CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT, ODISHA

SCHOOL OF PARAMEDICS AND ALLIED HEALTH SCIENCES

MASTER OF PUBLIC HEALTH

2022
SYLLABUS

Master of Public Health

Preface: Public health is an interdisciplinary study that focuses primarily on training human resources in delivering health service. It has a strong understanding of the determinants of health and the public health system in the country, the community context, and its influence on globalisation, urbanisation and national policies. The course also mandates to conduct relevant research to analyse complex public health issues and to collaborate with government, communities, academics to promote health and prevent diseases/disease conditions, as well as to provide evidence-based advice for healthy living. Public health being an interdisciplinary science integrates life sciences, social and behavioural sciences, and statistical sciences. Mater of Public Health programme is focused towards developing human resources with the ability to improve public health, develop and implement innovative programmes for health promotion and disease prevention, and contribute to policy making.

The objective of this program is to impart:

• To impart knowledge on aspects of disease prevention and health promotion
• To design and implement strategies to improve public health and strengthen the health care system
• Developing the critical ability to analyse the impact of public health policies on health enhancement
• Imparting skills for conducting research in public health to enhance evidence-based decision making

Scope: After completion of the course one can opt for career in:

- Health Informatics Specialist
- Healthcare Administrator
- Epidemiologist
- Public Health Project Manager
- Public Relation Officer in Health industry
- Health and Safety Engineer
- Public Health Educator
- Health care Consultant

Eligibility for admission:

The course is open to students with an undergraduate degree in life sciences (including microbiology, zoology, biotechnology, biochemistry, etc), clinical sciences (including BMLT, MBBS, BHMS, BAMS, BDS, BUMS), and allied science such as BMLT, BMRT, B.P.T./Physiotherapy, Nursing, Pharmacology, Nutritional Sciences.
(Minimum marks should be 50% at undergraduate level)

Examination: Examination rules will be as per guideline of CUTM Examination hand book.

Internship: A candidate will have to undergo internship for a period of six calendar months in a hospital/Diagnostics Centre /Research Institution equipped with modern laboratory facility, which fulfills the norms decided by the University. Dissertation will be compulsory to all students. Students will carry out dissertation work individually or in the group of not more than three students. The format for dissertation/Internship report will be similar to the research thesis style; incorporating chapters on:

Introduction, Materials and Methods, Results and Discussion and References / Bibliography. The dissertation will be submitted in a typewritten and bound form.

Degree: The degree of Master of Public Health course of the University shall be conferred on the candidates who have pursued the prescribed course of study for not less than two academic years and have passed examinations as prescribed under the relevant scheme and completed 6 months of

compulsory internship in the last semester.

On successful completion of two years programme, with a minimum course credit of **96 credits**, the candidate will be awarded with **"Master of Public Health"** from Centurion University.

SYLLABUS

Master of Public Health

Course structure

BASKET 1	**BASKET 2**	**BASKET 3**	**BASKET 4**	
School Core Courses	**Discipline Core Courses**	**Ability Enhancement Compulsory Course (AECC)** To be selected from University Basket	**Skill Courses** (To be selected from University Basket)	
SC-1	DC-1	AECC-I	SFS-1	
SC-2	DC-2	AECC-II	SFS-2	
SC-3	DC-3	AECC- III	SFS-3	**TOTAL CREDITS**
	DC-4			
	DC-5			
	DC-6			
	DC-7			
	DC-8			
	DC-9			
	DC-10			
	DC-11			
	DC-12			
	DC-13			
	DC-14			
	DC-15			
10 Credits	**68 Credits**	**6 Credits**	**12 Credits**	**96 Credits (Minimum Credits required)**

BASKET I

School Core Courses

Sl. No.	CODE	SUBJECT	SUBJECT TYPE (T+P+Pj)	CREDITS
SC-1	CUTM1721	Research Methodology	2+0+1	3
SC-2	CUTM2550	Biostatistics	2+0+2	4
SC-3	CUTM1746	Epidemiology	2+0+1	3

