> <li>• Demographic Transition (Population structure and composition, Age sex pyramid)</li> <li>• Population Characteristics (Age dependency and implications, Quality of data and data appraisal)</li> </ul>	<b><u>Operations Research (3)</u></b> <ul style="list-style-type: none"> <li>• Introduction to Operations Research</li> <li>• Concepts and Definition of Operations Research</li> <li>• Linear Programming</li> <li>• Solution by Graphical Method</li> <li>• Special Cases and Limitations</li> <li>• Transportation Problems</li> <li>• Assignment Problems</li> <li>• Integer and Goal Programming</li> </ul>

Ser No	Category	First Year	Second Year (Health Stream)
		<ul style="list-style-type: none"> <li>• Concept of fertility (Basic measures of fertility, Divorce and remarriage)</li> <li>• Mortality Definition (Sex and age patterns of mortality, basic measures of mortality)</li> <li>• Life Table techniques</li> <li>• Migration Type, Pattern, Consequences, Migration and health</li> <li>• Ratios, rates and Proportion</li> <li>• Population Growth rates</li> </ul>	<ul style="list-style-type: none"> <li>• EOQ Models</li> <li>• Quantity Discount Models</li> <li>• ABC Analysis</li> <li>• PERT</li> <li>• CPM</li> <li>• Queueing Theory</li> <li>• Waiting Time</li> </ul>
5.6.5.5			<b><u>Data Management and Analysis (1.5)</u></b> <ul style="list-style-type: none"> <li>• Introduction to Database</li> <li>• Data Coding, Editing and Transformation</li> <li>• Validation Tests</li> <li>• Introduction to SPSS</li> <li>• Data Entry and Database Creation</li> <li>• Importing Database and Overview to Database Management Options</li> <li>• Descriptive Analysis</li> <li>• Cross Tab and Chi Square Test</li> <li>• T Test</li> <li>• Correlation Analysis</li> <li>• Simple Linear Regression Analysis</li> </ul>
5.6.6	Miscellaneous		
5.6.6.1			<b><u>Emerging/Current Trends in Health Sector (1.5)</u></b> <sup>[6][26]</sup> <ul style="list-style-type: none"> <li>• Virtual Reality</li> <li>• Augmented reality</li> <li>• SMART Technology in Hospitals</li> <li>• AI and its Role in Health Care</li> <li>• Challenges in Clinical Decision Support</li> <li>• Data Mining and Big Data Analytics in Health Care</li> <li>• Patient Personalization and Personalized Medicine</li> </ul>

Ser No	Category	First Year	Second Year (Health Stream)
			<ul style="list-style-type: none"> <li>• mHealth, Tele Health and IoT</li> <li>• Wearable Technology Transforming Health Care</li> </ul>

5.7 An additional aspect that needs to be looked into is continuity. While IIHMR, New Delhi undertakes education in the health sector, it is primarily a research institute and the professors who are basically experts in their domain, are mainly involved in research/meeting contractual obligations. This implies that a professor who usually conducts a module may not do so and the module may instead be covered by another professor or a guest lecturer. To ensure that there is no change in the content being imparted it should be ensured that every module's slides should be kept in a central repository along with the soft copy of the module booklet both of which should have been vetted and approved by an earmarked committee. This would ensure that a guest lecturer or a replacement lecturer from within IIHMR has the study content which has been already vetted and approved, readily available and can go through it before conducting the class. The happen chance can be also obviated through earmarking two professors per module to conduct the module, at the beginning of a batch itself which can be managed easily since there are several related modules whose professors can be backups to each other. A related aspect which requires ensuring is that the module book should be available to the student in the first period on the first day of the module and the content of the slides should be in synchrony to the contents of the module book, with the module book being an amplification of the slides, thus ensuring that the book enables reference during the conduct of the module and can also be used for future reference in one's career. Also, the material for additional study/ reference material and the case studies should be a part of the module itself

so that it is available along with the module content at one place besides which this shall also ensure economy through central and bulk printing.

