DELHI PHARMACEUTICAL SCIENCES & RESEARCH UNIVERSITY

(The First Pharmacy University in India)

School of Allied Health Sciences

Syllabus Book

Masters in Public Health (MPH)

SCHOOL OF ALLIED HEALTH SCIENCES

The School of Allied Health Sciences is dedicated to become a pioneer in research and education in pharmaceutical, hospital management and public health. The school was established in 2016 under Delhi Pharmaceutical Sciences and Research University, Govt of NCT of Delhi.

Mission

- Capacity building of healthcare professionals through comprehensive teaching and training programs.
- To support the personal and professional development of young minds through effective management principles and preparing professionals for the healthcare sector.
- Connecting and collaborating with health care professionals, organisations and professional bodies to improve health care management and enable to get the best of collective expertise and resources for fulfilling the quality management objectives.

Vision

- To transform the health care education to overcome the limitations of Indian health care systems.
- Improvement in the standards of health care systems through excellent teaching, training and research.

The School of Allied Health Sciences has three main programmes:

- **MBA in Pharmaceutical Management (MBA-PM):**Two-year full time Masters of Business Administration Programme with specialization in Pharmaceutical Management
- **Masters in Public Health (MPH)**: Two-year full time Master's Programme with specialization in Public health
- **Masters in Hospital Management (MHM)**: Two-year full time Master's Programme with specialization in Hospital Management

All the three programmes are equipped to meet the educational challenges of the rapidly growing health sector in the world. The dynamic curriculum designed in conjunction with academia and industry experts provides the Opportunities for the students to master new skills and explore varied perspectives in pharmaceutical and health care management. The emphasis is on practical knowledge and personalized learning. Opportunities are abounding for students and faculty at all levels to participate in basic, translational, interdisciplinary and community-oriented education and research. The Departments of Pharmaceutical Management, Hospital Management and Public health offer diverse cutting-edge programs for students with a managerial and technical foundation for careers in pharmaceutical companies, consulting, health care systems, hospital management, public health management and health insurance. The School have collaborations and partnerships with major hospitals like Indraprastha Apollo Hospital, Max Super Specialty Hospital, Delhi Heart and Lung Super Specialty Hospital and renowned pharmaceutical companies such as Cognitrex Consultants Pvt. Ltd, Alniche Life Sciences Pvt. Ltd and other non-profit organizations etc.

Faculty

Faculty members generate knowledge through cutting-edge research in all functional areas of pharmaceutical, hospital and public health

management that would benefit students and society in general. The faculty members collaborate with the heath care and pharmaceutical industry as well as other academic institutions in India and abroad.

Internship/Training

An integral part of the MBA-PM, MPH and MHM programs is the internship/training, a structured and supervised professional experience with an approved agency from which students receive academic credit. After completing first year of class room learning, students undergo a short-term internship for 4-6 weeks. And on the completion of third semester they need to undergo training for 3-4 months in pharmaceutical industry, recognized hospitals and/or other health care agencies to gain specific practical training and exposure related to core areas of pharmaceutical management, public health and hospital management. The main purpose of internship for MBA-PM is to give practical exposure to the students on business operations in pharmaceutical industry and equip them to develop requisite skills and solving management problems. Also it helps them to acquire the consultancy skills along with class room teaching to develop them as trained professionals. The goal of these internships for MPH and MHM are to impart the practical knowledge through research methods, help formulate a rigorous research problem related to public health and hospital management issues on the basis of their observation, conduct an independent study, and encourage working in a team preparing them for a professional career in public health and hospital management.

Placements

The School of Allied Health Sciences is in the emerging phase, identifying the career development prospects of students. All the students have undergone the vigorous placement processes and are successfully placed in various organizations of repute like BLK Memorial Hospital, DGHS, Mamta Foundation, Care Foundation,

UNESCO, IQVIA, WNS Global Services, Cognitrex Consultants, ZS Associates, DRG, Eli Lilly and Course 5 Intelligence and few more.

Future Perspective

- Identified deep engagements with international networks for Advanced Management, which includes eminent business schools around the world.
- Partnership and collaborations with global organizations involved in public health management.
- Management Development Programs to improve management practices in health and related systems.

Rules governing conduct and maintenance of discipline for students

- Students of School of Allied Health Sciences are required to attend every lecture, field work and journal club activities during the semester. However, to be eligible to take end-semester examination, the student shall be required to attend 75% of actually held lectures and related activities of each course.
- Students availing fellowship shall not been titled to any vacation/ leave.
- Every student shall at all times maintain absolute integrity and devotion to studies and conduct himself in a manner conducive to the best interest of the School and University and shall not commit any act which is unbecoming of him/her or is prejudicial to the interest of the School and University.
- Conform to and abide by the provisions of the rules made by the University from time to time.

- Comply and abide by all lawful orders which may be issued to him /her from time to time in the course of his/ her studies by the University or by any person or persons to whom he/ she may be reporting in his/her department.

Masters in Public Health

Master in Public Health programme prepares students to become leading public health professionals capable of addressing current global health problems with multidisciplinary, evidence-based approaches. The curriculum provides graduate professional training in quantitative and qualitative research methodologies, demography, epidemiology, community-based research and community engagementstrategies. Programme is focused on the interrelationships between a multitude of factors that can impact on a public health problem includingscientific, medical, environmental, cultural, social, behavioural, economic, political and ethical factors.

Program Structure, Course Curriculum

And

Scheme of Examination

Program Overview

Master in Public Health Programme is structured to build knowledge, develop skills and provide exposure to real-world situations in public health. The pedagogy for each course is selected judiciously, and consistently encourages the students to learn experientially, by helping them to relate concepts and theories to public health management systems.

Program Outcomes (POs): After completion of the program, the students would be able to:

PO1:Critical Thinking: Critically analyse public health issues from different perspectives as critical thinking is crucial in public health due to the increasingly complex challenges faced by this field, including disease prevention, illness management, economic forces, and changes in the health system.

PO2: Effective Communication: Understand concepts and theories in communication and apply them to develop approaches and conceptual tools in planning and management of communication processes in community out-reach programs in health services and develop skills for effective communication with people.

PO3: Social Interaction: Promote the highest level of health for people by demonstrating active, meaningful and sustained participatory approaches to enhance instruction, research, and service. Focus is on community-centred collaborations and social interactions laying emphasis on the value of mutual support, networking, and consensus building.

PO4: Effective Citizenship: Demonstrate empathetic social concern towards national development, and the ability to act with an informed awareness of healthcare issues with an aim to create an environment where they will attain the knowledge, competencies, and values of public health.

PO5: Ethics:Take decisions based on ethical and respectful promotion of public health and promote the highest standards of accountability, transparency and respectful practices in the tradition of the institutional setting to foster an environment of trust and integrity.

PO6: Environment and Sustainability: Examines health issues, understand the significance of environmental health, causes, and possible future approaches to control the major environmental health problems in industrialized and developing countriesfor the purpose of environmental health planning.

PO7: Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes and acquire knowledge that will help them throughout the life.

Program specific Outcomes (PSO's): After completion of the Program, students should be able to

PSO1: Identify population needs, assets and capacities that affect community's health. Demonstrate quality management techniques, principles of leadership, policy development, budgeting and program management in the planning, implementation and evaluation of health programs for individuals and populations.

PSO2: Determine the relationship between environmental, behavioral, social, gender and cultural factors and community health, that impact individual & population health and health disparities over the life course. Classify communication strategies to convey appropriate public health content, both in writing and through oral presentation along with use of integrated technology and software skills.

PSO3: Define epidemiologic methods to analyze patterns of disease and injury to identify and apply appropriate statistical methods to describe and analyze a public health problem by operational research in institutional and field settings. Administer public health programs and categorize health problems by applying principles of

management that include the mobilization of community partnerships like in case of disasters.

PSO4: Describe efficient and equitable allocation of resources and development of strategies to promote cost-effective healthcare and generate scientific approach to reduce cost of care through better material and money management. Illustrate and estimate knowledge of various types of health insurance policies and schemes.

PSO5: Use appropriate strategies for effective planning, implementation and evaluation of institutional and community based health and family welfare program.

PSO6: Explain the legal and regulatory environment in healthcare and implications for public health professionals within the field

Course structure and Duration

It will be an intensive full time two years course, comprising of four semesters, which will include classroom lectures, tutorials, seminars, journal club and practical exposure in various public health organizations. A researchproject willbetakenby the students aftercompletionofthe third Semester.

This booklet contains the Programme Structure, the Detailed Curriculum and the Scheme of Examination. The Programme Structure includes the courses, arranged semester wise. The importance of each course is defined in terms of credits assignedto it. The credit units assigned to each course has been further defined in terms of contact hours i.e. Lecture Hours (L), Tutorial Hours (T), Practical Hours (P).
It is hoped that it will help the students study in a planned and a structured manner and promote effective learning. Wishing you an intellectually stimulating stay at Delhi Pharmaceutical Sciences and Research University New Delhi.

Master in Public Health (MPH)

Semester-1

Semester	Paper Code:	Subject	Periods			Credit Units	Evaluation scheme		
			L	T	P		Internal*	External	Total
I	MPH 101	Principles of Management	3	1	-	4	20	80	100
	MPH 102	Healthcare Delivery System and Policies	3	1	-	4	20	80	100
	MPH 103	Health Economics	3	1	-	4	20	80	100
	MPH 104	Human Resource Management	3	1	-	4	20	80	100
	MPH 105	Research Methodology	3	1	-	4	20	80	100
	MPH 106	Demography	3	1	-	4	20	80	100
	MPH 107	Communication Skills-I	2	-	-	2	50*	-	50*
	MPH 108	Computer Application Lab	-	-	4	2	50*	-	50*
Total			**20**	**6**	**4**	**28**	**220**	**480**	**700**

***Evaluation to be conducted by internal faculty/examiner.**

Principles of Management
Paper Code- MPH 101

Contacts: 3L + 1T **Credits: 4**

Course Overview:
The course defines management principles and discusses major functions of managers working in pharmaceutical industry. Knowledge is imparted about the roles and responsibilities in order to accomplish stated objectives with efficiency.

Course Objectives: The objectives of this course are to:

- Provide knowledge and ability to apply managerial principles to corporate environment with special reference to pharmaceutical industry.
- Discuss organizational behaviour as well as the roles and responsibilities of management and leadership within healthcare organizations through the macro (organization-wide) and micro (individual and team performance) perspectives.
- Inculcate the practice of managing individuals and groups through motivation, communication, teamwork, leadership, organizational change, coalition building, negotiation, and conflict management and resolution.

Course Outcomes: After Completion of this course, students would be able to:

CO1 Describe key concepts, theories and techniques for analyzing different organizational situations.
CO2 Identify and demonstrate the dynamic nature of the environment in which planning, organizing, controlling, staffing,

decisions making skills are demonstrated and help the organization in implementation of its vision and mission.

CO3 Apply the introduced conceptual frameworks, theory and techniques to lead the organization in achieving its goals.

Course Content:

Unit 1: Introduction to Management

Management- definition, scope, function and significance; approaches to management: system and contingency; Levels of management-concepts of PODSCORB, managerial grid; Evolution of management thoughts-contribution of F.W. Taylor, Henri Fayol and contingency approach, functions of managers.

Unit 2: Planning and Decision making

Planning- definition, characteristics, objectives, nature, importance, steps, planning process, advantages and disadvantages; Forecasting: definition, techniques, advantages and disadvantages; Objectives and MBO-meaning of objective, MBO, process of MBO, benefits of MBO; strategies, policies and planning premises- nature & purpose, the strategic planning process, TOWS matrix, Portfolio matrix, porter's competitive strategies, implementation. Decision making-meaning, characteristics, process, systems approach

Unit 3: Organizing

Organizing- concepts, structure (formal & informal, line & staff and matrix), meaning, advantages and limitations; Departmentation - formal and informal organization, Organizational division-the department, the structure and process of organizing, the span of management; departmentation by time, enterprise function, geography, product, customer, matrix organization; Strategic Business Units, line and staff concepts, Delegation- authority & responsibility relationship. Staffing- overview of the staffing function, situational factors affecting staffing

Unit 4: Directing and Leading

Directing- Meaning and Process; Motivation- Theories, Systems and Contingency Approach to Motivation. Leadership- Defining Leadership, Ingredients of Leadership, Styles and Functions of Leadership, Trait Approach to Leadership, Situational or Contingency Approaches to Leadership, Communication.