BASKET II

Discipline Core Courses

Sl. No.	CODE	SUBJECT	SUBJECT TYPE (T+P+Pj)	
DC-1	CUTM2551	Introduction to Public Health	3+0+1	4
DC-2	CUTM2552	Maternal and Child Health	4+0+1	4
DC-3	CUTM2553	Health Behavior & Promotion	4+0+1	4
DC-4	CUTM2554	Environmental and Occupational Health	2+0+1	3
DC-5	CUTM2555	Disease Related Epidemiology	3+0+1	4
DC-6	CUTM2556	Health Economics	3+0+1	4
DC-7	CUTM1726	Health Programme in India	2+0+1	3
DC-8		Clinical, Diagnostic & Therapeutic Services	2+0+2	4
DC-9		Hospital Administration	3+0+1	4
DC-10		Management of Quality	1+0+1	2
DC-11	CUTM2557	Public Health Nutrition	2+0+2	4
DC-12		Health Policy and Health Care Management	2+0+2	4
DC-13	CUTM2558	Community Based Service Learning	0+0+2	2
DC-14	CUTM2559	Internship	0+12+0	12
DC-15	CUTM2560	Project	0+0+12	12

Note:

Along with the School core and Disciple core subjects, the students need to opt for AECC Courses, Skill/ Domain/ Elective courses and value- added courses from the University Basket, as per the requirement by the University.

Research Methodology

Course Code: CUTM1721 **Credit: 2+0+1**

Objective

- To equip students with a basic understanding of the underlying principles of quantitative and qualitative research methods.
- Provide students with in-depth training on the conduct and management of research from inception to completion using a wide range of techniques.

Learning outcome

- Students can understand the ethical and philosophical issues associated with research in education
- This study provides knowledge on various modes of presenting and disseminating research findings.
- Enable students to acquire expertise in the use and application of the methods of data collection and analysis.
- Provide learning opportunities to critically evaluate research methodology and findings.
- Enable students to be reflexive about their role and others' roles as researchers.

Course Outline

Module I:

Introduction to Research: Definition, Scope, Limitations, and Types. Objectives of Research. ResearchProcess: Proposal Development: Basic steps involved in the health research proposal development process Literature Review: Importance and Sources, Strategies for gaining access to information, Library search, Computer search.Research Designs: Research Title and Objectives Criteria for selecting a research title, Formulation of research objectives, Types of research objectives, Qualities of research objective

Module II:

Data Collection: Secondary Data, Primary Data, and Methods of Collection. Scaling Techniques: Concept, Types, Rating scales & Ranking Scales, Scale Construction Techniques and Multi- Dimensional Scaling. Sampling Designs: Concepts, Types and Techniques and Sample size Decision.

Module III:

Research Hypothesis**:** Definition, Qualities of research hypothesis Importance and types of research hypothesis. Theory of Estimation and Testing of Hypothesis Small & Large Sample Tests, Tests of Significance based on t, F, Z test and Chi-Square Test. Designing Questionnaire. Interviewing. Tabulation, Coding, Editing. Interpretation and Report Writing.

Project:

- Writing a review on Nosocomial urinary tract infection.
- Writing a research article on antibiotic resistance patterns in wound infections.
- Writing a review on Virus culture
- Literature survey on Covid-19

***Suggested Readings*:**

- Research Methodology by C.R. Kothari (3rd Ed)
- Research Methodology In the Medical & Biological Sciences by PetterLaake et al.
- Essentials of Research Design and Methodology by Geoffrey Marczyk et al.

- WHO, Health Research Methodology: A guide for training in research Methods, 2nd Edition, WHO-WIPRO
- A Student's Guide to Methodology by Clough P and Nutbrown C. Sage Publication.
- National Ethical Guidelines for Health Research in Nepal, Available at Nepal Health Research Council.
- Field Trials of Health Interventions in Developing Countries by Smith PG, Morrow.

Biostatistics

Course Code: CUTM2550 **Credit: 2+0+2**

Course objectives

- To introduce students to the use of bio-statistics in health sciences
- To understand the role of biostatistics as a supportive discipline of epidemiology
- To train students in use of statistical software
- To explain use of data in decision making
- To make students aware of pitfalls in statistical analysis

Course content

Module I:
Introduction to biostatistics: Descriptive and Inductive statistics; Describing data: Variables: Nominal, Ordinal and Interval scale variables.

Module II:
Measures of central tendency: Mean (arithmetic, geometric, harmonic) Median, Mode; Merits and demerits of different measures. Measures of dispersion: Range, Variance, Standard Deviation; Merits and demerits of different measures of dispersion. Measures of Skewness and Kurtosis; Graphical presentation of data.

