

# Post Graduate Diploma in Medical Records Science

## Introduction:

Information is the life blood of health care delivery system. The medical record, in manual or automated form, houses the medical information that describes all aspects of patient care. Physicians, nurses, and other health care providers require medical information for treating a patient. The medical record serves as a communication link among care-givers. Documentation in the medical record also serves to protect the legal interests of the patient, health care provider, and health care facility.

## Objectives/aim of the course:

The aim of the recommended curriculum is to produce Medical Record professionals who understand the:

- Definition and characteristics of 'Good' Medical Record
- Values of 'Good' Medical Record to various users
- Required Characteristics of entries in medical Records
- Responsibility for Medical Record Quality

They should be able to manage:

- Analysis of Medical Record-Quantitative & Qualitative and Incomplete RecordControl
- Source-oriented, Problem-oriented, and Integrated Health Information Management
- Medical Record Forms and their Content
- Standard Order of Arrangement of Medical Record forms

## Objectives

To develop competent professionals who can:

- Enable the health care organization to better manage patient information
- Support health care administrators in routine activities
- Apply the knowledge obtained on specialized areas effectively in the health care system
- Work collaboratively with other health care professionals to achieve a quality service

## Eligibility for admission:

### Selection procedure

1. He/she has passed the bachelor of science degree or equivalent examination recognized by any Indian University or a duly constituted Board with 50% pass marks
2. He/she has attained the age of 20 years as on - (current year) & maximum age limit is 30 years.

### Duration of the course

Duration of the course is of 2 years or 4 semesters (inclusive of internship) with 970 hours of Theory & 770 hours of Practical Classes

### Medium of instruction:

English shall be the medium of instruction for all the subjects of study and for examination of the course.

### Attendance:

A candidate will be permitted to appear for the Examination for any semester if he / she secure not less than 80% of attendance (separately in theoretical and Practical) during the calendar year, failing which he / she should complete the number of days/hours and undergo the next semester/final examination conducted by the Institute.

A candidate has to secure minimum 80% in Skills training (practical) for qualifying to appear for the final examination. No relaxation, whatsoever, will be permissible to this rule under any ground including indisposition etc.

### Assessment:

The scheme of examination is as follows:

#### First Year

Sl. No	Subject Title	Internal Assessment		Examination	
		Max	Min	Max	Min
1.	Health Information Management – I	25	15	50	25
2.	Medical Terminology	25	15	50	25

#### Second Year

Sl. No	Subject Title	Internal Assessment		Examination	
		Max	Min	Max	Min
1.	Health Information Management – II	25	15	50	25
2.	International Classification of Diseases(ICD-10) and Surgical Procedures	25	15	50	25
3.	Log Book/Project/Record work/Viva-voce	-	-	50	25

#### Internal Papers

Sl. No	Course Titles	Internal Assessment	
		Max	Min
1.	Human Anatomy and Physiology	25	15
2.	Biostatistics & Research Methodology	25	15
3.	Communication and soft skills	25	15

4.	Biochemistry	25	15
5.	Microbiology	25	15
6.	Basic computers and information science	25	15

Marks for Internal papers will not be added along with the Final Examinations. Marks to be sent to the Registrar.

## Model Curriculum Outline

### First Year

No	Course Title	Hours		
		Theory	Practical	Total
1.	Introduction to Healthcare Delivery System in India	10	0	10
2.	Health Information Management - I	180	210	390
3.	Human Anatomy and Physiology	40	0	40
4.	Research Methodology and Biostatistics	40	20	60
5.	Medical Terminology	150	120	270
6.	Communication and soft skills	20	10	30
7.	Clinical Visits	0	20	20
Total		440	380	820

### Second Year

No	Course Title	Hours		
		Theory	Practical	Total
1.	International Classification of Diseases (ICD-10) and Surgical Procedures and SNOMED-CT	170	110	280
2.	Health Information Management - II	180	70	250
3.	Biochemistry & Microbiology	60	0	60
4.	Pathology	30	0	30
5.	Forensic Medicine	10	0	10
6.	Basic computers and information science	80	150	230
7.	Log Book/Project/Record work	0	60	60
Total		530	390	920

## First Year

### Introduction to National Healthcare System

The course provides 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. Topics to be covered under the subject are as follows:

1. Introduction to healthcare delivery system
2. National Health Programme
3. Demography & Vital Statistics

- 3.1. Demography – its concept
- 3.2. Vital events of life & its impact on demography
- 3.3. Significance and recording of vital statistics
- 3.4. Census & its impact on health policy
4. Epidemiology
  - 4.1. Principles of Epidemiology
  - 4.2. Natural History of disease
  - 4.3. Methods of Epidemiological studies
  - 4.4. Epidemiology of communicable & non-communicable diseases, disease transmission, host defense immunizing agents, cold chain, immunization, disease monitoring and surveillance.