Unit 5: Coordination and controlling

Co-Ordination- Feature, Types, Problems, Steps, Co-Ordination and Co-Operation; Controlling- The Basic Control Process, Initial Control Points and Standards, Control as A Feedback System, Requirement for Effective Control; Control Techniques - The Budget, Traditional Non-Budgetary Control Devices

Text & References:

1. Essentials of Management. Author Harold Koontz, McGraw-Hill series in management
2. Management. Stephen P. Robbins, Mary Coulter. — 11th ed
3. Tripathy PC And Reddy PN, " Principles of Management", Tata McGraw-Hill, 1999.
4. Decenzo David, Robbin Stephen A, "Personnel and Human Reasons Management", Prentice Hall of India, 1996
5. Goel, R. K. S. (2007). *Hospital administration and management: Theory and practice*. Deep and Deep Publications.

Introduction to Healthcare Delivery System and Policies
Paper Code - MPH 102

Contacts: 3L + 1T **Credits: 4**

Course Overview:

The course will provide the requisite knowledge and understanding of health systems and policies, disease burden, health inequalities and global health scenario.

Course Objective: The objective of this course is to:

Provide the students a basic insight into the main features of Indian health care delivery system and how it compares with the other systems of the world.

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

CO1: Identify major trends in the Indian healthcare system.
CO2: Determine the role of Indian health care delivery system and how it compares with the other systems of the world; and also the role of hospitals as a supportive & referral services to the national goal.
CO4: Describe the concept of health & factors responsible for disease causation, its prevention & estimation of disease load in the community.
CO5: Identify concerns of the Indian healthcare system like health disparities and design alternative approaches to address significant health care issues.
CO6: Analyze the impact of health care policies on services delivery provided by the industry.

Course Content:

Unit 1: Health and Development

Concept of Health and disease, health and its determinants, Public Health indicators - Mortality Rates and Morbidity (Incidence and Prevalence), Disease burden in terms DALY, Disease dynamics, Holistic approach to Health.

Unit 2: Social Determinants of Health

Female feticide, Child Labour, Substance Abuse, Suicidal patterns, Civil Unrest, Domestic Violence, Corruption and Health, Gender and Health, Effect of Urbanization on Health, Ageing population

Unit 3: Indian Healthcare System and Delivery

Evolution of Health Planning in India, Concept and Elements of Primary Health Care, Rural Healthcare Structure of India, Rural Health Statistics, Indian Public Health Standards, National Health Policy 2017 and overview of National Health Mission.

Unit 4: Global Trends

Sustainable Development Goals and Millennium Development Goals, Changing global health policy environment and Factors influencing public policies, Role of International Agencies viz. WHO, UNFPA, UNICEF services in health sector

Text and References:

1. K Park, Preventive and Social Medicine, BansaridasBhanot Publishing House.

2. Brijesh C Purohit. Health Care System in India**:** Towards Measuring Efficiency in Delivery of Services.
3. Maxcy-Rosenau-Last, Public Health & Preventive Medicine, 14th Edition Ed Robert Wallace.

Health Economics
Paper Code - MPH 103

Contacts: 3L + 1T **Credits: 4**

Course Overview:

The course equips students with basic economic concepts and principles for better resource management in the hospitals. The rationale behind economics is to demonstrate the application of the application of the economic principles and methodologies to key management decisions within organization.

Course Objectives: The objectives of this course are to

- To describe basic concepts of health economics
- To develop an understanding of healthcare market and the relationship between economics health development
- To analyse the cost and cost behaviour in hospital environment

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

CO1: Asses how uncertainty and asymmetric information affect demand for healthcare.
CO2: Assess the value of health and its implications for decisions allocating scarce resources.
CO3: Describe basic economic concepts, such as supply, demand, free & chained markets and price elasticity.
CO4: Demonstrate management of organizational costs within the economic environment of various health care industries.
CO5: Apply economic tools to assess implications of various healthcare financing and delivery models.
CO6: Acquaintance to the concepts of health insurance.
Course Content:

Unit 1: Key concepts of Economics

Definitions of Wealth, HealthEconomics, Scarcity and Growth; Scope of Economics - Theoretical, applied and Descriptive; Micro and Macroeconomics; Perspectives of Health**:** as a right, as consumption good and as an investment; Economic Agents, Free market mechanism and chained market Mechanism; Law of diminishing Marginal Utility.

Unit 2: Basic concepts of Supply and Demand

Law of Demand and Supply, Demand Curve, Supply Curve, Shifts in demand and supply curve; Price Elasticity of demand; Distinction between Need, Want and Demand; Factors determining Demand for healthcare – Price factors, Patient factors and Physician factors (Supplier Induced Demand)

Unit 3: Healthcare Market

Market Failure: Imperfect Competition, Risk and Uncertainties, Unequal Information, concern of equity, Externalities; Concepts of efficiency, effectiveness, Market of unqualified medical care providers; Grover C. Wirick factorsof demand for Healthcare.

Unit 4: Concepts of Costs and Healthcare Expenditure

Classification of Costs on the basis of Traceability, cost behaviour, controllability and selection among alternatives; Calculations and curves of Total Costs, Fixed costs, Variable costs, Average Costs and Marginal cost; Types of economic evaluation in health care;
Public Health Expenditure on Health; National Health Accounts – Financing Sources, Financing agents, Providers and functions

Unit 5:Health Insurance

Insurance and demand for healthcare, Adverse Selection, Moral Hazard; Health Insurance in other countries; Private Health Insurance – Mediclaim, Third Party Administration (TPA)

Management; Social Health Insurance – ESI, CGHS, RSBY, Ayushman Bharat; Microfinance

Text and References:

1. Ceri J Phillips. Health Economics- An introduction for health professionals, Blackwell publishing.
2. Clewer Ann and D Perkins. Economics for healthcare management, Prentice Hall.
3. Folland S, A.C. Goodman, and M. Stano, The economics of health & Healthcare, Prentice Hall
4. Usha Mehta, A.D. Narde. Health Insurance in India and Abroad, Allied Publishers.
5. Thomas K. T., Sakthivel R.Health Insurance In India:Overcoming Challenges and Looking Ahead, Lambert Academic Publishing, 2012.
6. Brijesh C. Purohit, Economics of Public Health and Private Healthcare and Health Insurance in India, Sage Publications.

Human Resource Management
Paper Code - MPH 104

Contacts: 3L + 1T **Credits: 4**

Course Overview:

The course aims at developing the skills of managing people in the health organizations and systems. It also Introduces concepts of human resource management in the context of organization, organizational characteristics, learning organization, human resource planning, recruitment and selection, job analysis and evaluation, performance appraisal, career planning, motivation, leadership, team work, and managing employees relations.

Course Objectives: The objectives of this course are to:

- Provide an understanding of the dimensions of the management of human resources, with particular reference to HRM policies and practices in India.
- Explain the development, implementation, and evaluation of employee recruitment, selection, and retention plans and processes.

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

- **CO1:** Describe the organizational context in which human resource management activities take place.
- **CO2**: Describe human resource planning as a systematic approach to the acquisition, use and deployment of people in the organization

- **CO3:** Conduct job analysis and job responsibilities; outline the nature of the contract between the employer and an employee.
- **CO4**: Identify key issues in performance appraisal, training and development of the employees
- **CO5**: Describe the main features of the collective relationships between employers and employees and describe organizational characteristics and learning organization

Course Content:

Unit 1: Overview of HRM

Introduction of HRM, Overview of HRM, Scope of HR, Nature of HR, Need for HR Planning, Organization culture- Induction and Socialisation, Roles and Responsibilities of HR Manager, Challenges Issues in HRM, HR Information Systems- EHRM, International trends in HR Management

Unit 2: Human Resource Planning, Training and Development, compensation

Recruitment and Selection, placement, and planning staffing. Job Analysis & Design- job description- job specification- job enlargement- job enrichment

Appraising & Managing Performance-different methods-Traditional and modern- and other methods-potential appraisal - succession planning, Promotion procedure and policies, Employee Training & Development, Career Planning & Development.

Unit 3: Wages and compensation and employee grievances

Wages and compensation -Employee Remuneration, Administrative job evaluation, Designing and administering the wage and salary structure- Non financial rewards, Employee grievance Handling-Counselling and mentoring, Downsizing separation processes,

Turnover retirement, Layoff discharge, VRS, Evaluation of HR effectiveness-HR audit

Unit 4: Industrial Relations

History- purpose-scope-objectives, Relationship of Industrial Relations with Employee Relations, Theories of Industrial Relations, Industrial Relations in Globalised Economy. The Role of Government in Industrial Relations. National Commission on Industrial Relations Recommendations. HRM & IR

Unit 5: Trade unions

History of Trade Unions -Structure-Organizations –Problems, Trade Unions -Theories, functions, methods. Trade Unions ACT 1926, Management of Trade Unions in India, Trade Unions in a liberalized era, Collective bargaining, workers' participation movement, managing employee Safety and Health, ILO and India

Text and References:

1. Human Resource Management, Ashwatthapa. 8th edition.
2. Human Resource Management – Gary Dessler
3. Fundamentals of Human Resource Management, 9th Edition
4. David A. DeCenzo (Coastal Carolina University), Stephen P. Robbins
5. Human Resource Management Text and Cases (Paperback)- VSP RAO
6. Hospital Administration And Human Resource Management R.C. Goyal
7. Designing and Managing Human Resource Systems- UdaiPareek& T. V. Rao (Oxford& IBH Pub. Co. Ltd., New Delhi)

Research Methodology
Paper Code- MPH 105

Contacts: 3L + 1T **Credits:4**

Course overview:

The course introduces the concepts of research, ethical principles and challenges and the elements of the research process within quantitative, qualitative, and mixed methods approaches. The rigorous curriculum prepares students to become leading public health professionals capable of addressing current global health problems with multidisciplinary, evidence-based approaches. Students will use these theoretical learnings to review literature relevant to their field or interests.

Course Objectives: The objectives of this course are to:

- Develop understanding on various kinds of research, objectives of doing research, research process, research designs and sampling.
- Impart knowledge for enabling students to develop data analytics skills and meaningful interpretation to the data sets so as to solve the organizational problems.
- Describe the participants in conducting research work and formulating research synopsis and report.

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

CO1: Analyze research and evaluation studies from the literature in terms of the appropriateness of their research questions, designs, methodologies, results and conclusions

CO2: Develop comprehensive evaluation plans for an intervention or program.

CO3: Define a research problem or an evaluation issue and design and carry out a study to address that problem/issue using appropriate research and analytic methods and analytical issues.
CO4: Illustrate data analysis and statistical issues in design of experiments, as well as the techniques and terminology commonly used to elicit and communicate evidence concerning scientific hypotheses.
CO5: Learn to interpret strength of statistical arguments made by researchers, and how to weigh statistical and clinical evidence in assessing a scientific hypothesis.

Course Content:

Unit 1: Basics of Research

Definitions & uses of research in healthcare, Steps Involved in Research Process, Variables in research, Formulation of research problems, writing research questions, Development of conceptual framework.

Unit 2: Sampling & Research Designs

Sampling, Sampling Procedure, types of Sampling Techniques, reliability & validity in research, Research Designs- Non-experimental & experimental research designs.

Unit 3: Review of Literature & Hypothesis

Sources of literature review, Writing literature review, Hypothesis-Meaning and types of hypothesis, Type I & Type II errors in hypothesis testing.

Unit 4: Data Collection

Different methods of data collection- Observation method, interview method, Questionnaire and schedule, Data Management: editing, entry and preparing data sets for analysis; Design and development of questionnaire.

Unit 5: Project proposal and research report writing

Need assessment, Rationale for project, Proposal workplan; Structure and Components of Research Report, Types of Reports, Layout of Research Report, Method of writing a research report.

Unit 6: Research Ethics & Reference Writing

Ethics in health research, confidentiality and privacy, informed consent, vulnerable subjects and special treatments; reference writing using endnote

Text and References:

1. Gummersson, E. Qualitative methods in Management Research, Sage publications
2. Grundy F and Reinke W A, Health Practice Research and formalize Managerial Methods, Geneva, WHO
3. Designing and conducting Health surveys, Jossey Bass Publishers.
4. Varkevisser, C. M., Pathmanathan, I., & Brownlee, A. T. (2003). Designing and conducting health systems research projects (Vol. 1). IDRC.
5. John Creswell (2013). Research Design: Qualitative, Quantitative, and mixed methods approaches. Fourth edition, Sage Publications
6. Kothari, C.R., 1990. Research Methodology: Methods and Techniques. New Age International. 418p
7. Ulin P, Robinson E, Tolley E. (2005), Qualitative Methods in

Public Health : A field guide for Applied Research, Jossey Bass Pub
8. Russell Bernard H., Gery W. Ryan (2010), Analyzing Qualitative Data: Systematic Approaches, SAGE Publications.
9. Coley, Soraya M. and Scheinberg, Cynthia A. (2008) Proposal Writing. Effective Grantsmanship. Thousand Oaks, CA: Sage.