### **Core Competency**

5.8 The changes recommended above should lead to a core competency which is a mix of both business and health related competency. At the end of having undertaken PGD in Health Management the students should graduate from IIHMR, New Delhi with the competency to perform/conduct the following: -

#### **5.8.1 Leadership Competencies.**

5.8.1.1 Through negotiation and advocacy, influence management decision making, health policy and health policy decision.

5.8.1.2 Be a good verbal and written communicator with good presentation skills

5.8.1.3 Manage operations to ensure organizational performance in a health organization.

5.8.1.4 Understand the nuances of marketing management and be able to apply them to public health programs and health service organizations

5.8.1.5 Ensure smooth organizational functioning through effective Human Resource Management while at the same time be able to ensure ones own professional growth and development.

5.8.1.6 Comprehend economic and financial reports/statements, analyse them and enable public health management decision making based on such analysis.

5.8.1.7 Ensure cost effectiveness in operations through economic analysis.

5.8.1.8 Be able to ensure logistic effectiveness in the delivery of health care.

5.8.1.9 Understand the importance of data, how to obtain, analyse and utilize it.

#### 5.8.2 **Health Care Competencies**

5.8.2.1 Comprehend Public Health, its determinants, how they influence health and how these can be improved to ensure prevention and promotion of health.

5.8.2.2 Have effective understanding of health systems, public policy, and environmental health.

5.8.2.3 Apply epidemiological methods to public health practice and situations, use data collection methods relevant to a health issue, analyse the data using biostatistics and computer based software and interpret the results for application to public health practice, research or policy.



5.8.2.4 Be able to define a research problem, identify the hypothesis, conduct the research, analyse and review the results, generate a conclusion and present it.

5.8.2.5 Be able to review and evaluate interventions, programs, outcomes, public health reports and research articles.

5.8.2.6 Have an understanding of legal aspects related to public health and ethical practices as well as how to ensure adherence to legal aspects and ethical practice of health care.

5.8.2.7 Have an understanding of disaster and be able to manage the medical requirements to alleviate the sufferings of those effected.

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# Ministry of Health and Family Welfare

2017-18



सत्यमेव जयते

Model Curriculum Handbook

MASTERS IN

<sup>1</sup>  
PUBLIC HEALTH

This course will be an attempt to prepare competent cadre of professionals who have a basic understanding of the various aspects of public health and are able to successfully apply this knowledge towards meeting public health challenges in Indian context.

## **1 MASTERS IN PUBLIC HEALTH**

### **A. CORE MODULES (COMPULSORY)**

#### **1. Principles and practices of public health:**

- Public Health- what it is; causation, prevention, social determinants of health, health systems and health policy
- Health equity
- Environments and health
- Public Health action

#### **2. Health system and policy in developing countries:**

- Basic theoretical approaches and concepts used in policy analysis
- Understanding of global and national health policies, including current trends
- Analyse the political system within which policies are made
- Contextual factors that influence to policy change
- Changing global health policy environment

#### **3. Health management: Management principles and practices:**

- Basic knowledge of health care systems and the environment in which health care managers and providers function
- Health Programmes: planning, implementation, Monitoring and Evaluation
- Components of strategic management
- Project management
- Behavioural aspects of governmental, faith based and other non – governmental organizations
- Introduction to logistics management
- Introduction to human resource management
- Quality: define quality, its importance in public health, measures to manage and improve equality
- Introduction to Operational Research
- Risk management
- Effective management of Health Management Information Systems (HMIS) and its application
- Public Health Leadership

#### **4. Basic Epidemiology including communicable and non-communicable diseases:**

- History of Epidemiology
- Measurements in Epidemiology
- Incidence and prevalence
- Causation and association
- Measures of association
- Outline of study designs (including cross sectional study design, case control study design, cohort study design and randomised control trials)
- Introduction to confounding and bias
- Screening tests- validity and reliability methods
- Disease surveillance
- Outbreak investigation
- Communicable and non-communicable diseases

#### **5. Basic Biostatistics:**

- Types of variables
- Scales of measurement
- Measures of central tendency
- Measures of dispersion
- Types of distribution
- Bayes theorem
- Sample/sampling and population distribution
- Central limit theorem
- Type I and type II error and power calculation
- P-value and 95% confidence interval
- Parametric and non-parametric test
- How to choose the statistical test
- Correlation
- Basics of regression
- One statistical software (SPSS/Stata)

