THE TAMIL NAU Dr. MGR MEDICAL UNIVERSITY, CHENNAI

SYLLABUS AND REGULATIONS

BACHELOR OF MEDICAL RECORD SCIENCE

1. PROPOSED REGULATION

The course shall be called "BACHELOR OF MEDICAL RECORD SCIENCE" (BMRSc) under the Tamil Nadu Dr. MGR Medical University, Chennai. The course shall be of three years. The course is designed to enable students to acquire knowledge and skill in Medical Record Science and information so that after passing the final examination, they can function as qualified Health Record professionals.

These regulations shall come into force from the academic year 2011-2014 session.

These regulations and the syllabus are subject to modification by the Standing Academic Board of the University from time to time.

2. OBJECTIVES

1. To have an exposure to the vast strides in the classification and codification of drugs, diseases and their treatment, and in the organization of hospitals.

2. To acquire sufficient knowledge of the prevailing system of scientific documentation with computerization, information search and retrieval.

3. To acquire knowledge of the networking of hospitals and institutions by the Internet and Intranet.

4. To get familiarity with large databases dealing with various categories of entities such as diseases, pathological conditions, symptoms, drugs and concepts such as 'data mining'

5. To acquire knowledge of the current trends in Medical Record Science like health insurance and third party payers.

6. To integrate advanced knowledge and skills in health care data.

7. Apply effective communication skills and strategies in interactions with multidisciplinary and multi-facility professionals.

3 ELIGIBILITY

Candidates would have passed the qualifying examinations after a period of 12 years of study in the following subjects : English, Physics, Chemistry and Biology. Candidates should have passed in all subjects of the qualifying examination of the Higher Secondary Certificate Examination (Academic) conducted by the Tamil Nadu State Board or any other equivalent examination in one and the same attempt in the subjects.

4. ELIGIBILITY CERTIFICATE

Candidates who have passed any qualifying examination other than the above Higher Secondary course examination conducted by the Government of Tamil Nadu before seeking admission to any one of the affiliated institutions shall obtain an Eligiblity Certificate from the Dr.MGR Medical University by remitting the prescribed fees along with the application form..

5. AGE LIMIT FOR ADMISSION

Candidates should have completed the age of 17 years at the time of admission or should complete the said age or or before 31st December of the said year.

6. REGISTRATION

A candidate admitted to the Bachelor of Medical Record Science (BMRSc) degree course shall register with the university by remitting the prescribed fee along with the application form for registration duly filled in and forwarded to this university through the Head of the Institution within the stipulated date.

7. DURATION OF THE COURSE

The duration of certified study of the BMRSc. course shall extend over a period of 3(three) academic years followed by six months of compulsory paid Internship.

8. MEDIUM OF INSTRUCTION

English shall be the medium of instruction for all the subjects of study of the BMRSc. degree course.

9.COMMENCEMENT OF COURSE

The academic year for the BMRSc. course shall commence from August 1 of the year.

10. COMMENCEMENT OF EXAMINATION

February 1 / August 1

Theory examinations will not be held on Saturdays and Sundays. If the date of commencement of the examination falls on a public holiday, the next working day will be the date of commencement of examinations.

11. WORKING DAYS IN THE ACADEMIC YEAR

Each academic year shall consist of not less than 270 working days.

12. ATTENDANCE REQUIRED FOR ADMISSION TO EXAMINATIONS

i. No candidate shall be permitted to appear for any one of the parts of BMRSc. degree course examinations, unless he/ she has attended the course in the subject for the prescribed period in an affiliated Institution recognized by this University and produces the necessary certificate of study, attendance, satisfactory conduct and progress from the Head of the Institution.

ii. A candidate is required to put in a minimum of 90% of attendance in both theory and practical separately in each subject before admission to the examination.

iii. A candidate lacking in the prescribed attendance and progress in any one of the subjects in theory and practical in the first appearance shall not be permitted for admission to the entire examination.

13. INTERNAL ASSESSMENT

The Internal Assessment should consist of the following points for evaluation :-

(i) Theory
(ii) Practical / Clinical
(iii) Viva Voce

The Internal Assessment of the candidate has to be assessed on the above points and a report has to be submitted by the institution once in three months as detailed below :-

For the batch appearing for examination in August

(i) First Internal Assessment - At the end of January

(ii) Second Internal Assessment - At the end of April

(iii) Third Internal Assessment - At the end of June

and the aggregate of final Internal Assessment marks should be submitted on or before July 10.

For the batch appearing for examination in February

(i) First Internal Assessment - At the end of July

(ii) Second Internal Assessment - At the end of October

(iii) Third Internal Assessment - At the end of December

and the aggregate of final Internal Assessment marks should be submitted on or before January 10.

A minimum of 35% Internal Assessment marks is mandatory for permitting a candidate to appear for the University Examination.