Module III:
Introduction to the concept of probability, events; exhaustive, mutually exclusive events; laws of probability, additive and multiplicative laws of probability and its properties; Discrete probability distributions: Binomial probability distribution and Poisson distribution and their properties. Continuous probability distribution. Introduction to normal distribution and its properties

Module IV:
Sampling methods: Type of sampling, Probability sampling, Non-probability sampling, sample size determination; Correlation: Concept of correlation, Pearson correlation coefficient, and its properties; Spearman ranks correlation coefficient

Module V:
Concepts in Inductive statistics: Population, sample parameter, and statistic. Sampling distribution of mean and standard error. Statistical hypothesis, critical region, level of significance, and two types of errors. Test of Significance: T-test for small samples and tests based on normal distribution for large samples. Testing the association of attributes and Chi-square goodness of fit. Nonparametric tests: One sample test, two sample tests, linear regression, multiple linear regressions, one way ANOVA and two way ANOVA

Projects:
1. Introduction to statistical software
2. Working with data: Computing variables, recoding variables, sorting data, grouping data, ensuring quality of data
3. Exploring data: Descriptive statistics, Frequencies, compare means, frequency tables and crosstabs, multiple response analysis

4. Analysing data: Pearson correlation, The Chi-Square Test of Independence, comparing means: One sample t tests, Paired t tests, Independent samples t tests, and One-way ANOVA

5. Multivariate analysis: Linear regression, logistic Regression analysis

Suggested reading:

1) Statistics for Social sciences: T. Rajaretnam, Sage publication. New Delhi 2016

2) Fundamentals of Statistics (Seventh Edition): S.G. Gupta. Himalaya Publication, Mumbai, 2017

3) Introduction to Biostatistics and Research Methods(Fifth Edition): P.S.S. Sundar Rao, J. Richard, Prentice Hall, New Delhi, 2012

4) An Introduction to Biostatistics: A manual for students in Health Sciences: P.S.S. Sundar Rao, J. Richard Prentice Hall, New Delhi, 1996

5) Bio-Statistics: A foundation for Analysis in the Health Sciences: Daniel, W.W., John Wiley and Sons Pub., Canada, 1991.

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

Epidemiology

Course Code: CUTM1746 **Credit: 2+0+1**

Objective:

- Understand the basic epidemiological methods and study designs.
- Understand and discuss population-based perspective to examine disease and health – related events.
- Discuss the ethical issues in epidemiological research.
- Explain the importance of epidemiology for informing scientific, ethical, economic and political discussion of health issues.
- Describe a public health problem in terms of person, place, and time.
- Evaluate the strengths and limitations of epidemiologic reports

Learning outcome:

- Distinguish between definitions of epidemiology and clinical epidemiology and public health research.
- Apply the terminology of the Epidemiologic Triad to an infectious disease.
- Describe the important historic events in the field of epidemiology.

Course Outline

Module I:

Introduction to Principles of Epidemiology: History, Definition, and scope of epidemiology,Achievements in epidemiology, Terms &Terminologies used in epidemiology. Measuring Health and Disease: Definitions of health and disease, Measures of disease frequency Use of available information, Comparing disease occurrence

Module II:

Concept of Epidemiological Study: Basic concepts of epidemiology Descriptive / Analytical, Applied/Experimental, Field Epidemiology. Concept of Prevention and Control of Diseases: Causation in epidemiology: The concept of cause, Establishing the cause of a disease Epidemiological markers, Phenotypic and genetic markers including molecular epidemiology.Disease surveillance: Clinical, Laboratory

Module III:

Communicable disease epidemiology, Clinical epidemiology, Environmental & occupational epidemiology, Nutritional epidemiology, Reproductive epidemiology, Social epidemiology, Food epidemiology. Epidemiology, Health services and health Policy: Health care planning, Monitoring & evaluation, The planning cycle, Epidemiology, public policy and health policy, Healthy public policy in practice

Suggested Readings:

11. Basic Epidemiology. By Beaglehole R., Bonita R., Kjellstrom , World Health Organization,Geneva, **https://books.google.com/books/about/Basic_Epidemiology.html?id=AAZGobMNTXgC**
12. Field Epidemiology, By B Gregg, 2nd Edition, Oxford University Press, 2002 **academic.oup.com/aje/article/156/8/783/78217**
13. Gordis L. E*pidemiology*, 2nd Edition, WB Saunders Company Aharcourt Health Sciences Company, Philadelphia.www.bookdepository.com/Epidemiology-Leon-Gordis/..
14. Epidemiology in Medicine, by LipppincottEilliams and Wilkins, and Walters Kluwer Company wkauthorservices.editage.com/.../medicine.html
15. Epidemiology, Principle and Method, McMahon B, Trichopoulos D, by 2nd Edition, Boston, Little, Brown.