#### **6. Demography and population sciences:**

- Factors affecting population
- Measures of fertility and mortality
- Standardisation methods
- Population growth and projection
- Demographic transition
- Implication of rapid population growth
- Demographic dividend or disaster
- Life table
- Urbanization

#### **7. Introduction to health economics:**

- Key concepts of economics, micro and macro economics
- Strategizing and prioritizing within scarce resources (decision making)
- Determinants of demand, supply and costs of production
- Concepts of efficiency, effectiveness, equity, elasticity of demand, costing, production, marginal cost analysis, and opportunity cost
- Market model, market failure, and the roles and limitations of markets in health care
- Universal health coverage and role of health care financing
- Principles and application of economic evaluation in health care including Cost Benefit Analysis (CBA) and Cost Effective Analysis (CEA)

#### **8. Health promotion approaches and methods:**

- Introduction to health promotion
- Foundations for health promotion
- Social determinants and health promotion
- Communication strategies for health promotion
- Overview of current national health policies, national health programs their health promotion strategies
- Community need assessment for designing an effective health promotion activity
- Evaluation of health promotion plans
- Substance abuse epidemic in parts of India
- Smokeless (chewable) and smoked tobacco addictions in parts of India
- Drunken driving: social and personal responsibilities and control measures
- Stigmatization of health conditions
- Behavioural issues in children and teens: substance abuse, suicide patterns
- TV and other media as influencers of healthy/non healthy lifestyle

#### **9. Introduction to Financial management and Budgeting**

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

#### **10. Social and behaviour change, effective communication in Healthcare:**

- Introduction on sociological perspectives on health
- Key concepts in sociology as applied to the study of health
- Social and cultural processes impacting health status and access to health services



- Introduction to behaviour change theories and communication
- Health and human behaviour
- Medical anthropology
- Implementing and managing social and behaviour change communication in public health: Information Education and Communication (IEC), Inter Personal Communication (IPC), Behaviour Change Communication (BCC), Social Behaviour Change Communication (SBCC)
- Human behaviour and communication, its role in public health problems and solutions
- Public speaking
- Verbal vs. Non-verbal communication
- Various forms of written communication
- Evidence based advocacy
- Consensus building
- Using audio visual aid in communication
- Etiquettes and professionalism

#### **11. Introduction to RMNCH+A:**

- Introduction to the RMNCH+A services – historical context, evolution, coverage and innovations
- Various components of service delivery under RMNCH+A (including GoI programs)
- Maternal, New-born and Child Health (MNCH) services in the country
- Adolescent health
- Role of gender in public health programs
- Evolution of RCH services in the country – Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs)
- Innovations in service delivery
- Framework for evaluation of services

#### **12. Introduction to Design and Evaluation of Public Health Programs**

- Concepts underlying the design of health programs
- Basic approaches to the design, analysis and interpretation of health programs
- Communicate in public health research
- Framework to evaluate the effectiveness of health programme implementation
- Case Study: how to integrate a package of care for a specific problem into a platform of healthcare delivery
- Process, outcome and impact evaluation

#### **13. Principles of Research Methods:**

- Objectives of research
- Research design

- Ethical issues in research
- Tools and Measurements in research
- Sample size and sampling
- Understanding and analysis of
  - Qualitative data and research
  - Quantitative data and research
  - Mixed methods
- Public health surveillance and research

#### **14. Environment and Occupational health:**

- Theories and history of environmental health
- Environmental health policy and legal mechanisms in a national and international context
- Ecosystems in various settings (linking the built environment, transport, housing and green space to human health)
- Environmental pollution, waste disposal and treatment
- Lifestyle and dietary effects on health, food safety and sanitation
- Occupational Health: Hazards at workplace and work safety; Prevention of occupational hazards; Laws related to occupational health; Various government and other schemes for working population in India
- Climate Change & Health
- Biomedical Waste Management
- Management of environmental hazards, natural disasters
- Central Pollution Control Board (CPCB) guidelines
- Environmental health impact assessment