### Health Information Management – I:

Health Information Management serves the healthcare industry and the public by managing, analyzing, and utilizing the data vital for patient care and making the data accessible to healthcare providers. Enhancing individual patient care through timely and relevant information is one of the primary goals for the Health Information Management Technology

- I. Characteristics of quality Health Information Management:
  - a. Definition, Characteristics of Medical Record
  - b. Values of Medical Record to various users
  - c. Required Characteristics of entries in medical Records
  - d. Source-oriented, Problem-oriented, and Integrated medical records
  - e. Medical Record Forms and their Content
  - f. Standard Order of Arrangement of Medical Record forms
  - g. Analysis of Medical Record-Quantitative & Qualitative
  - h. Incomplete Record Control
  - i. Practical: Actual handling of medical records
- II. Medical Records for different patient encounters with health care facility
  - a. Ambulatory Care Records {Emergency & Outpatient Records}
  - b. Clinical Records in Long Term Care and Rehabilitation Facilities
- III. Filing Methods, Storage, and Retention
  - a. Numbering and Filing Systems
  - b. Filing
  - c. Storage- Microfilming and Disk Storage
  - d. Retention
  - e. Registers & Indexes
  - f. Record movement control & Tracking system
- IV. Organizational Aspects of the Centralized Admitting Services
  - a. Principles of Identification of a Patient
  - b. Methods of Collection of Identification Data
  - c. Types of Central Admitting Services
  - d. Admitting Policies
  - e. Procedure Outlines for Admissions
  - f. Flow of Records following Admissions
  - g. Advantages of good Admitting Policies and Procedures
- V. Medical Record Department Management
  - a. Planning, Organizing, Directing and Controlling

- b. Personnel Management
  - c. Principal Responsibilities and Duties of the Medical Record Administrator
  - d. Tools of Management in the Hands of the Medical Record Administrator
- VI. Intradepartmental and Interdepartmental Relationships
- a. Developing Intradepartmental Relationship
  - b. Developing Interdepartmental Relationships with various Departments of the Hospital
- VII. Medico-Legal Aspects of Health Information Management
- a. Medical Ethics, Hippocratic Oath, and Code of Ethics for the HIM Professionals
  - b. Ownership of the Medical Record
  - c. Privileged Communication and confidentiality of Medical Records
  - d. Release of Information: To the Patient, To Authorized Persons /Agencies Legal Implications of release of Information to unauthorized, Persons/Agencies.
  - e. Consents: Different types and their validity, invalidity blanket, and improper consents.
  - f. Corrections in identification data medical documentations
  - g. Rights and responsibilities of patients
  - h. Medical Record in a Court of Law
  - i. Legal requirements in Retention of Medical Records

### Human Anatomy & Physiology

Understand the technical functions of various organs and systems of the body  
 Acquire knowledge about various body fluids, hormones and enzymes

Topics Covered:

- o Integumentary system,
- o Musculoskeletal system,
- o Respiratory system,
- o Cardiovascular system,
- o Blood and lymphatic system,
- o Digestive system,
- o Urogenital systems
- o Nervous system,
- o Organs of special sense.

### Research Methodology and Biostatistics

The objective of this is to help the students understand the basic principles of research and methods applied to draw inferences from the research findings.

1. Introduction to research methods
2. Identifying research problem
3. Research design
4. Basic Concepts of Biostatistics
5. Types of Data
6. Research tools and Data collection methods
7. Developing a research proposal

8. Frequency Distribution: Measures of Central Tendency – Arithmetic Mean, Median and Mode for un-grouped and grouped data
9. Presentation of data: Bar diagram, Pie Diagram, Histogram, Frequency polygon, Frequency curve, and Line diagram.
10. Measures of Variation: Range, Inter Quartiles, Mean Deviation, Standard Deviation Coefficient of Variation
11. Probability: Definitions of Classical Probability (Priori) and Frequency, Addition and Multiplicative Theorems of Probability
12. Probability Distribution: Binomial distribution, Poisson distribution and Normal distribution
13. Sampling- Definition: Population and simple Sampling, Simple Random Sampling, Stratified Random Sampling, Systematic Random Sampling and Cluster Sampling
14. Correlation and Regression: Scatter Diagram, Linear Correlation and Linear Regression Equation Test of Significance – Procedure Test of Significance for large samples and for small samples Chi-square Test – Testing for association Misuse of Chi-square Test

### Communication and soft skills

Major topics to be covered under Communication course

1. Business Communication Skills. With focus on speaking - Conversations, discussions, dialogues, short presentations.
2. Teaching the different methods of writing like letters, E-mails, report, case study, collecting the patient data etc. Basic compositions, journals, with a focus on paragraph form and organization.
3. Basic concepts & principles of good communication.
4. Ability to create agendas, lead meetings, maintain documentation, and follow up
5. Effective communication and negotiation skills.