Introduction to Public Health

Course Code: CUTM2551 **Credit: 3+0+1**

Objectives

- To understand the determinants and measures of disease and health related states
- To be able to use the interlinkages between health and development at the local, national, and international levels when developing health programmes

Course content:

Module I

Introduction to Public Health: Definition of Public Health and Associated Terms; Current Concerns in Public Health: Global and Local; Group work and students presentation on current public health challenges from their shared experiences or regions

Module II

History and Evolution of Public Health: Core functions and scope of public health; History of public health and evolution of Public Health

Module III

Health, Disease, Ethics and Determinants: Concept of health and disease; Natural history of disease; Levels of prevention; Determinants of health; Infectious Disease and Germ Theory; Introduction to public health ethics; Globalization and Health; Governance in Health; Pharmaceuticals and Health; International Health Regulations; Introduction to Research Proposal Writing; Qualities of a good research proposal; Grant writing elements

Module IV

Overview of health systems: Indian Health Systems;Systems thinking in public health;Case study on health systems units and key functions. Evolution of global public health initiatives: primary health care, selective primary health care, MDGs, SDGs.

Essential Readings:

1. Park's Textbook of Preventive and Social Medicine
2. Mary-Jane Schneider, Introduction to Public Health, 2nd Ed... Jones and Bartlett, 2006.
3. Essentials of Public Heath - BJ Turnock. Jones & Bartlett, 2007

4. Oxford textbook of Public Health Ed. Roger Detels, James Mcewen, Robert Beaglehole, and Heizo Tanaka Oxford University Press (OUP) 4th Edition: 2002.
5. Maxcy-Rosenau-Last Public Health & Preventive Medicine, Fourteenth Edition Ed Robert Wallace, MD, et al.
6. International Public Health: Diseases, Programs, Systems, and Policies by Michael Merson, Robert E Black, Anne J Mills - Jones and Bartlett Publishers.

Maternal and Child Health

Course Code: CUTM2552 **Credit: 3+0+1**

Course overview
This module is designed to build upon concepts taught in earlier courses under MPH program towards effective utilization of skills in the context of the MCH programs. In addition, it will also refresh an understanding of the salient features of MCH. The course will also be designed to improve the evaluation skills of supervisors for the program activities.

Course Content
Module I:
Develop an acquaintance with the MCH Program; Identify the impact of improved management skills on programmatic outcomes; Outline the management aspects relevant to the level of functioning in the context of the MCH.

Module II:
Perform an evaluation of the programmatic activities in nearby localities; History of Maternal and Child health Programs in India; Scope & Functions of RCH programs

Module III:
Maternal death audits; Access and utilization of care under RCH; Components of adolescent care under RCH; PIP for vulnerable groups in RCH

Module IV:
MDG 4- IMR; Neonatal health Lecture; IMNCI Operational plan; Supportive supervision and monitoring in RCH; Quality of care in RCH

References:
1. Jugal Kishore. National Health Programmes: National Policies & Legislation related to Health. 7th Edition, 2005
2. IMNCI-Module No. 1-9 (UNICEF-India)
3. State & National PIP documents of RCH-II (Government of India)
4. A Strategic Approach to Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A) in India. Ministry of Health & Family Welfare Government of India February 2013
5. Revised operating manual for preparation and monitoring of RCH-II & immunization component of NRHM state programme implementation plans (PIPs). Ministry of Health & Family Welfare Government of India. November 2010
6. Guidelines for Preparation of Annual Programme Implementation Plan National Rural Health Mission. 2013-2014

Health Behavior and Promotion

Course Code: CUTM2553 **Credit: 3+0+1**

Course objectives:

- To introduce students to the factors affecting on health and illness behaviour of population, and methods of behavioural modifications

Course outline:

Module I:

Introduction to health behavior research; attitude, behaviour, perception, risk, self-efficacy etc and how these concepts used in prevention and health promotion programmes; Introduction to health behaviour theories and models : Health Belief Model, Transtheoretical model, Theory of Reasoned Action and Planned Behavior.