#### **15. Law and ethics in public health**

- Public Health laws and ethics
- Human rights in public health
- Role of governments in managing health of people
- Public health regulations in Indian context
- Public health information and privacy
- Research ethics in public health
- Regulations during emergencies and outbreaks
- Addressing newer challenges: Bioterrorism, conflicts and emerging infectious diseases
- Public Health laws in global economy
- Global health hazards and security
- Different forms of power, influential to policy making
- Concept of governance and institutions
- Different theories useful in policy analysis
- Political nature of evidence for policy making in health
- Written and verbal competence in communicating evidence to inform policy

## **B. ELECTIVE MODULES**

### **Stream B1: EPIDEMIOLOGY**

#### **i. Advanced Biostatistics:**

- Principles of regression
- Methods of regression
- Linear regression
- Logistic regression
- Poisson regression
- Cox proportional hazards regression
- Regression diagnostics
- Introduction to multilevel modelling
- Introduction to data imputation
- Choosing the best models

#### **ii. Advanced Epidemiology:**

- Directed acyclic graphs and conceptual framework
- Confounding bias and methods to reduce confounding
- Selection bias
- Information bias
- Measures of validity and reliability
- Nested study designs
- Advanced designs in clinical trials
- Systematic reviews and meta-analysis overview
- Epidemiology and management of Vector Borne Diseases
- Health measures following disasters
- Various public data sources: CRS, SRS, Census, NFHS, DLHS, HMIS, MCTS, etc.

#### **iii. Survey design and methods:**

- Pre survey formative research
- Sampling and sample size calculations
- Ethical issues in surveys
- Tool development
- Conduct of surveys
- Quality control and assurance in surveys
- Survey data analysis
- Identify appropriate research designs for a range of questions in health
- Describe the steps involved in planning and conducting a research project
- Evaluate the strengths and weaknesses of various data collection methods

**iv. Communicable disease epidemiology:**

- Recognize the burden of communicable diseases (CD) affecting the population
- Examine factors contributing to the persistence of infectious diseases
- Understand reasons for emergence and re-emergence of infectious diseases
- Key concepts covered are:
  - Incubation periods
  - Epidemic patterns
  - Modes of transmission
  - Transmission dynamics
  - Measures of infectiousness
  - Secondary attack rates
- Analyze the transmission dynamics of diseases and design appropriate control measures
- Apply basic infectious diseases epidemiological skills to address major emerging and re-emerging communicable diseases
- Surveillance: Case in point: Integrated Disease Surveillance Program (IDSP)
- Epidemiology of common communicable diseases like TB, Malaria, Leprosy, Polio, STIs, AIDS, Meningococcal meningitis, Hepatitis B, and Measles (mathematical models of infection dynamics, outbreak investigation and surveillance, schedules, adverse reactions, contraindications, vaccine efficacy, impact assessment)
- Live outbreak investigation
- Adverse Event Following Immunization (AEFI)

**investigation v. Non-communicable diseases (NCD) epidemiology:**

- Describe and understand the epidemiology of NCDs
  - Cardiovascular diseases
  - Hypertension
  - Diabetes mellitus
  - Cancers
  - Mental health
  - Stroke
  - Burns/trauma/ accidents etc.
- Comprehend the upstream and downstream determinants of NCDs
- Understand the Individual approaches/or high-risk approaches and population based/ or public health approaches to prevent NCDs
- Recognize the risk factor approach to prevent non-communicable diseases
- Comprehend the Population based/public health approaches to prevention of common NCD risk factors (physical inactivity, tobacco and unhealthy diet)
- Familiarize with the current projects on targeting the prevention of NCDs, including, innovations in prevention

- How prevention of NCDs interlinks with Communicable diseases. How women and child health, health of the girl child links to prevention of NCDs
- Recognize Economic burden of NCDs and benefits of prevention
- Comprehend how sustainable development and prevention of NCDs go hand in hand
- Comprehend the power of policy and role of environment in the prevention of NCDs
- Population-based screening
- Surveillance of cancers including cancer registry