Demography
Paper Code - MPH 106

Contacts: 3L + 1T **Credits: 4**

Course Overview:

This course intends to teach global population trends and patterns, population and health, enhance the technical skill and knowledge regarding use of demographic data for policy analysis, program strategies and priorities. It would cover measures and indicators of nuptiality, fertility, mortality and migration and migrant health issues and provide skills in making population estimation and projection.

Course Objectives:The objectives of this course are to:

- Discuss basic techniques and concepts in population sciences.
- Explain students the fundamentals of population studies and its links with health.
- Apply practical knowledge and skills of demographic and health data sources.

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

- **CO1:** Describe the impact and consequence of population growth on society.
- **CO2**: Estimate the knowledge of population policy, population measures, population dynamics.
- **CO3**: Discuss population composition and characteristics; and basic concepts in population dynamics.
- **CO4**: Analyze the causes of population growth and government's efforts to check it.
- **CO5**: Interpret the causes of urbanization and its related problems.

Course Content:

Unit1: Population Fundamentals

Science of demography, Demographic cycle, Population trends and demographic indicators, Factors affecting population, Demography and Family Planning and its role in population policy of India.

Unit 2: Demographic Studies

- Fundamentals of population studies and its links with health.
- Methods of demographic data collection, sources of data, population census, population composition, world population growth, growth of Indian population, morbidity, mortality, ageing, migration/ urbanization, population projections life tables.
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Unit3: Family Planning

Fertility and fertility factors, Family planning, Population policies & programmes and National Population Policy, Family planning 2020 India commitment

Text and References:

1. Asha Bhende and Tara Kanitkar. Principles of population Studies, Himalaya Pub Houses,
2. John Weeks, Population, Wordsworth pub, 1994.
3. S.N.Singh, M.K.Premi, P.S.Bhatia. Population Transition In India, B. R. Publishing Corporation.
4. P.B. Desai. Population in the context of India's development, UGC – UNFPA project.
5. Peter Cox. Demography, Cambridge University Press
6. K.B. Pathak, F. Ram. Techniques of Demographic Analysis, Himalaya Publishing Houses.
7. Health Monitor, Foundation for Research in Health S.

8. International Institute for Population Sciences. National Family Health Survey – 1, 2 and 3, Mumbai.
9. K. Srinivasan. Basic graphic Techniques and Applications, Sage Publications, 1998

Communication Skills – I
Paper Code - MPH 107

Contacts: 2L **Credits: 2**

Course Overview:

This course is designed to facilitate the students to communicate effectively by emphasizing on practical communication through refurbishing their existing language skills and also to bring one and all to a common take-off level

Course Objective: The objectives of this course is to:

- Enable students to be an integral part of corporate communication network

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

CO1: Understand the role of communication in personal and professional success..
CO2: Develop awareness of appropriate communication strategies.
CO3: Prepare and present messages with a specific intent
CO4: Ethically use, document and integrate sources.

Course Content:

Unit 1:

Communication Skills-Meaning and Introduction- Process of Communication-Types of Communication-Verbal- Non-verbal - Advantages ,Disadvantages Body Language-Channels of Communication- Formal and Informal -Directions of

Communication within organisation –Barriers to communication-Listening Skills.

Unit 2:

Presentation Skills and confidence building, Aids to Correct business Writing, Email writing, Resume writing, Telephone etiquettes, Group Discussion,, Mind mapping, Networking skills, Facing Interviews-Mock interviews-FAQ, Stress management

Text and References:

1. Sharan J.Gerson and Steven M.Gerson – "Technical Writing – Process and Product" – Pearson Education – 2000.
2. Raymond V.Lesikar, John D. Pettit and Mary E.Flatley – Lesikass Basic Communication Tata McGraw Will 8th Edition – 1999.
3. Stevel. E. Pauley, Daniel G.Riordan – Technical Report Writing Today – AITBS Publishing & Distributors, India 5th edition – 2000.
4. Robert L.Shurter, Effective letters in business Third Ed. 1983.
5. Communication Skills by Vasantha Patri
6. McGraith – Basic Managerial Skills for all Prentice Hall of India – 6th Edition 2002.
7. Halliday, M.A. K R .Hasan, Cohesion in English, Longman, London 1976.

Computer Application Lab
Paper Code - MPH 108

Contacts: 4P **Credits: 2**

Course overview:

The course will expose the students to the developments in computer technology and will help the students understand the application of information technology in the healthcare system.

Course objectives: The objectives of this course are to:

- To develop the end-user IT skills
- Learn various computer applications, databases and statistical tools applicable in public healthcare system.

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

CO1: Understand the concept of Computer's Input/output devices, the concept of databases, data types, MS Word, MS Excel, MS Power Point, array, pointers, string, structures and files.
CO2: Design program logic on real-world problems.
CO3: Apply programming concepts to compile programs to find solutions.
CO4: Apply of IT tools in various functions of healthcare organizations.

Course Content:

Unit 1:

Introduction to Windows: Application in Windows – word processing (MS Word) – Spreadsheet (MS Excel) – Presentation (MS Power Point) – Relational databases (MS Access).

Unit 2:

Introduction to Databases: Application of Databases – Parts of Databases – Types of Databases – Role of Social Media in todays' scenarios-presenting of data-Social Media and Data-Big Data Introduction.

Unit 3:

Awareness on the application of IT in Various functions of Hospital; Working knowledge of commonly used hospital software, Application of statistical tools through SPSS in the areas of Health services.

Semester-2

Semester	Paper Code	Subject	Periods			Credit Units	Evaluation scheme		
			L	T	P		Internal*	External	Total
2	MPH 201	Biostatistics	3	1	-	4	20	80	100
	MPH 202	Epidemiology	3	1	-	4	20	80	100
	MPH 203	Organizational Behaviour	3	1	-	4	20	80	100
	MPH 204	Health Promotion Approaches	3	1	-	4	20	80	100
	MPH 205	Public Health Management	3	1	-	4	20	80	100
	MPH 206	National Health Programmes	3	1	-	4	20	80	100
	MPH 207	Communicable and Non Communicable Diseases	3	1	-	4	20	80	100
	MPH 208	Communication Skills- II	2	-	-	2	50	-	50*
	YGS 104	Yogic Science	2	-	-	2	10	40	50
	YGS 104 P	Yogic Science Practical		-	4	2	10	40	50
Total			**25**	**7**	**4**	**34**	**210**	**640**	**850**

***Evaluation to be conducted by internal faculty/examiner.**
****At the end of 2nd semester mandatory Summer Internship of 4-6 weeks.Internship report will be presented and evaluated during 3rd semester.**

Biostatistics
Paper Code - MPH 201

Contacts: 3L + 1T **Credits: 4**

Course Overview:

This course intends to teach bio-statistical methods and concepts used in the health sciences, emphasizing interpretation and concepts. It also develops the ability to read the scientific literature to critically evaluate study designs and methods of data analysis. The course also introduces basic concepts of statistical inference, including hypothesis testing, p-values, and confidence intervals.

Course Objectives: The objectives of this course are to:

- Develop the understanding of various statistical tools used for decisions making and explain how each tool can be used in the healthcare environment.
- Explain the students different types of data arising in health research; interpret differences in data distributions via visual displays; calculate standard normal scores and resulting probabilities.
- Describe the use of statistical software package SPSS for different hypothesis testing procedures covered in the course.

Course Outcomes: After completing the course, the students would be able to:

CO1 Learn different statistical techniques used in pharmaceutical industry.

CO2 Learn to make practical use of statistical computer packages.

CO3 Develop a comprehensive evaluation plan for projects with the help of statistical tools & techniques.

CO4 Gain knowledge of basic statistical tools with emphasis on their application in industry environment.

CO5 Learn to write research proposals/reports/projects.

CO6 Understand the concepts of statistical inference

Course Content:

Unit 1: Introduction to biostatistics

Classification of data, Source of data, Variables, Scales of measurement- nominal, ordinal,ratio and interval scale, building composite scales, measuring reliability and validity ofScales.

Unit 2: Measures of central tendency & dispersion

- Measures of central tendency- Mean, Median, Mode

- Measures of dispersion – Range, Mean deviation & Standard deviation.

Unit 3: Sampling and Probability distributions

- Population, Sample, Sampling frame, Sampling process, Types of sampling, sample sizeCalculation.

- Concepts of Probability distributions– Binomial, Poisson & Normal ProbabilityDistribution.

Unit 4: Hypothesis testing

- Null hypothesis, alternative hypothesis, level of significance, how to choose the statisticaltest

- Non parametric tests: Chi square test, Mann-Whitney U test

- Parametric tests: Student's T-test (One sample t test, Independent sample t test, Paired t-test, ANOVA

Unit 5: Correlation and regression analysis:

- Definition, types of correlation, degrees of correlation, Karl Pearson's coefficient ofcorrelation, Spearman Rank correlation

- Regression Analysis: Linear regression, multiple regressions

Unit 6: Statistical methods and application:

SPSS processing, Statistical procedures-descriptive, univariate, bivariate and multivariatestatistics; parametric and non-parametric tests; correlation and regression.

Text & References:

1. B.K. Mahajan. Methods in Biostatistics, Jaypee Brothers

2. P.S.S. Sundar Rao. An Introduction to Biostatistics: A manual for students in HealthSciences, J.Richard Prentice Hall, 1996.

3. Daniel, Wayne.W. Bio-Statistics: A foundation for Analysis in the Health Sciences, JohnWiley and Sons Pub, 1991.

4. K. Vishwas Rao. Bio-Statistics: A Manual of statistical methods for use in the Health,Nutrition and Anthropology, Jaypee Brothers Medical Pub, 1996.

5. Verma B.L., Shukla G.D. Bio-Statistics perspective in Health care research and practice,C.B.S. Pub, 1993.

6. Krishnaiah, P.K. Rao, C.R. (ed), Handbook of Statistics, Elsevier Science Pub, 1988.

7. Beri - Business Statistics (Tata Mc Graw Hill 2nd Edition).

8. Chandan J S - Statistics for Business and Economics (Vikas 1998.Ist Edition).

9. Render and Stair Jr - Quantitative Analysis for Management (Prentice-Hall, 7th edition)

10. Sharma J K - Business Statistics (Pearson Education 2nd Edition).

11. Gupta C B, Gupta V - An Introduction to Statistical Methods (Vikas1995, 23rd Edition).

12. Levin Rubin - Statistics for Management (Pearson 2000, New Delhi, 7th Edition).

Epidemiology
Paper Code: MPH 202

Contacts: 3L + 1T **Credits: 4**

Course Overview:

The course introduces risk measurement, age adjustment and survival analysis and use of morbidity and mortality indicators. It helps students understand the epidemiological study designs, bias, confounding and disease surveillance. The courses also equip the students with knowledge and skills regarding general principles of public health research.

Course Objectives: The objectives of this course are to:

- Discuss models and inference underlying observational studies.
- Determine the applications of epidemiology in public health decision making.
- Evaluate the scientific merit and feasibility of epidemiological study designs.
- Describe and recognize potential causes of confounding in epidemiologic studies.

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

CO1: Determine basic epidemiology principles, concepts and procedures useful in the surveillance and investigation of health-related states or events.
CO2: Describe key features and applications of descriptive and analytic epidemiology.
CO3: Estimate and interpret ratios, proportions, incidence rates, mortality rates, prevalence, and years of potential life lost.

CO4: Discuss the processes, uses, and evaluation of public health surveillance.
CO5: Describe the steps of an outbreak investigation.

Course Content:

Unit 1: Basic concepts of epidemiology

Epidemiology: Basic concepts, methods, principles and use of epidemiology. Epidemiological tools for assessment of risks. Investigation of an epidemic and role of hospital in its control.

Unit 2: Descriptive epidemiology

Natural History: History of a disease and its application in planning intervention. Modes of transmission and measures for prevention and control of communicable and non-communicable disease. Diseases: Definition, calculation and interpretation of the measures of frequency of diseases and mortality.

Unit 3: Epidemiological measurement methods

Principal sources of epidemiological data, epidemiological research, summary measures (ratios, proportion and rates), incidence and prevalence, sociometric choice patterns in hospital ward groups. Uses and abuse of Screening Tests: Accuracy and clinical value of diagnostic and screening tests (sensitivity, specificity & predictive values).