Module II:

Behaviour change communication: Adherence and Resistance, Motivation and behaviour change, illness, diseases and behaviour change, social and psychological factors contributing to long-term behavioural change

Module III:

Health education: methods of health education interventions, ways of communication, and assessment of impact of health education; Health promotion and disease prevention: a) Lay Representations of illness, social and psychological factors involved in the illness experience b) Stress and illness: Stress and Coping, role of social support in stress, coping and health outcome c)Substance use and psychological intervention d) Pain and chronic illness

Module IV:

Methods to measure behavioural change: scale development and validation of a scale by taking examples from existing research, when to use scale, analysis of data gathered using scale.Cultural Epidemiology Framework and respective domains: Cultural identity (Domain I), Illness Explanatory Model (Domain II), key social interpersonal relations (Domain III) and relevant societal structural features of the health systems acknowledging the potential impact of social status and political economy (Domain IV)

Suggested reading:

1) Marks D, Murray M, Brian Evans, Estacio EV, Health Psychology. Delhi: sage publication, 2011

2) McDowell Ian, Measuring Health: A guide to relating scales and questionnaires. New York: Oxford University Press, 2006.

3) Scott Kahan, Andrea C. Gielen, Peter J. Fagan, Lawrence W. (eds)Green Health Behavior Change in Populations. USA: JHU Press, 09-Oct-2014

4) Karen Glanz, Barbara Rimer and K. Viswanath (eds) Health Behaviour: Theory Research and Practice. Jossey-Bass, July 2015

5) Prestwich,A. Jared Kenworthy , Mark Conner Health Behavior Change: Theories, Methods and Interventions. London and Newyork: Routledge, 6 October 2017, ISBN-13: 978-1138694811
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6) Baranowski, T., Perry, C.L., Parcel, G.S. 2002. How Individuals, Environments, and Health Behavior Interact. In: Glanz, K., Rimer, B.K., Lewis, F.M., editors. Health Behavior and Health Education: Theory, Research, and Practice. 3rd Edition. San Francisco, CA: Jossey-Bass. p. 165-184.

7) Gitlin L., Sara Czaja. Behavioral Intervention Research: Designing, Evaluating, and Implementing. New York: Springer Publishing Company, 2015 ISBN 13 9780826126580

8) Weiss, M. G., (2017). The promise of cultural epidemiology. Taiwanese Journal of Psychiatry, 31(1), 8–24.

9) Weiss M. G. (2018). Cultural Epidemiology: Conceptual framework and current directions of an interdisciplinary field. Bulletin of the Institute of Ethnography SASA

Environmental and Occupational Health

Course Code: CUTM2554 **Credit: 2+0+1**

Course objective:

- To enable the students to identify the various sources of environmental threats and occupational hazards to health and the ways to manage these threats and hazards so as to prevent related diseases

Course outline:

Module I:
Principles of environment health and human ecology; Food sanitation and safety

Module II:
Vector and rodent control; Waste disposal; Environmental pollution: Environment health policy, Current and emerging issues in environment including global warming

Module III:
Occupational health: Hazards at the workplace, Diagnostic criteria of various occupational diseases; Workplace safety: Prevention of occupational hazards (including accident prevention) Legislations related to occupational health, Employees State Insurance Scheme

Disease Related Epidemiology

Course Code: CUTM2555 **Credit: 3+0+1**
Objective:

- Understand the basic epidemiological methods and study designs.
- Understand and discuss population-based perspective to examine disease and health – related events.
- Discuss the ethical issues in epidemiological research.
- Explain the importance of epidemiology for informing scientific, ethical, economic and political discussion of health issues.
- Describe a public health problem in terms of person, place, and time.
- Evaluate the strengths and limitations of epidemiologic reports

Course Content:

Module I:

Epidemiology and management of Vector Borne Diseases; Health measures following disasters; Various public data sources: CRS, SRS, Census, NFHS, DLHS, HMIS, MCTS, etc.; Recognize the burden of communicable diseases (CD) affecting the population; Examine factors contributing to the persistence of infectious diseases

Module II:

Understand reasons for emergence and re-emergence of infectious diseases; Key concepts: Incubation periods, Epidemic patterns, Modes of transmission, Transmission dynamics, Measures of infectiousness, Secondary attack rates; Analyze the transmission dynamics of diseases and design appropriate control measures; Apply basic infectious diseases epidemiological skills to address major emerging and re-emerging communicable diseases; Surveillance: Case in point: Integrated Disease Surveillance Program (IDSP)

Module III:

Epidemiology of common communicable diseases like TB, Malaria, Leprosy, Polio, STIs, AIDS, Meningococcal meningitis, Hepatitis B, and Measles (mathematical models of infection dynamics, outbreak investigation and surveillance, schedules, adverse reactions, contraindications, vaccine efficacy, impact assessment)

Module IV:

Comprehend the upstream and downstream determinants of NCDs; Understand the Individual approaches/or high-risk approaches and population based/ or public health approaches to prevent NCDs; Familiarize with the current projects on targeting the prevention of NCDs, including, innovations in prevention; Comprehend how sustainable development and prevention of NCDs go hand in hand

Suggested Readings:

1. Basic Epidemiology. By Beaglehole R., Bonita R., Kjellstrom , World Health Organization,Geneva, **https://books.google.com/books/about/Basic_Epidemiology.html?id=AAZGobMNTXgC**
2. Field Epidemiology, By B Gregg, 2nd Edition, Oxford University Press, 2002 **academic.oup.com/aje/article/156/8/783/78217**
3. Gordis L. E*pidemiology*, 2nd Edition, WB Saunders Company Aharcourt Health Sciences Company, Philadelphia.www.bookdepository.com/Epidemiology-Leon-Gordis/..
4. Epidemiology in Medicine, by LipppincottEilliams and Wilkins, and Walters Kluwer Company wkauthorservices.editage.com/.../medicine.html
5. Epidemiology, Principle and Method, McMahon B, Trichopoulos D, by 2nd Edition, Boston, Little, Brown.

Health Economics

Course Code: CUTM2556 **Credit: 3+0+1**

Course Objective:
Health Economics brings together the issues of generating, pooling, purchasing and delivering health services with the aid of the knowledge of economics.

Course content:
Module 1:
The National and International Health Scene: Organisation of health care delivery in India. General Issues concerning health care delivery in India. Health indicators of India and some other countries.Correlation with the level of economic development, and with public expenditure on health as a share of total public expenditure.Review of the Indian National Health Policy is made along with a discussion of other feasible alternatives. Interface between health and economics. Nature and scope of health economics, fields of health economics. Special characteristics of health care.

Module II:
Resource Allocation in the Health Sector: This module deals with resource allocation problems in private and Govt. hospitals and with resource allocation problems facing a private practitioner. General problems of Resource allocations in health care sector. Production function, productivity, efficiency and equity and considerations, all applied to the hospital and physician services are covered. This section also deals with resource allocation between the private and the public provision of health services, between preventive and curative care, between traditional and modern systems and between general and referral (specialised) services.

Module III:
Evaluation of Benefits and Costs of Health Services: The application of benefit cost analysis to public health and family planning projects; the role of health in economic development; value of output-loss due to no. of sick days; and benefits and costs, both private and social, of training professional manpower such as physicians, dentists, pharmacists, nurses, etc.

Module IV:

Financing of Health Services: A review of per capita private and public expenditure on health services over time and in different parts of the country. An analysis of the sources of (public) finance for health.The need for a general health insurance due to failure of private health insurance markets.The need for a social health insurance for the poor, disabled and the aged. A comparative analysis of alternative

payment systems such as health insurance.

Health Programme in India

Course Code: CUTM1726 **Credit: 2+0+1**

Course Objective:

- Understanding efficiency of health education and health promotion programmes.
- Reducing exposure to harmful factors in the living, working and educational environment and mitigating their health effects.
- Improving efficiency and effectiveness for Health care industry.
- Improving access to and efficiency of primary health care.
- Understanding about various health programme in India.

Learning Outcome:

- Perform as a health care team manager.
- Work as team leader in different types of health programme.
- As a service provider n National Tuberculosis Programme.
- Able to give the service for health awareness Programme.

Course Outline

Module I:

Introduction to Health Programme in India, Voluntary Health Agencies in India, Indian Red Cross Society, Central Social Welfare Brand, Indian Council for Child welfare.

Module-II:

Family Planning Association of India, National programme for control of blindness, National Tuberculosis Programme, National Leprosy Eradication Programme

Module-III:

National Programme for health care of elders, National Programme for prevention and control of cancer, Diabetes, Cardiovascular disease, National Immunization Programme, AYUSH- Objective and Goal.

Suggested Reading:

3. Text Book of Social and Preventive Medicine by Park JE and Park K

Clinical, Diagnostic & Therapeutic Services

Code: **Credit:** 2+0+2

Course Objective:

The primary aim of this subject is to acquaint students to Various Clinical Services provided hospitals

Course Outcome:

On successful completion of the course the learner will be able to

- Design and manage secondary and tertiary systems of medicine

- Maintain hospital records appropriately
- Handle specialist services effectively

Course Content

Module I:

Common Terms of Healthcare Management: Terms related to levels of healthcare; Primary; Secondary and Tertiary – Systems of Medicine – Ayurveda, Siddha, Unani, Homeopathy, Yoga, Naturopathy, Reiki, etc. –

Preventive and Curative Medical Care – General and Specialty Hospitals – Pharmacopeia (in patient and out patient)

Module II:

Specialty-wise terminology – Pathology terms of Common Use – Clinical, diagnostic and therapeutic terms – Paediatric services – Dental – Psychiatric.