## **Stream B2: Health Programme, Policy and Planning**

### **i. Health policy, process and planning:**

- Policy making: key components
- Policy framework
- Stake holders in policy making
- Effects of different interest and advocacy groups in influencing health policy
- Translating research in policy making
- Effects of national and international affairs on health policy
- Introduction to different national population, disease control, tobacco control, nutrition, maternal and child health policies
- Short term versus long term policies
- Resources allocation to optimize health
- Using research and data to drive good policy making

### **ii. Design and evaluation of public health programs (including current NHPs):**

- Concepts underlying the design of health programs;
- Basic approaches to the design in health programmes, with a focus on low resource settings
- analysis and interpretation of studies/programs;
- Communication in conducting public health research
- National health programmes in India (including goals, objectives, purposes, organization, man power, sources, activities, roles and responsibilities)

### **iii. Translating research for Health Policy and Advocacy:**

- Different forms of power influential to policy making
- Concepts of Governance and Institutions
- Different theories useful in policy analysis
- Political nature of evidence for policy making in health
- Written and verbal competence in communicating evidence to inform policy
- Critical appraisal of issues in health policy and financing



**iv. Current issues in health policy: National and Global perspective:**

- Theory explaining public health action, its evolution and application in health policy
- Methods of assessing the health impact of different types of policy; national and global perspective
- Assessing health impacts of different policies across sectors
- Impact of health threats and interventions to counter health threats including crisis management

**v. Role of Non-governmental Organizations (NGOs) in health care:**

- Health service delivery and program Implementation
- Research and evidence generation
- Training and education
- Inter-sectoral coordination in health including Public Private Partnership
- Advocacy and planning in health care

**Stream B3: HEALTH SYSTEM MANAGEMENT**

**i. Strategic management, Innovations and Entrepreneurship in healthcare**

- Strategy: various definitions
- Major concepts and frameworks in strategic management: SWOT, experience curve, portfolio theory, value chain
- Strategic thinking and decision making
- Strategic planning: Environmental, scenario, implementation and evaluation
- Sustainability
- Various sources for financing a new venture: finalize your target audience
- Preparing a business speech, elevator pitch
- Innovations in public health
- Health informatics, e-Health
- Telemedicine, m-Health
- Conflicts management and negotiations in business world
- Business modelling: preparing your own business model
- Peer review of individual business model

**ii. Advanced Operations Research**

- History of operation research and seven stages of OR
- Safety, Acceptability, Feasibility and Effectiveness (SAFE) in designing Public Health Interventions
- Field interventions and field trials
- Stage 1: Formulate/define organizational problem
- Stage 2: Observe the system
- Stage 3: Create a mathematical model of the problem
- Stage 4: Model validation and application to the problem
- Stage 5: Identification of a suitable alternative

- Stage 6: Results discussion and conclusion
- Stage 7: Implementation and evaluation of the recommendation

**iii. Advanced Financial management and budgeting**

- Introduction to financial management
- Tools of financial analysis and planning in healthcare
- Cash flow, accounts and balancing budget
- Cost and dividend for health outcomes
- Effectiveness and efficiency
- Sustainability of health programs

**iv. Organizational management and services**

- Components of organization: Purpose, Coordination, Division of labour and Hierarchy
- Project management lifecycle
- Setting common goals and objectives
- Analytical thinking
- Risk identification and control
- Leadership
- Priority setting and resource allocation
- Why organizations fail? learning from case stories

**v. Effective communication in public health:**

- Public speaking
- Effective Communication: Verbal versus Non – verbal communication
- Various forms of written communication
- Evidence based advocacy
- Consensus building
- Using audio-visual aid in communication
- Etiquettes and professionalism

**Stream B4: RMNCH+A**

**i. Reproductive and Sexual Health**

- Fundamentals of reproductive biology
- Adolescent Sexual and Reproductive Health
- Understanding Reproductive Health Policy
- Family Welfare and Reproductive Health measures
- Reproductive Health programs in India

**ii. Maternal, Newborn and Child Health (MNCH):**

- Introduction to maternal, new-born and child health programs and their behavioural basis
- Historical developments in MCH in India
- Reproductive & Perinatal Epidemiology