Unit- 4: Epidemiological study designs and analysis

Various types of epidemiological study designs. Review of literature for a certain public health problem along with critical comments and formulation of solutions, Epi-info software for epidemiological analysis.

Text and References:

1. Beaglehole. R. Bonita, et. al Basic Epidemiology: WHO Publication, Geneva, 1993.
2. David E., et. al. Foundations of Epidemiology : Oxford University Press, New York, 1984.
3. Epidemiology in health care planning: E.A. Knox (ed), Oxford University Press, New York, 1979.
4. Silman and McFarland: Epidemiological Studies, Practical Guide 2nd Edition
5. Aschengrau and Seage: Essentials of Epidemiology in Public Health
6. Friis Robert: Epidemiology for Public Health Practice, Third Edition
7. Timmreck Thomas C: An Introduction to Epidemiology, Third Edition 2002
8. Text Book of Preventive and Social Medicines - K. Park, M/s BanarasidasBhanot.
9. Preventive and Social Medicine – Prabhakar Rao.
10. Text book of Social & Preventive Medicine – Mahajan.

Organisational Behaviour
Paper Code - MPH 203

Contacts: 3L + 1T **Credits: 4**

Course Overview:

Students study the behaviour of individuals and groups as part of the social and technical system in the pharmaceutical ecosystem. They examine individual and group behaviour, communication, conflict and various management styles, motivational techniques and coordination in the work environment and apply these concepts to the development of an organization's human resources.

Course Objectives: The objectives of this course are to:

- Discuss organizational behaviour as well as the roles and responsibilities of management within healthcare organizations through the macro (organization-wide) and micro (individual and team performance) perspectives.
- Analyze and compare different models used to explain individual behaviour related to motivation and rewards, conflict and stress management.
- Understand the concepts like group dynamics, team building, negotiation, leadership styles and the role of leaders in a decision making process.
- Understand organizational strategy and culture, its dimensions, various organizational designs and concept of organizational change.

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

- CO1: Demonstrate the applicability of the concept of organizational behaviour to understand the behaviour of people in the healthcare organizations.
- CO2: Analyze the complexities associated with management of the group behaviour in the healthcare organizations.
- CO3: Demonstrate how the organizational behaviour can integrate in understanding the motivation behind behaviour of people in the organization.
- CO4: Explain and apply organizational theories to healthcare organizations and evaluate external environment influencing healthcare organizations.
- CO5: Understand the practice of managing individuals and groups through motivation, communication, teamwork, leadership, organizational change, coalition building, negotiation, and conflict management and resolution.

Course Content:

Unit 1: Introduction to Organizational Behaviour

Nature Scopeand Purpose – Definition of Organizational Behavior, Need, Importance and Emergence of Organizational Behavior — Frame Work – Organizational Behavior Models

The Individual - Foundations of Behaviour, Ability, Personality, Learning. Group and Interpersonal Behaviour, Decision Making, Values, Attitudes, Perception, Applications of Attributes. Individual Values and Ethics-Self-Concept, Self-Esteem and Self-Efficacy-Locus of Control-Abilities and Performance

The Group – Foundations of Group Behaviour, Defining and Classification of Groups, Group Decision Making, Understanding Teams – Types of Teams, Teams and Groups Concepts, Group

Dynamics, Emergence of Informal Leaders and Working Norms – Interpersonal Relations – Communication – Control, Team Building

Unit 2: Leadership and Motivation

Meaning – importance – leadership approaches – theories – trait theories, Behavior theories, leaders Vs managers, contemporary issues in leadership.,Power and politics - power centers – Organizational politics-tactics. Motivation – concepts, significance, theories: natural, incentive, behaviourist, socio cultural theory, content and cognitive (process) theories., thematic apperception test, attribution theory, approach avoidance, employee motivation- job characteristics model

Unit 3: Organisation Dynamics: Culture and Design

Definition of Organisational Culture, Characteristics of Culture, Strong and Weak types of Culture, Changing Organisational Culture, Differences in Culture and Climate, Assessing Organizational Citizenship Behaviour. Organisational Design - Definition of Organisation, Importance of Organising Process, Organisation Design Process, Internal Contingency Factors: Technology, External Contingency Factor: Environment and Information processing.

Unit 4: Organisational Strategy and Technology

Introduction, Definition of Strategy, Components of Organisational Strategy, Vision and Mission, Strategy Management Process, Organisational Strategy Implementation, Organisational Issues, Innovation Process, Project Groups, Technology Opportunity, Technological Concepts, Introduction of New Technologies in Organisations.

Unit 5: Conflicts, Negotiations & Stress Management

Definition, Transitions in conflict thought, functional Vs dysfunctional conflict, the conflict process. Consequence of Conflict-Stress, Emergence of Stress, Causes-Copying mechanisms, psychosomatic disorders, consequences, managing stress. Negotiating and Resolution- Conflict Management, managing interpersonal and Inter-group conflict-negotiation tactics, change.

Text and References:

1. Organizational Behaviour Stephen P. Robbins, Timothy A. Judge,Neharika Vohra, 16th edition
2. Organizational Behaviour by Stephen P. Robbins
3. Organizational Behaviour by Fred Luthans
4. Hersey, P and Blanchard, K: Management of Organizational Behaviour
5. Behavioural Processes in Organization by D. M. Pesonjee, T. V. Rao and UdaiPareek

Health Promotion Approaches and Methods
Paper Code MPH 204

Contacts: 3L + 1T Credits:4

Course Overview:

The course gives students an understanding of health promotion at individual, group, community and national levels, as well as their critical thinking around the social determinants of health approaches to health interventions.

Course Objective: The objective of this course is to:

Introduce different models of communication for use in health promotion activities and community based activities.

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

CO1: Describe the role and importance of communication in health care.
CO2: Identify steps communication planning process and develop a health communication plan and strategy.
CO3: Analyze matrix of targeted behaviour, audience, key messages, media choice, and indicators of change.
CO4: Describe dimensions of Interpersonal Communication and PLOT.
CO5: Describe approaches to Media Advocacy, basic principles and approaches to Counselling.

Course Content:

Unit 1: Basics of Health Communication and Health Education

Communication Process, Functions and Types, Barriers to communication, Methods of Health Communication, Mass communication, Doctor patient communication, Community Participation – Concepts and Types; Health Education – its approaches, principles and models.

Unit 2: Social and Cultural Context to Health

Health Belief Model, Culture and Health, Cultural Competency, Sociology and Health, Social determinants of Health, Approaches to social perspectives on Health, Medical Anthropology, Factors influencing Healthcare service utilization, Biopsychosocial Model.

Unit 3: Information, Education and Communication (IEC) Strategies

IEC situation assessment – methods of data collection, Different Mediums of communication and their advantages & disadvantages, Education material development and dissemination;
IEC program planning, implementing, monitoring and evaluating;
District infrastructure of IEC

Unit 4: Behaviour Change Communication

Factors influencing behavior, Phases of Behavior Change, Developing effective behavior change communication, Target Audience Segmentation.

Text and References

1. Ahmed Manzoor. Community Participation: The Heart of Primary Health Care, International council for education, Essex.

2. Bhat Anil. Community-involvement in Primary Health Care, Public systems group, IIM.
3. Behaviour Change through Mass communication, AIDS control and prevention Project, Family Health International, USAID.

Public Health Management
Paper Code - MPH 205

Contacts: 3L + 1T **Credits: 4**

Course Overview:

The course provides basic concepts and principles of public health managementprepares professionals to enrich their knowledge about NGOs, different types of NGOs, essential features and management of NGOs at local, national and international levels. It inculcates learning opportunities for developing program management skills, and translate the modern management concepts in to public health program planning and management.

Course Objectives: The objectives of this course are to:

- Train the students in health program design management with special focus on formulation, implementation, monitoring and evaluation.
- Identify and apply appropriate statistical methods to analyse and describe a public health program.
- Demonstrate how to apply the principles of leadership, policy development, budgeting and program management in the planning, implementation and evaluation of health programs for individuals and populations.
- To understand the basic concepts and principles involved in managing NGOs.
- To enhance knowledge on project proposal writing and maintenance of the accounts in NGO's.

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

CO1: Describe the need for health planning, concept and process of health planning..
CO2:Understand the concepts underlying the design of Health programs.
CO3: Determine log frame and indicators for monitoring the program.
CO4: Design systematic and time bound action plans and framework to evaluate the effectiveness of health program implementation
CO5: Understand the management of NGOs and the role of NGO's in community development.
CO6: Demonstrate knowledge and understanding the role of Public Health in disaster situations.

Course content:

Unit 1: Health Planning

Need for health planning, Concept of programme planning, problem identification and priority setting, Process of planning, Community involvement in planning.

Unit 2:Health program designing

Concepts underlying the design of Health programs, Basic approaches to the design , analysis and Interpretation of health programs, evolving a logical framework - setting goals, objectives and targets. Feasibility analysis and budgeting, Plan implementation

Unit 3: Monitoring and evaluation

Framework to evaluate the effectiveness of health program implementation, Process, outcome and impact evaluation.

Unit 4: NGO'S management

Definition, Classification, Objectives and Functions of NGOs, Vision, Mission and Goals in NGOs - Role of NGO's in Community

Development, issues in NGO management, Trusts and Societies with Special reference to Trust and Society Registration Acts, Foreign contributions and Regulation Act (FCRA), Methods and Techniques of Fund Raising – International, National and Local Levels, Process in NGO Registration.

Unit 5: Disaster Management

Classification of Disasters, Effects of disasters, Phases of Disaster Management, Fire Safety, Impact of disasters on Hospitals, Hospital Disaster Management Plan.

Text and References

1. Shirley, D. (2016). Project management for healthcare. CRC Press.
2. Longest Jr, B. B. (2004). Managing health programs and projects (Vol. 5). John Wiley & Sons.
3. Yogan Pillay, Timothy H. Holtz, Textbook of International Health: Global Health in a Dynamic World 3 rd Edition. Oxford University Press.
4. Paul F. Basch. Textbook of International Health, Oxford University Press
5. Michael Seear, An Introduction to International Health, , Published by Canadian Scholars Press Inc. 5. Manoj Sharma, Ashutosh Atri.(2010).Essentials of International HealthJones& Bartlett Learning
6. Clark John. (1991). Voluntary Organizations: Their Contribution to Development. London: Earth Scan.
7. Jain R.B. (1995). NGO's in Development Perspective. New Delhi: VivekPrakasan
8. Sakararan and Rodrigues. (1983). Handbook for the Management of Voluntary Organization. Madras: Alfa
9. Behera M. C. (2006). Globalizing Rural Development. New Delhi: Sage.
10. Chowdhry Paul. (1973). Administration of Social Welfare Programmes in India. Bombay: Somaiy.

11. NGO's and Rural Development Theory and Practice. New Delhi: Concept.
12. Julie Fisher. (2003). Non-Governments – NGO's and the Political Development of the Third World. New Delhi: Rawat
13. Mrinalini Pandey, Disaster Management, Wiley Publications.

National Health Programs
Paper Code - MPH 206

Contacts: 3L + 1T **Credits: 4**

Course Overview:

The course aims to develop requisite knowledge and understanding of Indian health systems and policies, health programs, health sector reforms and experiences. Overall the course provides national perspective of health systems and program, and their historical background.

Course Objectives: The objectives of this course are to:

- Provide information about the background objectives, action plan, targets, operations, achievements and constraints of various National Health Programs in the country.
- Understand the concepts underlying the design of health programs
- Explain basic approaches to design health programmes, with a focus on low resource settings.

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

CO1: Demonstrate a thorough understanding and comprehension of public health programs and policies.
CO2: Determine planning, implementation, and evaluation of health programs for individuals and populations.
CO3: Analyze essential services that public health programs provide to protect and improve the health of populations.
CO4: Determine the elements to improve health outcomes and systems.
CO5: Design the methods of assessing the health impact of different programs.