Module III:

Casualty and Emergency – Neurology – Obstetric and Gynaecology – Dermatology intensive care – Coronary care services.

Module IV:

Medical Records – Admission – Billing – Nursing Records – Diagnostic Records – Infection Control Records – Maintenance of Intensive Care Units Records.

Housekeeping Records – Food Records – Engineering Records – Maintenance Records – Security Records – Fatal Documents – Mortuary Maintenance Records – Transportation – Medico Legal Records.

Module V:

Concepts of Disease: Disease and Epidemiology; Aims of Epidemiology; Principles of Epidemiology; Methods of Epidemiology; Natural History of Diseases; Current Diseases-Concepts; Food and Water Borne Diseases; Concepts of Prevention and Mode of Intervention; Changing Pattern of Diseases

References:

2. Clinical Laboratory Management by Lynne S Garcia

Hospital Administration

Code: **Credit:** 3+0+1

Course Objective:

This subject will provide knowledge about the administration of hospitals

Course Outcome:

On successful completion of the course the learner will be able to

- Analyze the structure and interdependence of healthcare system elements and issues using critical thinking to formulate innovative system designs.
- Create policy and processes and execute decisions in compliance with the legal, regulatory and ethical

considerations inherent in managing healthcare systems and organizations
- Integrate concepts of ethics, privacy, law and regulation to achieve optimal organizational effectiveness

Course Content

Module I:

Hospital administration Principles Introduction to the hospital field- Definitions -- hospital and medical care, types, control.- Functions-- medical care, prevention, professional education and research. - Role of hospital in health spectrum. Hospital of India-to-day. Classification & Accreditation- Number; type; size; distribution; ownership; utilization; rations; trends; problems

Module II:

Trends of Hospital Administration Abroad. Hospital administration-Principles Responsibilities, Roles & Functions of Hospital Administrator, Expected qualities of a good Hospital Administrator Organization of Hospital. The governing authority; the administrator; business aspects; clinical aspects; channels of authority and communication. Importance of qualified v/s non-qualified, Medical v/s non Medical Hospital Administrator.

Module III:

Problems of hospital administration and their expected solutions. Management of different Clinical, Para clinical, and Support service departments in Hospitals Hospital hazards Administration of Government (Rural, District & Municipal Hospital) v/s Private Hospitals Administration of a teaching hospital. Administration of a corporate hospital. Administration of a voluntary & charitable hospital.

Module IV:

Hospital Audits, Financial Audit, Clinical Audit, Tissue Audit Nosocomial Infection, Management of Biomedical Waste in Hospitals (Law & the Reality), Role of Administration in Medical & Paramedical Education and Research Recent trends in hospital administration., Health Education in Hospital, Responsibilities of the hospital to the general public, Methods of Health Education in hospital and their importance. Patient Education through I.T. (CAPE), Inquiries and Disciplinary Actions. Disaster Management Programs.

References

1. Hospital Administration by D.C.Joshi & MamtaJoshi, Publisher Jaypee Brothers

2. Hospital Administration Principles & Practices by Yashpal Sharma & R K Sharma, Publisher Jaypee Brothers

Management of Quality

Code: **Credit:** 1+0+1

Course Objective:

To provide basic knowledge on the concepts of Healthcare Quality Management towards continuous improvement of quality patient care.

Course Outcome:

On successful completion of the course the learner will be able to

- Prepare quality policy and objectives for hospitals
- Plan and organize quality accreditation

Course Content

Module I:

Basic Concept, Definition, Terminology of Quality Management, Quality Policy and Objectives. Organisation for Quality, Quality Circles.

Module II:

Economics of Quality. Quality Assurance, Zero Defect Concept, Quality Specifications.

Module III:

Statistical Aids in Limits and Tolerances. Inspection. Manufacturing Planning for Quality.

Module IV:

Sampling Plans for Attributes and Variables and Various Control Charts. Total Quality Control Accreditation: requirement, procedures, exercises and benefits.