- Prenatal and Infant Growth and Development
- Issues in the Reduction of Maternal and Neonatal Mortality
- Preventing peri-natal and infant mortality
- Infectious Disease and Child Survival
- Nutrition and Growth in Maternal and Child Health
- Legislations and programs in MCH

### **iii. Adolescent Health:**

- Overview of population health approaches for adolescents
- Adolescent Health and Development
- The Social Context of Adolescent Health and Development
- International Adolescent Health
- Adolescent Health status in India
- Adolescent Health Development - policy and systems
- Health issues specific to adolescents: anaemia, teenage pregnancy, menstrual hygiene, obesity, mental health promotion and illness prevention, substance use prevention, violence, media etc.

### **iv. Gender and Health:**

- Define concepts - Gender, vulnerable populations, gender equality and equity and emerging issues
- Understand the difference between equity and equality
- Understand different forms of social exclusion
- Explain the difference between sex and gender and how these variables, combined with other forms of social exclusion impacts on health
- To increase understanding of the importance, benefits and urgency to identify and reduce barriers and address the needs of women and socially excluded groups, and promote their agency in the context of accessing health care and related information
- To increase understanding of the inter- sectionalism between gender and other types of social exclusion/inclusion and patients' experiences in accessing and utilising health services and the impacts on uptake and utilization of services
- To increase understanding of the realities of discrimination from the grass root perspective
- To identify good practices in Gender and Social Inclusion (GSI) within India
- To become familiar with toolkits for including GSI in public health research, programs, policies and advocacy

### **v. Public Health Nutrition**

- Appreciate the basic concepts and principles of foods and nutrition relevant to human health
- Summarize population based dietary and nutritional recommendations
- Define the concept, purpose and scope of Public Health Nutrition
- Understand the definition, utility and applications of epidemiology in nutritional sciences
- Recognize the role of community nutrition in improving human health



- Utilize suitable data and assessment methodologies to conduct community needs assessment
- Recognize the pillars of a healthy community
- Identify the most relevant nutrition concerns in the community at present and enlist strategies for their prevention and management (Adolescent, Women, Maternal and child under-nutrition, nutrition transition, over-nutrition and chronic diseases)
- Demonstrate an understanding of principles of nutrition education and enlist the steps of developing nutrition education programs
- Demonstrate an understanding of project planning and management in nutrition programmes
- Appreciate inter-sectoral nature of nutrition and food policy
- Enlist the features of various ongoing nutrition programs
- Under/over nutrition

**Appendix B**  
(Refers to Para 2.16)

PGDPHM COURSE MODULES	
<b>MANAGEMNT</b> <ul style="list-style-type: none"><li>❖ Introduction to Public Health Management</li><li>❖ Human Resource Management and Organizational Behaviour</li><li>❖ Financial Management</li><li>❖ Management of MCH/RCH</li><li>❖ Project Management</li><li>❖ Logistic Planning and Drug Distribution/</li><li>❖ Inventory Management</li></ul>	<ul style="list-style-type: none"><li>❖ Health Communication and Promotion</li><li>❖ Health Management Information Systems</li><li>❖ Public Health Nutrition</li><li>❖ Communicable Diseases</li><li>❖ Non-Communicable Diseases</li><li>❖ Health Policy and Health Care Planning</li><li>❖ Environmental and Occupational Health</li></ul>
<b>PUBLIC HEATH</b> <ul style="list-style-type: none"><li>❖ NRHM, National Health Programs, Health Systems and Health Sector Reforms</li><li>❖ Urban Health</li><li>❖ Behavioural and Social Science in Health</li><li>❖ Quality, Equity and Access to Health Care</li></ul>	<b>ANALYTICAL SKILLS</b> <ul style="list-style-type: none"><li>❖ Epidemiology</li><li>❖ Demography</li><li>❖ Disease Surveillance</li><li>❖ Biostatistics</li><li>❖ Research Methods and Operations Research</li><li>❖ Essential of Health Economics</li><li>❖ Health Financing and Insurance</li></ul>

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