Course content:

Unit 1: Key Health Committees

Bhore committee, Mudliar committee, Mukherjee committee, Chaddah committee, Jungalwala committee, Kartar Singh Committee, Srivastava committee

Unit 2: Reproductive, Maternal, Neonatal, Child and Adolescent health

Janani Shishu Suraksha Karyakaram (JSSK), Rashtriya Kishor SwasthyaKaryakram(RKSK), Rashtriya Bal SwasthyaKaryakram (RBSK), Universal Immunisation Programme, Mission Indradhanush / Intensified MissonIndradhanush, Janani Suraksha Yojana (JSY), Pradhan Mantri SurakshitMatritva Abhiyan (PMSMA), NavjaatShishu Suraksha Karyakram (NSSK), National Programme for Family planning

Unit 3: National Nutritional Programmes

National Iodine Deficiency Disorders Control Programme, MAA (Mothers' Absolute Affection) Programme for Infant and Young Child Feeding, National Programme for Prevention and Control of Fluorosis (NPPCF), National Iron Plus Initiative for Anaemia Control, National Vitamin A prophylaxis Programe, Integrated Child Development Services (ICDS), Mid-Day Meal Programme

Unit 4: Communicable diseases

Integrated Disease Surveillance Programme (IDSP), Revised National Tuberculosis Control Programme (RNTCP), Malaria Eradication ProgramNational Leprosy Eradication Programme (NLEP), National Vector Borne Disease Control Programme, National AIDS Control Programme (NACP), Pulse Polio Programme, National Viral Hepatitis Control Program, National Rabies Control Programme, Guinea worm Eradication Program,

Unit 5: Non-communicable diseases

National Tobacco Control Programme(NTCP), National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases & Stroke (NPCDCS), National Programme for Control Treatment of Occupational Diseases, National Programme for Prevention and Control of Deafness (NPPCD), National Mental Health Programme, National Programme for Control of Blindness& Visual Impairment, National Programme for the Health Care for the Elderly (NPHCE), National Programme for Prevention & Management of Burn Injuries (NPPMBI), National Oral Health programme

Unit 6: Health system strengthening programs

Ayushman Bharat Yojana, Pradhan Mantri Swasthya Suraksha Yojana (PMSSY), National Health Mission (NRHM and NUHM).

Text and References

1. GOI 2005, National Rural Health Mission: Meeting People's Health needs in rural areas, Framework for implementation, 2005-2012, MoHFW.
2. GOI 2005, Report of National Commission on Macroeconomics and Health, MoHFW.
3. Kishore, J. (2012). National health programmes of India: National policies and legislations related to health. Peer-reviewed, Official Publication of the Indian Academy of Geriatrics, 165.
4. GOI, MoHFW, Annual Report of various years.

Communicable and Non Communicable Diseases
Paper Code- MPH 207

Contacts: 3L + 1T **Credits: 4**

Course Overview:

This course imparts overview of infectious and non-infectious diseases and their impact on population. Students are also oriented about infectious disease control programs including their epidemiology, biology, pathogenesis, pathology, management and prevention.

Course Objectives: The objectives of this course are to:

- Provide students with an understanding of the scope of the public health issues with regard to communicable and non-communicable diseases in India.
- Discuss the pathology, pathogenesis, pathology, clinical manifestation, mode of transmission, prevention and control of diseases.

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

CO1: Explain the biological principles required to understand the distribution of infectious and non-infectious diseases of public health importance.
CO2: Apply the current research to solve public health problems.
CO3: Describe the methods for the prevention and control of disease.
CO4: Apply the biological principles in attacks on diseases of public health significance.
CO5: Analyze the effects ofvarious disease control, elimination and eradication programs running in our country.

Course content:

Unit 1: Introduction

Classification of diseases, modes of evolution of disease stages, burden of communicable & and non-communicable diseases, disease cycle/ transmission

Unit 2: Communicable diseases

COVID-19, SARS, MERS, influenza, intestinal, vector borne diseases, TB, Malaria, Leprosy, Polio, STIs, AIDS, Meningococcal meningitis, Hepatitis B, and Measles (Incubation periods, Epidemic patterns, Modes of transmission, outbreak investigation and surveillance, schedules, adverse reactions, contraindications, vaccine efficacy, impact assessment), Examine factors contributing to the persistence of infectious diseases, Understand reasons for emergence and re-emergence of infectious diseases

Unit 3: Non-communicable diseases

Asthma, Cancer, Cardiovascular diseases, chronic rheumatic diseases mellitus, hypertension, substance abuse related illness & control, obesity, Stroke, mental health, and Accident & Injuries,

Unit 4:Public health approaches to prevent diseases

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 diseases, Recognize the risk factor approach to prevent communicable and non-communicable diseases, Comprehend the Population based/public health approaches to prevention of common risk factors

Text and References:

1. Dutta, A. (2001). Infectious diseases and immunization. Indian Journal of Pediatrics, 68(2), 140-140.
2. World Health Organization. (2018). Antimicrobial resistance and primary health care: brief (No. WHO/HIS/SDS/2018.57). World Health Organization.
3. Giesecke, J. (2017). Modern infectious disease epidemiology. CRC Press.
4. Duguid, J. P., Swain, R. H. A., & Marmion, B. P. (1978). Medical microbiology: a guide to the laboratory diagnosis and control of infection. Churchill Livingstone.
5. Davidson, S., Edwards, C. R. W., Bouchier, I. A. D., Haslett, C., &Chilvers, E. R. (1995). Davidson's principles and practice of medicine. Saunders.
6. Kasper, D. L., Braunwald, E., Hauser, S., Longo, D., & Jameson, J. L. Harrison's (2004) Principles of Internal Medicine 16th Edition. McGraw-Hill Professional.

Communication Skills-II
Paper Code- MPH 208

Contacts: 2L **Credits: 2**

Course Overview:

This course is designed to facilitate the students to communicate effectively by emphasizing on practical communication through refurbishing their existing language skills and also to bring one and all to a common take-of level

Course Objective: The objective of this course is to:

Enable students to be an integral part of corporate communication network.

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

CO1: Understand the different types of personalities.
CO2: Learn time management and diversity management in healthcare settings.
CO3: Understand human behaviour and communication, its role in public health problems and solutions.

Course Content:

Unit 1:

Types of personalities- The Assertive personality-Personality Tests; Goal setting and achievement

Unit 2:

EQ and IQ; Aptitude tests; Creative problem solving/Innovative thinking; Transactional analysis

Unit 3:

Time management; Managing change; Conflict management; managing meetings; Attitude

Unit 4:

Diversity management; Leadership and team building; Personal impact; Corporate etiquettes

Unit 5:

Human behaviour and communication, its role in public health problems and solutions

Unit 6:

Evidence based advocacy; Consensus building

Text and References

1. Sharan J.Gerson and Steven M.Gerson – "Technical Writing – Process and Product" – Pearson Education – 2000.
2. Raymond V.Lesikar, John D. Pettit and Mary E.Flatley – Lesikass Basic Communication Tata McGraw Will 8th Edition – 1999.
3. Stevel. E. Pauley, Daniel G.Riordan – Technical Report Writing Today – AITBS Publishing & Distributors, India 5th edition – 2000.

4. Robert L.Shurter, Effective letters in business Third Ed. 1983.
5. Communication Skills by Vasantha Patri
6. McGraith – Basic Managerial Skills for all Prentice Hall of India – 6th Edition 2002.
7. Halliday, M.A. K R .Hasan, Cohesion in English, Longman, London 1976.

Yogic Science
Paper Code-YGS 104

Contacts: 2L **Credits: 2**

Course Overview:

The course imparts overview of history, tradition and branches of Yoga. Students are also oriented about different types of Yogasanas, their importance, methods, rules, regulations and limitations.

Course Objectives: The objectives of this course are to:

- Understand the basic Concepts and types of Yoga
- Apply the principles of Yoga to live healthy and active life style.
- Promote the awareness of health through yoga.
- Explain health plans and recipes in different lifestyle diseases

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

CO1: Explain the various definitions of Yoga, history of Yoga and branches of Yoga.

CO2: Describe kinds of Yogasanas, its importance, methods, rules, regulations and limitations.

CO3: Demonstrate knowledge of pranayamas, pranaand lifestyle, breathing and lifespan.

Course Content:
Unit 1:Introduction to Yoga

- Yoga – an exact science and practical system of self culture History & Tradition of Yoga – Yoga sutra of Pantanjali, Yoga as explained in Bhagvad Gita, Yoga in daily life, Yoga – one of the Six Darshans (Philosophy), UN resolution and International Yoga Day
- Introduction of Hatha Yoga, Raja Yoga & Kundalini Yoga
- Eight limbs of Yoga as per Yogasutra of Patanjali – Discipline/self restraint (Yama),Observance (Niyama), Posture (Asana), Restraint of breath/exercises of life force (Pranayama), Abstraction of senses/Introversion-of attention (Pratyahara), Concentration (Dharna), Meditation(Dhyana) and Super conscious state/illumination (Samadhi)
- Aphorism from Yoga Sutra: ll.29, ll.30, 11.32, ll.46, ll.49, ll.54, lll.1, lll.2, lll.3 & lll.4 defining above terms
- Introduction of Mudras, Bandhas and Shat karmas

Unit2:Kundalini Yoga

- Seven Chakras – Muladhara (att he anus), Svadhisthana, (at the root of organ of generation), Manipura (at the navel), Anahata (in the heart), Visudda (at the neck), Ajna (in the space between two eyebrows) &Sahasrara (at the crown of head)
- Nadis – Ida, Pingala, Shushumna
- Awakening of Kundalini by Pranayama, Asanas & Mudras by Hathayogis and through Concentration by Rajayogins

Unit 3:Raja Yoga

- Purification and Control of mind
- Concentration : Power of concentration, Aids to Concentration, Objects for Concentration, Benefits of Concentration

- Meditation : Concrete and Abstract, Types of Meditation viz Gross (Sthoola), Subtle (Sookshma), More Subtle (Sookshanmatrara) and Most subtle (Sookshamatama), Objects of meditation, Obstacles in meditation

Unit 4:Anatomy& Physiology of Yoga

- Effect of Yoga on skeleton & Muscular system
- Effect of yoga on physiology

Unit 5:Nutrition in Yoga

- Diet according to season (Ritucharya)
- Health plans and recipes in some lifestyle diseases

Text & References:

1. Asana Pranayama Mudra Bandha by Swami SatyanandaSaraswati Publisher: Yoga Publication Trust, Munger, Bihar, India
2. Yoga on Hypertension by Swami Shankardevanand Publisher: Yoga Publication Trust, Munger, Bihar, India.
3. Essence of Yoga by Swami SivanandaSaraswati. Publisher: The Divine Life Society, Uttarakhand, India
4. Yoga Sutras of Patanjali by Swami Venkateshananda Publisher: MotilalBanarsidassPublishers Private Limited, New Delhi, India
5. Hatha Yoga by Swami Sivananda. Publisher: The Divine Life Society, Uttarakhand, India
6. GherandaSamhita by Swami NiranjanandaSaraswati Publisher: Yoga Publication Trust, Munger, Bihar, India
7. Essence of Pranayama by Dr Shrikrishna Publisher: Kaivalyadhama, Pune, India.
8. Dhyana Yoga by Swami SivanandaSaraswati Publisher: TheDivine Life Society, Uttarakhand, India

Yogic Science Practical
Paper Code- YGS 104 P

Contacts: 4P **Credits: 2**

Course Overview:

The course imparts overview of history, tradition and branches of Yoga. Students are also oriented about different types of Yogasanas, their importance, methods, rules, regulations and limitations.

Course Objectives: The objectives of this course are to:

- Understand the basic concepts and types of Yoga
- Apply the principles of Yoga to live healthy and active lifestyle.
- Promote the awareness of health through yoga.
- Explain health plans and recipes in different lifestyle diseases.

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

CO1 Learn the procedures of Pranayama and be able to execute these.

CO2 Introduce a regular and rigorous practice of yoga for lifestyle management.

CO3 Learn the procedures of different Yogasanas, Shatkarmas and be able to execute these and guide others in practice.