References:

1. Reference Books: 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

Public Health Nutrition

Course Code: CUTM2557 **Credit: 2+0+2**

Objectives:
This course aims to provide an appropriate orientation and sufficient training in public health nutrition in an emerging country setting. It provides an integrated program covering life cycle approach to nutrition, epidemiological, public health, social and biological aspects of nutritional science. It will also cover the epidemiological methods of research, community nutrition and new innovations inaspects of nutritional science.

Module I:
Concept of different food groups: Recommended Dietary Allowances &Nutrition in pregnancy, Nutrition in Lactation, Nutrition in infants&Nutrition in preschool children, Nutrition in school age and Nutrition during adolescenceNutrition during adulthood&Nutrition during old age

Module II:
Energy: Energy content of foods, Macro and Micronutrient metabolism and uses.

Module III:
Relation of nutrition to development in terms of socio economic, industrial andagricultural development and consequences of malnutrition, Meaning, nature and importance of nutrition education to the community.

Module IV:
Assessment of nutritional status, Nutrition Intervention programmes in India, National organization concerned with food and nutrition

Health Policy and Health Care Management

Course Code: **Credit: 2+0+2**

Objectives:
The course aims atteaching the student about the need of Health policies and the concept of health care

Course Outcome:

On successful completion of the course the learner will be able to

Under stand the importance of technology in Healthcare administration

- Learn the advantages of different health policies

- Understand therole vatious classification of hospitals
- Learn about the health and family welfare services

Course content
Module I:
Demography Trends: World Population Trends; Indian Population Trends; Demographic Structure and Health Implications; Health Policy - Meaning and Need; National Health Policy - Features: Objectives, Current Scenario; Preventive and Promotive Aspect of Health; National Health Programmes in India; Planning under Five Year Plans and Plan Outlays; Cancer Control Programme.

Module II:
Health Care: Concept of Health Care; Levels: Primary, Secondary and Tertiary; Present Status of Health Care System in India; Structure and Classification of Hospitals; Hospital Services

Module III:
Determinants of Health: Life Style; Socioeconomic Conditions; Economic Status; Heredity; Health and Environment; Regulation; Health and Family Welfare Services

Module IV:
Organizations for Health: Voluntary Health Agencies in India; Indian Red Cross Society; Bharat Sevak Samaj (BSS); Central Social Welfare Board (CSWB); Indian Council for Child Welfare (ICCW); Family Planning Association of India; National Tuberculosis Control Programme; National Programme for Control of Blindness; All India Women's Conference (AIWC); Hind Kusht Nivaran Sangh; International Organisations

References:

1. Peter R. Kongstvedt, Essentials of Managed Health Care, 2007.
2. Sherman Follard, Allen C. Goodman, Mison strw, The Economic of Health and Health Care, 2005.

Community Based Service Learning

Course Code: CUTM2558 **Credit: 0+0+2**

Course objectives:

- To learn about health systems and services in high, medium, low-income settings

Course outline:

Students will select any topic in the field of maternal and child health, infectious diseases, non-communicable diseases, injuries, mental health and prepare a dissertation on the health systems and health interventions and present an analysis of it.

The purpose is to carry out project work in assistance with a mentor. The project should be relevant to the syllabus and should be qualitatively initiated towards fetching a research publication/ case study/ clinical study/ community service/ survey on successful completion within the stipulated time. Outcome: Research paper publication/ new idea generation/ case study/ clinical study/ community service/ survey.

Internship

Course Code: CUTM2559 **Credit: 0+12+0**

Internship
Thesis Guideline

This Guideline is designed to provide students the knowledge and practice of public health research activity, to enable them to carry out researches and solve research related problems and to help them in writing thesis and defend their work. Upon successful completion of the course, the students shall be able to:

1. Search relevant scientific literature
2. Develop a research proposal
3. Employ appropriate data collection techniques and tools
4. Manage collected data
5. Analyze data with appropriate statistical techniques
6. Write thesis
7. Defend the findings

Internship

1. Case record
2. Lab management and ethics
3. Evaluation-Guide(internal)
   -Industries guide (external)
   -University-project report/Viva

Project

Course Code: CUTM2560 **Credit: 0+0+12**

Project work:

Proposal Development:

At the ending of second year (fourth Semester), students individually consultation with designated faculties and extensive literature survey will develop research proposal during the initial 6 months period.

Data Collection/ Thesis Writing:

Students will carry out data collection, data management, data analysis, and thesis writing during the remaining period (fourth Semester).

The Dissertation should have following format:

1. Title
2. Introduction
3. Materials and Methods
4. Results
5. Discussion
6. Conclusion
7. Recommendation
8. References
9. Appendix