14. MARKS QUALIFYING FOR A PASS

A candidate shall be declared to have passed the examination if he or she obtains the following qualifying marks:

(a) 50% marks in the university theory examination and 50% marks in university practical examination and 50% aggregate in theory, practical and internal evaluation marks taken together.
(b) Out of 50% mark in the practical examination wherever prescribed a maximum of 10% marks to be given for practical record book in each subject.
(c) 75% marks in the examination on coding (open book exam).

15. CARRYING OVER OF FAILED SUBJECTS

a. Candidates are permitted to carry over the failed subjects in first year to second year, second year to third year.

b. Candidates will be permitted to appear for the examination in the third year only after passing all the subjects in first and second year.

16. SCHEME OF EXAMS:

The scheme of examination is as follows:

FIRST YEAR

Sl. No.	Subject Title	I A		Theory		Practical		Viva Voce	
		Max	Min	Max	Min	Max	Min	Max	Min
1.	Pre and Para clinical subjects Human Anatomy, Physiology, Clinical and General Pathology, Microbiology, Biochemistry, Pharmacology and Forensic Medicine	50	25	100	50	-	-	50	25
2.	Medical Terminology I	50	25	100	50	-	-	50	25
3.	Medical Record Science	50	25	100	50	-		-	-

Internal Paper:

Sl. No.	Subject Title	I A		Theory	
		Max	Min	Max	Min
1.	* English	50	25	100	50
2.	* Computer	50	25	100	50

* English and Computer are internal papers. Marks to be sent to the university. There will be no university examination for English and Computer paper.

Internal Assessment

Theory (20)	Practical (20)	Log Book/Project/Record(10)

* Wherever there is no Log Book/Project/ Record work the 10 mark be added to the Practical of the respective subject.

SECOND YEAR

Sl. No.	Subject Title	I A		Theory		Practical		Viva Voce	
		Max	Min	Max	Min	Max	Min	Max	Min
1.	Bio-Statistics, Hospital Statistics	50	25	100	50	-	-	-	-
2.	Information Technology I	50	25	100	50	-	-	-	-
3.	Medical Terminology II	50	25	100	50	-		50	25
4.	Health Information Management I & Nomenclature	50	25	100	50			50	25

THIRD YEAR

Sl. No.	Subject Title	I A		Theory		Practical		Viva Voce	
		Max	Min	Max	Min	Max	Min	Max	Min
1.	International Classification of Diseases(ICD-10) and Surgical Procedures (ICD-9CM), CPT, HCPCS	50	25	100	50	-	-	50	25
2.	Hospital Organization and Administration Medical Ethics and Consumer Protection Act	50	25	100	50	-	-	-	-
3.	Health Information Management II, Medical Transcription and Telemedicine	50	25	100	50	-	-	50	25
4.	Hospital Accounting and Financial Accounting and Health Insurance and Billing Design	50	25	100	50	-	-	-	-

7. RECOMMENDED CLOCK HOURS OF INSTRUCTION FOR EACH SUBJECT:

Sub code	Subjects	Lecture hours
BMRSc 1-1	Pre and Para clinical subjects	140 hours
BMRSc 1-2	Medical Terminology I	200 hours
BMRSc 1-3	Communication skills	50 hours
BMRSc 1-4	Medical Record Science	120 hours
BMRSc 2-1	Bio-Statistics, Hospital Statistics	75 hours
BMRSc 2-2	Information Technology	75 hours
BMRSc 2-3	Medical Terminology II	150 hours
BMRSc 2-4	Health Information Management I & Nomenclature	150 hours
BMRSc 3-1	International Classification of Diseases(ICD-10) and Surgical Procedures(ICD-9CM), CPT & HCPCS	175 hours
BMRSc 3-2	Hospital Organizations and Administration and Medical Ethics and Consumer Protection ActI	150 hours
BMRSc 3-3	Hospital Accounting and Financial Accounting, Health Insurance and Billing Design.	150 hours
BMRSc 3-4	Health Information Management II, Medical Transcription and Telemedicine	175 hours
	Practical Experience (Total hours for 3 years)	4310 hours
	Special Lectures	50 hours

18.PRACTICAL TRAINING

	Outpatient Area	**Hours**
01	Registration of new cases	70
02	Registration of old cases	70
03	Patient guide	40
04	Computerized Alpha Index	20
05	OP coding (diseases) and Indexing	96
06	OP records retrieval	100
07	OP procedure test	2
08	OP Seminar	3
09	OP Statistics	20
10	Investigation Process	3
	Total	**524**
	Inpatient Area	**Hours**
01	Admission office (Computerized & Manual)	160
02	Inpatient record forwarding	150
03	Daily Census (Computer and manual)	160
04	Assembling and deficiency check	160
05	Inpatient diagnoses Coding and Indexing	192
06	Discharge analysis (Manual & Computer)	160
07	Incomplete record control	160
08	Completed record control (Group study)	160
09	Correction and authentication of Birth & death reports	150
10	Medico-legal procedures (OP & IP)	50
11	Medical Statistics	25
12	Record retention and destruction (OP and IP records)	72

13	Seminar	10
14	Test on IP procedures	3
15	Various OPDs	1500
	Total	**1599**

Miscellaneous section		**Hours**
01	Orientation introduction to all sections of the hospital	42
02	Hospital Reception	15
03	Record system in other departments of the hospital (Radiation Therapy, MHC, CHAD, RUHSA)	20
04	Secretarial practice	15
05	Library	500
06	Visiting other Health Care Institutions	30
07	Special projects	20
08	Training in Rural and Urban Health Centres	45
	Total	**687**

19. AWARD OF DEGREE

The university shall award the degree only after successful completion of the 3 year course and Compulsory Paid Internship.