Course Content:

HATH YOGA

Unit 1:Asana

- SukshmaVyayam (Joints Movement)

Backward Bending Asanas

- Sarpasana (snake pose)
- Bhujangasana (cobra pose)
- ArdhaShalabhasana (half locust pose)
- Shalabhasana (locust pose)
- Dhanurasana (bow pose)
- Kandharasana (shoulder pose)

Forward Bending Asanas

- Paschimottanasana (back stretching pose)
- JanuSirshasana (head to knee pose)
- PadaHastasana (forward bending pose)

Meditation Asanas

- Sukhasana (easy pose)
- Padmasana (lotus pose)

Vajrasana Group of Asanas

- Vajrasana (thunderbolt pose)
- Padadhirasana (breath balancing pose)
- ShashankBhujangasana (striking cobra pose)
- Ustrasana (camel pose)

Digestive/Abdominal Asanas

- Pawanmuktasana
- Uttanpadasana (raised legs pose)
- Nukasana (boat pose)

Standing Asanas

- AkarnaDhanurasana (bow and arrow pose)
- Tadasana (palm tree pose)
- TiryakaTadasana (swaying palm tree pose)
- Kati Chakrasana (waist rotating pose)
- Dwikonasana (double angle pose)
- Trikonasana (triangle pose)

Spinal Twisting Asanas

- BhuNamanasana (spinal twist prostration pose)
- ShavaUdarakarshanasana (universal spinal twist)
- ArdhaMatsyendrasana (half spinal twist)

Balancing Asanas

- EkPadaPranamasana (one-legged prayer pose)
- Natarajasana (Lord Shiva's pose)

Relaxation Asanas

- Shavasana (corpse pose)

Advanced Asanas

- Chakrasana (wheel pose)
- Brahmacharyasana (celibate's pose)

Unit 2:Pranayama

- Narishodhan(psychic network purification)
- Ujjayi(psychic breath)
- Kapalbhati (frontal brain cleansing breath)
- Bhastrika(bellows breath)
- Bharamri(humming bee breath)
- Surya Bhedi(vitality stimulating breath)
- Chandra Bhedi
- Sheetali (cooling breath)

Unit 3:Bandh

- JalandharaBandh(throat lock)
- UddiyanBandh (abdominal contraction)

- MoolaBandh (perineum contraction)
- MahaBandh (great lock)

Unit 4:Mudra

- Giyan Mudra (chin mudra)
- Hridaya Mudra (heart gesture)
- Bhoochri Mudra (gazing into nothing)
- Yoga Mudra (Attitude of psychic union)
- Shambhavi Mudra (eyebrow centre gazing)

Unit 5:Shat-karma

- Kapalbhati
- Neti, Jala (nasal cleaning with water)
- Agnisara (activating the digestive fire)

Summer Project Report On Public Health Practices

Credit Units:05

Summer Training Objective:
To provide on the job experience, as an understudy in a healthcare organization, to help the student understand systems and procedures and learn to make decisions considering the organization as an integral unit.

Duration: 2 months

Format for Report Writing
1. Abstract
2. Introduction
3. Aims & Objectives
4. Operational definitions
5. Significance of Study
6. Review of literature
7. Research methodology
8. Data Analysis
9. Results
10. Discussion
11. Conclusion
12. Recommendations
13. Limitations of study
14. Future prospects of study
15. References

Semester –3

Semester	Paper Code:	Subject	Periods			Credit Units	Evaluation scheme		
			L	T	P		Internal*	External	Total
3	MPH 301	Women and Child Health	3	1	-	4	20	80	100
	MPH 302	Laws and Ethics in Public Health	3	1	-	4	20	80	100
	MPH 303	Quality Management in Healthcare	3	1	-	4	20	80	100
	MPH 304	Financial Management and Budgeting	3	1	-	4	20	80	100
	MPH 305	Operations Research	3	1	-	4	20	80	100
	MPH 306	Environment and occupational Health	3	1	-	4	20	80	100
	MPH 307	Summer Project Report on Public Health Practices*	-	-	-	4	100	-	100
	Total		**18**	**6**	**10**	**28**	**220**	**480**	**700**

***Evaluation for Summer Internship Reportwill be done by internal faculty/examiner (done after second semester)**

Women and Child Health
Paper Code- MPH 301

Contacts: 3L + 1T **Credits: 4**

Course Overview:

The course is designed to respond to newly emerging issues in Mother and Child Health (MCH) and to the unique needs of the diverse communities and cultures of India and the world and to inspire students to use their skills and expertise to achieve health equity for all. This course will cover the aspects of newborn health, adolescent health, reproductive health, ante and post-natal care and what it means to make every birth wanted.

Course Objectives: The objectives of this course are to:

- Impart an understanding of the scope of women and child health and to enable students to find and interpret relevant information on women and child health.
- Discuss the aetiology, pathophysiology, presentation, and prognosis of women and children conditions as they present in clinical settings.
- Assess the public health impact of clinical problems for both women and children in the community, including the epidemiology of common risk factors and early intervention strategies.

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

CO1: Describe health across the lifecycle, from newborn to child, to adolescents and women, in areas of the world where the burden of disease is highest.

CO2: Interpret Current data on maternal and child health, distribution and determinants of health.

CO3: Discuss the role of public health programming in assessing and intervening to enhance positive parenting, breastfeeding, healthy family dynamics, healthy eating, healthy weights, growth and development in women and children.

CO4: Identify women and children at risk for poor health outcomes, particularly related to reproduction and child development and understand the importance of healthy sexual practices and family planning to maternal health.

CO5: Analyze the scheduling, indications, risks, side-effects, and impact of childhood vaccinations.

Course Content:

Unit 1: Women Health

Concepts, definition and measures; customs, norms, attitudes and practices pertaining to various aspects of women's health including menstruation, puberty, childbirth and menopause, infertility, Maternal mortality ratio, Antenatal Care

Unit 2: Child Health:

Care of children from infancy to childhood; Growth and development; Child health & morbidity, Under-five child mortality,

infant and neonatal mortality rate, Breastfeeding, weaning and supplementary feeding

Unit 3: Child Health Initiatives in India

Programmes and policies related to child health and development, health of physically and mentally challenged children, behavioural disorders, child abuse. handicapped children.

Unit 4: Adolescent Sexual Health & Family Planning

Adolescent sexual health & contraception, methods of family planning, measurement and service delivery, quality of family planning care, adolescent health Programmes (Rashtriya Kishor SwasthyaKaryakram; Balika Samridhi Yojana; Adolescent Friendly Health Services)

Unit 5: Introduction to RMNCH+A

Introduction to reproductive health and RMNCH+A services – historical context, evolution, coverage and innovations, Various components of service delivery under RMNCH+A (5 X 5 matrix).

Text and References:

1. Dutta DC 2005.Textbook of Obstetrics and Gynecology, Rawat Pub.
2. Gupta SD 2005.Adolescent and Youth reproductive health in India.
3. Jejeebhoy S. 1998. Adolescent sexual and reproductive health in India: review of the evidence from India. Social science and medicine; 46-10.

4. Lancet Series on Child Survival 2003
5. Lancet Series on Neonatal Health care 2005
6. Powell JL. 2003 Theorizing Social gerontology
7. United Nations International Research and Training Institute for the Advancement of Women (INSTRAW). 2003. The Situation of Elderly Women Available Statistics and Indicators
8. Behraman R, Kliegman R, Jenson Hal (Edt) 2001.Nelson's Textbook of Pediatrics. Harcourt Pub.
9. Guyton Arthur C., 1991, Textbook of Medical Physiology, A Prism Book Pvt. Ltd. Bangalore
10. Samson Wright's Applied Physiology, Oxford University Press, Delhi.
11. Handbook of Family Planning and Reproductive Healthcare by Anna Glasier. Churchill Livingstone.
12. Health communication: lessons from family planning and reproductive health by Phyllis Tilson Piotrow.
13. Oxford Handbook of Reproductive Medicine and Family Planning by Enda McVeigh, John Guillebaud, Roy Homburg. Oxford University Press.
14. India's Family Planning Programme: Policies, Practices and Challenges by Leela Visaria, Rajani R. Ved. Routledge Publications

Laws and Ethics in Public Health
Paper Code - MPH 302

Contacts: 3L + 1T **Credits:4**

Course Overview:

The course provides a forum for discussion and deliberation about ethical issues in the practice of public health (including the conduct of research) in developing countries. It equips students to identify and analyze critical ethical issues and to consider systematically the ethical responsibilities of all parties involved.

Course Objectives: The objectives of this course are to:

- Acquaint the students with various legal aspects concerning type and character of the health care organizations and its duties towards patients and its employees.
- Familiarize the students in matters of liability of medical negligence and medical malpractice.
- Impart the skills needed to assess external and internal healthcare polices to influence organizational design and delivery of healthcare services.

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

CO1: Understand public health laws and ethics in relation to healthcare.
CO2: Explain how laws and regulations affect the structure and operation of healthcare organizations, including corporate law, tort law, fraud and abuse laws, etc
CO3: Determine how law protects patient rights and regulates patient-provider relationships, including informed consent, medical

malpractice, confidentiality, treatment termination, advance directives, human reproduction, and obligations to provide care.
CO4: Analyze the impact of changing health care regulations on processes and services;
CO5: Demonstrate laws that promote health policy values and goals and comprehend the consequences of not adhering to the laws.

Course Content:

Unit 1:Ethics in healthcare:

Code of Ethics, Ethical Committee, Ethics and Law, Basic issues, process of developing and implementing ethics and values in an institution, code of conduct, Hippocrates Oath.

Unit 2:**Public Health laws and ethics:**

Public health regulations in Indian context, Public health information and privacy, Public Health laws in global economy, Parental rights and the rights of mentally unsound patients.

Unit 3:Laws in relation to healthcare profession:

Indian medical degreeAct 1916, IMC act & State medical act. Declaration of Geneva. Consumer Protection Act and its applications in healthcare, W.B Clinical Establishment Act 2000, Workman Compensation Act, Central births and registration act, issuance of birth and death certificate, PCPNDT Act, abortion, MTP Act, Euthanasia, Organ transplantation Act, Biomedical Waste Management and Handling Rule (1998).

Unit 4:**Legal liabilities in healthcare:**

Compulsory & voluntary duties of a medical practitioner towards the patient, Doctor patient relationship.Medical Negligence,

Confidentiality, informed consent, professional misconduct, Criminal, civil and tortuous liability, absolute and vicarious liability.

Unit 5:Ethics in research:

Ethical approval for clinical trials, Stem cell banking, Case studies on Medical Ethics, The Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954

Unit 6:Regulations during emergencies and outbreaks

Bioterrorism, conflicts and emerging infectious diseases, 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

Text and References:

1. Health Care Ethics by Benedict Ashley, 2006, Georgetown University Press.
2. Ethical Foundations of Health Care: ...by Jane Singleton and Susan Goodinson-McLaren, 1995, Mosby Medical
3. Cross-Cultural Perspectives in Medical Ethics by Robert Veatch, 1997, Harvard University Press
4. An Introduction to Medical Ethics: Patient's Interest First by Arthur Siew Ming Lim, 2008, World Scientific
5. Ethics Under the Knife: Patient Care and Disservice in the Medical Industry by by Matt Koepke
6. Principles of biomedical ethics by Tom Beauchamp, 1979
7. Medical Ethics: Accounts of Ground-Breaking Cases by Gregory Pence, 19
8. Bioethics: Principles, Issues, and Cases by Lewis Vaughn, 2009

9. Medical Law and Ethics by Bonnie Fremgen, 2002
10. Medical Law and Ethics by Jonathan Herring, 2006
11. Medical ethics in the ancient world by Paul Carrick, 2001
12. Resolving Ethical Dilemmas: A Guide for Clinicians by MieczysławKlimaszewski, 1995
13. Textbook of Healthcare Ethics by Erich Loewy, 1989
14. Encyclopedia of Bioethics by Warren Reich
15. Doing Right: A Practical Guide to Ethics for Medical Trainees and Physicians by Philip C. Hébert, 2009
16. Kuchhel, M.c, 2003, Marcentile Law; Vikas Publishing Private Ltd. New Delhi
17. Pathak,Legal Aspect of Business, TMH
18. P.L Mallick – Industrial Law – Eastern Book Company – Lucknow.
19. Bio-Medical Waste Management Handling Rule 1998.
20. Law & Ethics in Nursing & Health Care,Nelson Thrones
21. Park & Park-Preventative & Social Medicine.

Quality Management in Healthcare
Paper Code - MHM 303

Contacts: 3L + 1T **Credits: 4**

Course Overview:

The course provides basic concepts of quality in health care and approaches and skills to implement sustainable quality assurance program. Various quality improvement approaches, role of standards, use of quality improve tools; methods of quality assessment are discussed in the course.

Course Objective: The objectives of this course are to:

- Understand the concept of quality and its relation to healthcare scenario.
- Identify the elements that are part of the quality measuring process in the healthcare industry
- Describe, distinguish and use the several techniques and quality management tools.
- Evaluate the principles of quality management and to explain how these principles can be applied in healthcare.
- Identify the key aspects of the quality improvement cycle and to select and use appropriate tools and techniques for controlling, improving and measuring quality.

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

CO1: Analyze the concepts and measures of health care quality and patient safety leading to a greater emphasis on quality measurement and improvement of care.