### Medical Terminology :

This course introduces the elements of medical terminology. Emphasis is placed on building familiarity with medical words through knowledge of roots, prefixes, and suffixes. Topics include: origin, word building, abbreviations and symbols, terminology related to the human anatomy, reading medical orders and reports, and terminology specific to the student's field of study. Spelling is critical and will be counted when grading tests.

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

- To know the elements of medical words.
- To develop sense of correctness of medical terms.
- To gain an understanding of standard medical abbreviations.
- To understand the relationship between medical terms and their synonyms in common usage.
- To spell correctly the medical terms, to detect the meaning of unfamiliar medical terms, by analysis into their elements, and to follow directions given in medical phraseology
- To appreciate the logical order of medical terms, the exactness of concepts in medical terms, and the importance of medical terminology consciousness and continuous study.

All the above characteristics will enable the students in:

- Developing an ability to read and understand medical records and the medical literature;
- Writing terms correctly when abstracting medical records
- Establishing accuracy in International Classification of Diseases, Surgical procedures which will be useful in statistics, medical billing, and auditing medical insurance claims.

Topics to be covered under the subject are as follows:

### I. Introduction to Medical Terminology

- a. Definition and Origin of Medical Terms.
- b. Define word roots, prefixes, and suffixes
- c. Basic medical terms
- d. Components of Medical Terms
- e. Prefixes
- f. Suffixes
- g. Roots and Combining forms
- h. External Anatomy and Internal Anatomy
- i. Additional Lists and their combining forms grouped as: Verbs, Adjectives, Body Fluids, Body Substances, Chemicals, Colours and Phobias

### II. Terms Relating to the Body as a Whole

- a. Study of the Body
- b. Basic Structures
- c. Cells
- d. Tissues
- e. Organs
- f. Systems
- g. Directions
- h. Anatomic Planes and Position

### III. Basic medical abbreviations/symbols

- a. Diagnostic, surgical, and procedural terms and abbreviations related to the integumentary system, musculoskeletal system, respiratory system, cardiovascular system, nervous system, and endocrine system.
- b. Interpret medical orders/reports (Practical training to be included)

### Community orientation and clinical visit

The objective of this particular section is to sensitize potential learners with essential knowledge; this will lay a sound foundation for their learning across the post graduate program and across their career. Innovative teaching methods should be used to ensure the attention of a student and make them more receptive such as group activities, interactive fora, role plays, and clinical bed-side demonstrations.

The clinical visit will include visit to their respective professional department within any of the healthcare delivery system -Sub centre, PHC, CHC, SDH, DH and Medical college, private hospitals, dispensaries and clinics.

## Second Year

### International Classification of Diseases (ICD-10) and Surgical Procedures and SNOMED-CT:

- Introduction and usage of International Classification of Disease

- Coding of final diagnosis and secondary diagnosis.
- Disease and operation nomenclatures, International Classification of Disease 10, International Classification of Disease – 9CM, indexing of patient care data.
- ICD-10 CM- Alpha-numeric coding Guidelines
- International Classification of Diseases
  - Volume 1 – Tabular list
  - Volume 2 – Instruction manual
  - Volume 3 – Alphabetical Index
- Morbidity and Mortality Reporting
- CPT – Current Procedural Terminology (Introduction)
- HCPCS – Healthcare Common Procedure Coding System (Introduction)
- ICD- Oncology (ICD - O)
- ICP (Procedure) coding system - Practical
- International Classification of Diseases - Practical
- SNOMED-CT

## Health Information Management II

### I. Organizational Aspects of Medical Record Department/Services

- a. Policy development
- b. Functions
- c. Location, Space and Layout
- d. Equipments
- e. Forms Designing and Control
- f. Medical Records Flow and processing

### II. Health Care Statistics, Quality control of Data Collection & Presentation

- a. Health Care Statistics
- b. Inpatient census and rates computed from it.
- c. Processing and reporting of Vital Health Statistics
- d. Reporting of Notifiable Diseases to Public Health Authorities

### III. Quality Management

- a. Quality Assurance and Quality Improvement
- b. Utilization management & Utilization review processing
- c. Accreditation requirements, licensing regulations, and certification requirements relevant to department/organization.
- d. International Standards Organization [ISO], Quality Council of India, Joint Commission International [JCI] & National Accreditation Board of Hospitals [NABH]