CO2: Demonstrate an understanding of tools used in quality measurement and improvement and assess the healthcare delivery models.
CO3: Compile data to support quality and performance measurement decision-making processes for health care entities.
CO4: Design the principles of quality management for improving outcomes in hospitals and integrate quality improvement and evaluation strategies with systems such as Six Sigma, Lean Management etc
CO5: Analyze changes to implement in healthcare delivery to make it safe, timely, effective, equitable, efficient, and patient-centred.

Course Content:

Unit1:Basics of Quality Management

- Definition of quality, Principles of quality, Need for focus on quality in healthcare;
- Dimensions of quality in primary healthcare;
- Different Quality Frameworks, Quality Control Circles;
- Cost and Quality: Prevention Costs, Appraisal costs, Internal & External failure costs

Unit 2: Quality Approaches:

- Quality Control, Quality Assurance, QA cycle,
- Total Quality Management: Principles of Edward Deming, Joseph Juran& Philip Crosby;
- Types and process of Benchmarking; Outcome Management Model
- Clinical and Medical Audit – its need and methodology,

Unit 3: Quality Management Tools and Techniques

- Cause Effect Analysis and Pareto Analysis
- Lean management: Lean Principles and its tools (5 S Techniques, 3 M technique);
- Six Sigma Methodology: DMAIC methodology, Training and its application in hospitals.

Unit 4: Accreditation

Benefits of Hospital Accreditation, Quality Council of India (QCI), National Accreditation Board for Hospitals & Healthcare Providers (NABH) – its Accreditation procedure and Assessment criteria; Joint Commission International (JCI), ISO 9001.

Unit 5: Patient Safety

Principles and Types of Patient Safety; Nosocomial Infections, Control and prevention of Nosocomial Infections; Medical Errors and their prevention.

Text and References:

1. Raandi Schmidt J. Trumbo and R. Jonson, Quality in Health Care Sector – ASQC Quality – Press.
2. Quality Improvement in Health Care,2nd Ed, Nelson Thrones
3. Health Care Quality Management: Tools and Applications by Thomas K. Ross. ISBN: 978-1-118-50553-3.
4. Introduction to Healthcare Quality Management, Second Edition by Patrice L. Spath. ISBN-13: 978-1567935936.

5. Promising Care: How We Can Rescue Health Care by Improving It by Donald M. Berwick. ISBN: 978-1-118-79588-0.
6. The Healthcare Quality Book: Vision, Strategy, and Tools, 2nd Edition 2nd Edition by Elizabeth R. Ransom, Maulik S. Joshi, David B. Nash, Scott B. Ransom. ISBN-13: 978-1567933017.
7. Quality Management in Hospitals by S. K. Joshi
8. Total Quality Management – Aswathappa – Himalaya Books House
9. Quality Management – P. C. Tripathy
10. Hospital Quality Assurance: Risk Management & Program evaluation, Jesus J. Pena
11. Donald E. Lighter and Douglas C Fair: Quality Management in Health Care – Principles and Methods, Jones and Bartlett publishers, second edition.
12. Daigh RD. Financial implications of a quality improvement process.
13. McLaughlin CP and Kalauzny AD. Total quality management in health, Healthcare management review.
14. Hospital Infection Control – By S.A. Tabish – Academa, New Delhi

Financial management and Budgeting
Paper Code - MPH 304

Contacts: 3L + 1T **Credits:4**

Course Overview:

Enable the studentsto understand the basic concept ofCorporate Finance,practical applications of time value of money and evaluating long term investment decisions.Develop analytical skills to select the best source of capital ,its structure on the basis of cost of capital. Helps the future managers in understanding the recent trends of primary and secondary market and develop skills for application of various financial services.

Course Objective:

- To provide the concepts and foundations of managing finance in business enterprises.
- To provide the concepts and foundations of managing finance in business enterprises.
- To orient the students regarding financial management practices in Indian companies and Global enterprises.

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

CO1: Explain components of financial proposals for health care projects/studies.
CO2: Describe the balance sheet and income statement in health care settings.
CO3: Estimate budgets for revenues, staffing and salaries, supplies and services, and equipment.

CO4: Evaluate the financial status of a health service unit or department.
CO5: Determine the causes of performance deviation and use a variety of analytical methods to support sound decision-making.

Course Content:

Unit1:Introduction to Finance & Corporate Finance

Finance & its scope, Financial Decisions, Sources of Finance, Time Value of Money,Profit maximization vs. Wealth maximization, Functions of Finance Manager in Modern Age, Corporate Finance Introduction:– Nature and Scope, Concept of Risk and Return.

Unit2:Time value of Money

Compounding, Continuous Compounding, Effective Rate of Interest, Discounting – Single Cash Flows &Series of Cash Flows, Annuity – Future Value and Present Value, Present Value of Growing Annuity, Perpetuity – Present Value, Growing Perpetuity – Present value, Equated Annual Installments, Valuation of bonds and shares.

Unit 3:Investment Decision

Capital Budgeting Decisions: Discounting and Non discounting techniques, Calculation of Net present value (NPV) and IRR, Excel Application in Analyzing Projects.

Cost of Capital: Concept of Opportunity Cost, Cost of Debenture, Preference and Equity capital, Composite Cost of Capital, Cash Flows as Profit and components of Cash Flows, Capital asset pricing model (CAPM).

Financing Decision: CapitalStructure: Relevance and Irrelevancy theory

Leverage analysis – Types and Measurement along with its implications, EBIT EPS Analysis, Point of Indifference.

Unit 4:Working Capital Management:

Concept of working capital, factors determining working capital, Sources of working capital, estimating working capital needs, Managing cash, marketable securities, debtors and inventory.
Dividend Decision: Factors affecting Dividend Policy, Forms of Dividends, Types of Dividend Policies, Dividend Models: Walter and Gordon Model, Miller- Modigliani(MM) Hypothesis .

Unit 5:Indian Financial System:

Role of Financial Institution, Primary and Secondary Market, Lease Financing, Venture Capital, Mutual Funds. Introduction to Derivatives.

Text and References:

1. Khan and Jain - Financial Management (Tata McGraw Hill, 7th Ed.)
2. Pandey I M - Financial Management (Vikas, 11th Ed.)
3. William Hakka BettnerCarcello- Financial and Management Accounting (TMH-16th Ed.)
4. 4)Sheebakapil-Fundamental of financial management (Wiley, 2015)
5. Prasanna Chandra - Fundamentals of Financial Management (TMH, 9th Ed.)
6. V. Rajesh Kumar, "Financial Management", Mc Graw Hill Education.
7. Singh and Srivastava- Business Finance (Prayagpustakbhavan 3rd Ed.)

Operations Research
Paper Code - MPH 305

Contacts: 3L + 1T **Credits: 4**

Course Overview:

This course introduces the fundamentals of Operations Research Models including linear programming and applications and learn how to construct models appropriate to particular applications, develop optimal solutions, understand the theory behind solutions and translate solutions into directives for action. The course also aims to introduce quantitative methods and techniques for effective decisions–making; model formulation and applications that are used in solving public health problems.

Course Objectives: The objectives of this course are to:

- Provide basic OR approach to problem solving.
- Introduce important analytical tools for managerial decision making.
- Describe the concepts of resource allocation & health service planning.
- Identify and develop operational research models from the verbal description of the real system.

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

CO1: Learn different techniques managerial decision making.
CO2: Improve the objectivity of analysis and develop a comprehensive evaluation plan for healthcare services
CO3: Develop more effective approaches to programming.

CO4: Acquaint knowledge with respect to optimization in utilization of resources.
CO5: Understand and apply operations research techniques in healthcare operations.

Course Content:

Unit 1: Introduction

The OR approach to problem-solving and decision-making, Definition, Scope and limitations of OR in managerial decision-making.

Unit 2: Introduction to OR Techniques

Basics of: Linear Programming, Decision Tree Analysis, Queuing theory, PERT/CPM.

Unit 3:ORModels

Basics of Replacement models, Assignment models (balanced problems), Inventory control models, Forecasting: Qualitative and quantitative forecasting techniques (Simple moving average, weighted moving average).

Unit 4:Applications of OR in Healthcare organizations

Resource allocation and health services planning, Deployment of health human power using OR models.

Text and References:

1. Operations Research in Hospitals: Diagnosis and Prognosis, David H. Stimson, Ruth H. Stimson

2. Operations Research and Healthcare: A handbook of methods and Applications, Margaret L. Brandeau, Francois Sainfort, William P. Pierskalla
3. Patients hospitals and Operational Research, Taylor Francis
4. Operations Research by P. Rama Murthy
5. Operations Research: Methods, Models and Applications, Jay E, Aronson and Stanley Zionts
6. Operations Research, Frederick S.Hillier and Gerald J. Lieberman, Tata McGraw Hill, 2005, New Delhi.
7. Operations Research – An Introduction", Hamdy A Taha, Pearson Education, 2009, New Delhi.
8. Operations Research - Theory and Application, J.K.Sharma, Mac Millan India, 2003.
9. Quantitative Techniques in Management, N.D.Vohra, Tata McGraw Hill Publishing Co. Ltd, 2007.
10. Operations Research, R.Paneerselvam, Prentice Hall of India, 2008, New Delhi.

Environment and Occupational Health
Paper Code - MPH 306

Contacts: 3L + 1T **Credits:4**

Course Overview:

The course examines health issues, scientific understanding of causes, and possible future approaches to control the major environmental and occupational health problems in industrialized and developing countries. It includes how the body reacts to environmental pollutants; physical, chemical, and biological agents of environmental contamination; vectors for dissemination (air, water, soil); solid and hazardous waste; susceptible populations; biomarkers and risk analysis; the scientific basis for policy decisions; and emerging global environmental health problems.

Course Objectives: The objectives of this course are to:

- Provide the comprehensive knowledge in issues related to environment affecting health, sanitation and means of sustainable development.
- Describe the history of hygiene and environmental health and its development in the country.
- Explain the significance of environmental health and the basic components and purpose of environmental health planning.
- Teach basic concepts of Occupational Health & discuss about various occupational diseases and their prevention and demonstrate the contemporary issues surrounding occupational safety and health.

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

CO1: Define the major environmental agents i.e. environmental chemical, biological, and physical agents that cause adverse effects on human health and their sources.

CO2: Discuss the transport and fate of environmental agents in the environment, and identify the carriers or vectors (air, water, soil, and food) that promote the transfer of these agents from the environment to the human.
CO3: Describe the toxico-kinetics and toxico-dynamics of environmental agents in the body, including the effect of route of entry (inhalation, ingestion, absorption).
CO4: Identify and solve occupational safety and health problems.
CO5: Determine professional and ethical responsibility in occupational safety and health.
CO6: Design a system, process, or program to meet occupational safety and health needs.

Course content:

Unit 1:Environmental Pollution

Air pollution: Pollutants and their resources, effects on human health, air pollution control legislation.

- Noise pollution: sources and effects, control measures.
- Water pollution: sources, classification of water pollutants, Sewage and agricultural run – off, inorganic pollutants suspended solids and sediments, radioactive materials, purification of water and waste water treatment.
- Central Pollution Control Board (CPCB) guidelines

Unit 2:Environmental health impact assessment

Climate Change & Health, Lifestyle and dietary effects on health and food safety, Management of environmental hazards.

Unit 3: Waste management

Biomedical Waste management: classification, methods of treatment and disposal-compositing, sanitary land filling, thermal process,

recycling and reuse, Hazardous waste management: sources, treatment and disposal.

Unit 4: Introduction to occupational health

Definition & history of occupational health, Principles of occupational health & Ergonomics.

Unit 5: Occupational Diseases

Definition; classification on the basis of physical agents, chemical agents, biological agents; occupational diseases of skin, respiratory system; occupational diseases due to microorganisms; Occupational Poisoning; Laws related to occupational health; recommendations of National institute for occupational safety and Health; Prevention of occupational hazards

Text and references:

1. Moeller, D. W. (2004). Liquid waste. Environmental health. 3rd Edn., Harvard University press, Combridge, MA., ISBN–10: 0-674-01, 494-4.
2. Baxter, P., Aw, T. C., Cockcroft, A., Durrington, P., & Harrington, J. M. (2010). Hunter's diseases of occupations. CRC Press.
3. Julian Smedlay Oxford Text Book Of Occupational Health(2nd edition)
4. Levy, B. S. (Ed.). (2006). Occupational and environmental health: recognizing and preventing disease and injury. Lippincott Williams & Wilkins.
5. Park, K., & Park, K. (2015). Text Book of Preventive and Social Medicine, M/s. Epidemiology of chronic non-communicable diseases and conditions. 23rd ed. Jabalpur. M/s BanarsidasBhanot publishers.

Summer Project Report on Public Health Practices
Paper Code -MPH 307

Credits:4

Summer Training Objective:

To provide on the job experience, as an understudy in a healthcare organization, to help the student understand systems and procedures and learn to make decisions considering the organization as an integral unit.

Duration: 4-6 Weeks

Format for Report Writing:

1. Abstract
2. Introduction
3. Aims & Objectives
4. Operational definitions
5. Significance of Study
6. Review of literature
7. Research methodology
8. Data Analysis
9. Results
10. Discussion
11. Conclusion
12. Recommendations
13. Limitations of study
14. Future prospects of study
15. References

Semester-4

Semester	Paper Code:	Subject	Periods			Credit Units	Evaluation scheme		
			L	T	P/S		Internal#	External	Total
4	**Open Elective Subjects**								
	MPH 401	Public Health Nutrition	2			2	50	-	50
	MPH 402	Health Information System	2			2	50	-	50
	MPH 403	Supply Chain Management in public health	2			2	50	-	50
	(A)	Total				4	-	-	**100***
	Project Thesis Evaluation								
	MPH 404	Dissertation Project Thesis			-	6	-	150	150
		*Internal Assessment				6	150		150
		Viva-Voce				4		100	100
	(B)	**Total**				**16**			**400**
	(A+B)	**Overall Total**				**20**			**500**

***Students can choose 2 elective subjects out of the given 3 subjects.**

Evaluation is done for 50 marks for each elective subject.

#Evaluation Scheme for Internal Assessment is tabulated below

#Internal Assessment

Semester	Details	Credits	Total Marks
4	Journal Club Presentation	1	25
	Synopsis Presentation	1	25
	Conference/Seminars Attended	1	25
	Publications: • Submitted: 15/25 • Accepted:20/25 • Published: 25/25	1	25
	Thesis Evaluation(Supervisor)	2	50
	Total	**6**	**150**

Public Health Nutrition
Paper Code - MPH 401

Contacts: 2L **Credits: 2**

Course Overview:

This course prepares professionals to apply nutrition principles in evidence-based interventions to promote healthy nutrition practices in populations and to focus on interactions between nutrition and health, including nutritional epidemiology, obesity prevention and intervention strategies for impacting health through nutrition.

Course Objective: The objectives of this course are to

- Explain the basics of human, community nutrition and issues related to food safety.
- Apply nutrition indicators for different public health purposes, including: estimating prevalence, monitoring and surveillance, and investigating diet and disease relationships.
- Use evidence-based knowledge to develop nutrition programs and interventions for diverse populations

Course Outcomes:

On completion of this course, the students will be able to
CO1: Outline the acquisition of public health nutrition knowledge and skills.
CO2: Analyzehow to select information efficiently and effectively for public health practice.
CO3: Illustratethe administration of population-based food, nutrition and health services.
CO4: Determine interactions between nutrition and health, including nutritional epidemiology, obesity prevention and intervention strategies for impacting health through nutrition.

CO5: Apply epidemiological concepts of human nutrition in order to improve population health and reduce disease risk.

Course Content:

Unit 1: Basics of Nutrition

Classification of Foods by origin, chemical composition, predominant function & by nutritive value; Nutrients: Macro & Micro nutrients, Nutritional profiles of Principle Foods, Assessment of Nutritional status.

Unit 2: Disease specific nutrition

Nutritional Requirements, Diet modifications during various diseased condition – diabetes, obesity, heart diseases, civil and kidney, TB, HIV etc, Deficiency disorders & dietary management – PCM, anaemia, goitre and vitamin & mineral deficiency.

Unit 3: Community nutrition

Nutritional problems in Public Health, Nutritional surveillance, Prevalence of under nutrition and malnutrition in India, Malnutrition infection and infestation, effect of malnutrition in infancies, pregnant and lactating mothers, Nutrition organization programmes – national, international & voluntary organizations undertaken to combat malnutrition, policy & programmes for nutrition related issues and Balanced diet for preschool going children adolescents, pregnant and lactating mothers, old age & athletes.

Unit 4: Food Safety

General principles of Hygiene, importance of food borne illness, prevention of contamination, food intoxicants, food additives, food standards, importance of safe drinking water, purification methods, Food borne diseases, Prevention of Food Adulteration Act 1954 and National Nutrition Policy 1993.

Text & References:

1. Dr. M Swaminathan. Advanced textbook on food and Nutrition, Bangalore Publishing Co. Ltd., 1974
2. C Gopalan. Recent Trends in Nutrition, Oxford University Press, 1993.
3. E. Savage King. Nutrition for Developing Countries, Oxford University Press, 1992.
4. Dr. C. Gopalan. Nutrition problems and Programmes in South East Asia, WHO, 1987.
5. Sumati R. Mudambi, M.V. Rajagopal, V.R. Damodharan Fundamentals of food and Nutrition, Wiley Eastern Ltd. , 1982.
6. Nutritional Sciences: Sreelakshmi

Health Information System
Paper Code -MPH 402

Contacts: 2L **Credits: 2**

Course Overview:

The course provides an overview of Health Information Management System, its structure and functions; identifies information needs and indicators in the hospitals; describes uses of information for effective management of hospital services; describes various decision models and reviews decision making process in hospitals; application of information in performance tracking and analysis; monitoring of services and programs, supervision and impact evaluation. The course emphasizes on designing health information system and use of IT.

Course Objectives: The objectives of this course are to

- To provide knowledge on classification of information systems and health informatics
- To develop skills in identifying the information system according to hospital needs.
- To understand the various indicators of health and health information system and health management information system in hospitals.

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

CO1: Describe the evolution of information technology and its uses in healthcare management and delivery.

CO2: Discuss the role of information system applications common in health organizations: including electronic medical records; medical decision support; diagnostic information systems, physician practice management systems, claims processing etc

CO3: Analyze an information technology needs of a healthcare organization and diagram the process and critical issues related to identifying information and systems requirements and designing, developing, testing, implementing and evaluating information systems in healthcare settings.

CO4: Illustrate the ethical issues related to healthcare information management and the use of information technology in health management and clinical practice; including privacy, confidentiality and security issues.

CO5: Analyze current and future trends in the application of information technology to the healthcare industry.

Course Content:

Unit 1:

Health Management Information Systems in India, functional modules of e-hospitals Organizational Arrangements, Evaluation and application for the HMIS in India.

Unit 2:

Paperless Hospital management: Health records - functions, privacy and confidentiality, paper records - advantages & disadvantages, Electronic Health Records, advantages, disadvantages, bedside point of care systems, human factors and the EHR, Roadblocks and challenges to EHR implementation.

Unit 3:

Telemedicine - Historical perspectives, types of technology, Tele-health delivery models in India, advantages and barriers of telehealth, future trends, knowledge management,

Unit 4:

Approaches to Hospital Information System: patient based, functional organisation based, clinical information, nursing info system, appointment scheduling, dissemination of diagnostic information, registration general administration & productivity. Medical transcription - speech recognition, security, barriers and success factors in to information technology implementation.

Unit 5:

Software Applications in Health Care **-** Awareness on the application of computer software packages in various functions of Hospital. Internet and Intranet and their application in healthcare.

Text and References :

1. Management information systems - Srivastava, Jaypee
2. Management Information Systems – Conceptual foundations, structure and development, Gordon B.Davis and M.H. Olson, McGraw Hill Publishing, 1984.
3. Management Information System, Mahadeo Jaiswal & Monika Mital,Oxford University Press, 2005.
4. Management Information System - Sadagopan.S, Prentice Hall India Private Limited,
5. New Delhi 2004.
6. Management Information System - Kenneth .C.Laudon& Jane P.Laudon Prentice - Hall India Private Limited, New Delhi, 2006.
7. Managing with Information, Jerome Kanter, Prentice Hall – India Private Limited, New Delhi, 2004, 4th Edition.
8. Internet: An Introduction – CIS Series, Tata McGraw Hill.
9. Informatics for Healthcare professional - Kathleen M,

10. Management Information system - James O'Brien, Tate McGraw Hill

Supply Chain Management in Public Health
Paper Code - MPH 403

Contacts: 2L **Credits: 2**

Course Overview:

The course emphasizes on developing requisite knowledge and skills in managing inventory, equipment, and drug supplies in the hospitals; describes methods of procurement, storage and distribution of drugs.

Course Objective: To makestudent conversant with purchase management, inventory management and stores management.

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

CO1: Understand the procedures of material management and purchase management.
CO2: Describe role and importance of inventory, logistics and supply management in health care.
CO3: Evaluatevarious techniques of inventory management including ABC, VED etc and calculating Re-order level, buffer stock and Economic Order Quantity.
CO4: Interpret the processes of stock verification, condemnation and disposal.

Course Content:

Unit 1: Introduction to Material Management and Purchase Management

Scope, importance and objectives of materials management, Material Cycle.
Procurement procedure, Tendering system, Modes of tenders, Types of purchase orders.

Unit 2: Inventory Management

Types of Inventory, Inventory Control, Lead Time, Buffer stock, Re-order level, Economic Order Quantity, Inventory ordering systems.
Inventory Control Costs – Purchase, cost, shortage cost, inventory carrying cost, inventory acquisition cost.
Inventory Control Techniques like ABC, VED, FSN, SAP and MUSIC-3D
National List of Essential Medicines

Unit 3: Stores Management

Functioning of stores, types of hospital stores, layout and planning of hospital stores, preservation of material, duties of storekeeper and officer-in charge; Jan Aushadhi Stores;
Material Codification, Process of Stock Verification, Pilferage, resource mobilization, Stock distribution systems, criteria and methods of stock condemnation and disposal.

Text and References:

1. Inventory Control and Management, 2nd Edition by Donald Waters. ISBN: 9781118585214.
2. Essentials of Inventory Management by Max Muller. ISBN: 978-0814416556
3. Inventory Strategy: Maximizing Financial, Service and Operations Performance with

4. Inventory Strategy by Edward H. Frazelle. ISBN: 978-0071847179.
5. Supply Chain Strategy 1st Edition by Edward Frazelle. ISBN: 063-9785330219.
6. Inventory Accuracy: People, Processes, & Technology 1st Edition by David J. Piasecki. ISBN: 978-0972763103.
7. Inventory Management Explained: A focus on Forecasting, Lot Sizing, Safety Stock, and Ordering Systems by David J. Piasecki. ISBN: 978-0-9727631-1-0.
8. Hospital Stores Management- An IntegratedApproach, by Dr. Gupta Shakti, JaypeeBrothers.
9. Material Management by Dr. PawanArora, Global India Publication Pvt Ltd
10. Handbook of Materials Management, P. Gopalkrishnan, EasternEconomy Edition

Project Work & Dissertation Report
Paper Code MPH 403

Credits: 16

Internship Objective:

To impart the practical knowledge through research methods, help formulate a rigorous research problem related to hospital on the basis of their observation, help do an independent study, and encourage working in a team.

Pedagogy:

- Identifying several situations amenable to dissertation work, writing a proposal and making a presentation to the Departmental Research Committee. - Reporting to the committee on the progress of research work periodically. - Making use of a variety of research methods. - Defending the inference before the Examining Committee.

Dissertation Report Contents:

Every student will do a detailed study on the topic selected for the dissertation, and is expected to prepare a two or three proposals which he intends to take up for the Dissertation. The Assigned guide will examine this and decide on the topic of dissertation. Report will comprise of following contents:

1. Abstract
2. Introduction
3. Aims & Objectives
4. Operational definitions

5. Significance of Study
6. Review of literature
7. Research methodology
8. Data Analysis
9. Results
10. Discussion
11. Conclusion
12. Recommendations
13. Limitations of study
14. Future prospects of study
15. References

Activity Calendar

- **January:** 24th January **-** National Girl Child Day
- **February:** 4th February- World Cancer day,
- Sports week celebration
- **March:** 24th March - World TB day (Poster Competition)
- **April:** 7th April – World Health day (Outreach Activity)
- **May:** 5th May – World Hand Hygiene day
- **June:** 25th June – International day against drug abuse & elicit trafficking
- **August:** 13th August – Internal Organ donation day (Awareness programme)
- **September:** 29th September – World Heart Day (Slogan Writing Competition)
- **October:** 8th October (Friday) – World Mental Health day (Poster Competition and Work shop)
- **November:** 5th November**-**Management Forum

DELHI PHARMACEUTICAL SCIENCES &RESEARCH UNIVERSITY

(Approved by UGC under section 2f of UGC Act)

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