### IV. Fundamentals of Health Informatics

- a. Hospital Information System (HIS) with Electronic Medical Records (EMR) or Electronic Health Information Management System
- b. EHR – definitions – contents and examples of EHR practices
- c. Preliminary steps in implementation of EHR
- d. Issues and challenges in implementation of EHR
- e. Planning for the introduction of EHR
- f. Factors to be considered when developing EHR & implementation plan

### V. Health Insurance and Billing Design:

- a. Definition and history of Health Insurance



- b. Concepts in Health Insurance
  - c. Types of health insurance
    - i. Social health insurance
    - ii. Private health insurance
    - iii. Community health insurance (CHI)
    - iv. Government-initiated health insurance schemes (GHI)
  - d. Denial of claims
  - e. Role of MRD in Health Insurance and Billing
- VI. Medical Transcription:
- a. Basics of Medical Transcription
  - b. Objectives of Medical Transcription
  - c. Rules of Medical Transcription
  - d. Advantages of Medical Transcription
- VII. Telemedicine:
- a. Objectives of Telemedicine
  - b. Technology of Telemedicine
  - c. Rules of Telemedicine
  - d. Future Telemedicine plans

## Biochemistry

Topics covered:

- a) Chemistry of the human body fluids in health and diseases
- b) Cerebrospinal fluid
- c) Clotting mechanism of the blood,
- d) Enzymes produced in the G.I.Tract,
- e) Vitamins, Hormones, Proteins and Non-proteins,
- f) Nitrogenous substances, lipids, carbohydrates,
- g) Electrolytes
- h) Metabolism, acid-base balance,
- i) Normal values and ranges of biochemistry investigations

## Microbiology

Topics covered:

- a) Introduction to Microbiology,
- b) Classification and characteristics of organisms,
- c) Cultivation and identification of organisms, Viral, fungal, bacterial etc
- d) Disinfection,antiseptics,sanitation,
- e) Immunity,
- f) Allergy
- g) Pathogenic organisms,non-pathogenic organisms,virus and fungus.

## Clinical and General Pathology

Topics covered:

- a) Introduction to Pathology

- b) Inflammation and Repair
- c) Infection, Degeneration, Neoplasia
- d) Blood groups, cross-matching, transfusions
- e) Tests done on various body fluids and tissues
- f) Infectious Disease
- g) Disease of red blood cells
- h) Disease of white cells and lymph nodes

## Forensic Medicine

Topics covered:

- a) Introduction to Forensic Medicine
- b) Medico-legal aspects of wounds
- c) Wound certificate
- d) Toxicology
- e) Traffic Accidents
- f) Drowning
- g) Food poisoning
- h) Medico-legal autopsy

## Basic computers and information science

The students will be able to appreciate the role of computer technology. The course has focus on computer organization, computer operating system and software, and MS windows, Word processing, Excel data worksheet and PowerPoint presentation. Topics to be covered under the subject are as follows:

1. Learning to use MS office: MS word, MS PowerPoint, MS Excel.
2. Basic Data Processing
3. Database and Spreadsheet Operations
4. Basic Computer Concepts and Applications
5. Miscellaneous: Scanning of documents (of various sizes) and in different conditions (for e.g., mutilated), file naming, saving, uploading, etc. Copying of original medical document, back up of old data/ records.

## Log Book/Project/Record work

As a part of this, the students will choose a relevant subject and prepare an in-depth project report of not less than 1000 words which will be handed over to the Registrar or HOD. The report can include objective, scope of the project and an in-depth report.

## Skills-based outcomes and monitorable indicators for Medical Records Assistants

SI No:	Learning outcomes	Knowledge / comprehension	Applications / synthesis / evaluation
1	Verify the documentation in the health record is timely, complete, and accurate	Basic health record forms Completeness of health records Assembling and deficiency checking	Is able to verify the accuracy of data collected and assemble into a complete health record
2	Collect and maintain health record data	Basic data generated from medical records and its purpose and uses	Is able to liaise with patients and their families to collect the necessary data
3	Apply mortality and morbidity codes as per the guidelines	ICD classification system	Is able to use the ICD system effectively
4	Identification of the legal use of health records and relevant documents	Legal requirements of managing and maintaining health records	Demonstrates the ability to identify legal implications of documents
5	Identification of discrepancies between documentation and disease coding	Minimum entry requirements in the health records	Demonstrates the ability to identify discrepancies in documentation
6	Comply with ethical aspects of health records and the information it contains	Confidentiality and privacy aspects of health records	Demonstrates the ability to uphold the confidentiality and privacy of patient records
7	Utilize basic descriptive, institutional healthcare statistics	Basic hospital statistics calculation and data requirements	Is able to perform basic statistical calculations and document results