20. MODEL QUESTION PAPER FOR ALL SUBJECTS OF BMRSc DEGREE EXAMINATION (Except ICD Coding)

Time: 3 hours Maximum marks: 100 marks

Answer ALL questions

SECTION A

1. Essay type questions (2*15=30)

a)

b)

2. Short notes (10X5 = 50)

a)

b)

c)

d)

e)

f)

g)

h)

i)

j)

SECTION B

2. Short answer type questions.

a) b) c) d) e) (10 X 2 = 20)

f) g) h) I) j)

BACHELOR OF MEDICAL RECORD SCIENCE

The three year degree course in Medical Records Science and Management is designed to prepare the student for a professional career in Medical Record Administration and Health Information Management of any modern health care delivery system or care providers

BMRSc 1-1 FUNDAMENTALS OF PRE AND PARA CLINICAL SUBJECTS

Subjects Covered

Basics of:

1. Human Anatomy and Physiology,
2. Clinical and General Pathology
3. Biochemistry,
4. Pharmacology,
5. Microbiology
6. Forensic Medicine.

OVERALL OBJECTIVES

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

- Know the anatomical parts of the human body, identify all organs, and their functions;
- Recognize common anatomical planes, regions, and abbreviations;
- Acquire knowledge of the anatomical and physiological terms to comprehend Medical Terminology;
- Correctly code the diseases and operative procedures to clinical pertinence as per WHO's ICD – 10;
- Read and understand names of diseases and types of infections for proper classification.
- Understand various Laboratory Tests and Reports, needed in patient care and completion of medical records;
- Read and understand the names and dosages of drugs prescribed alone or in combination for treatment of various diseases;
- Understand various types of medical documentations
- Guide the patients to their respective clinical specialities on presenting signs and symptoms.

1. HUMAN ANATOMY AND PHYSIOLOGY

Objectives:
To make the student to understand medical documentation to perform record analysis, and International Classification of diseases to clinical pertinence.

On completion of this subject, the student will be able to:

- Identify all anatomical structures of the human body
- Understand the technical functions of various organs and systems of the body
- Acquire knowledge about various body fluids, hormones and enzymes

Topics Covered:

i. Integumentary system,
ii. Musculoskeletal system,
iii. Respiratory system,
iv. Cardiovascular system,
v. Blood and lymphatic system,
vi. Digestive system,
vii. Urogenital systems,
viii. Endocrine system,
ix. Nervous system,
x. Organs of special sense.

2. CLINICAL AND GENERAL PATHOLOGY

Objectives:

To make the student to understand pathology laboratory reports, the normal ranges of investigations, severity and specificity of disease conditions which will help him perform International Classification of diseases to clinical pertinence.

On completion of this subject, the student will be able to:

- Differentiate between symptoms and diseases
- Understand the needs of mandatory diagnostic procedures
- Demonstrate an understanding of the pathology of common diseases
- Understand various pathology laboratory reports
- Know about the possibilities and consequences of nosocomical infections, needle prick injuries etc., in a health care facility

Topics covered:

- Introduction to Pathology
- Inflammation
- Infection
- Degeneration
- Benign and Malignant Tumours
- Blood groups, cross-matching, transfusions
- Tests done on various body fluids and tissues

3. BIOCHEMISTRY

Objectives:

To make the student to understand biochemistry laboratory investigation requests, reports, the normal ranges of investigations, severity and specificity of disease conditions which will help him perform International Classification of diseases to clinical pertinence.

Topics covered:

i. Chemistry of the human body fluids in health and diseases
ii. Cerebrospinal fluid
iii. Clotting mechanism of the blood,
iv. Enzymes produced in the G.I.Tract,
v. Vitamins, Hormones, Proteins and Non-proteins,
vi. Nitrogenous substances, lipids, carbohydrates,
vii. Electrolytes
viii. Metabolism, acid-base balance,
ix. Normal values and ranges of biochemistry investigations

4. MICROBIOLOGY

Objectives:

To make the student to understand microbiology laboratory investigation requests, reports, various types of bacterial, viral and fungal infections, culture reports, severity and specificity of disease conditions which will help him perform International Classification of diseases to clinical pertinence.

Topics covered:

i. Introduction to Microbiology,
ii. Classification and characteristics of organisms,
iii. Cultivation and identification of organisms,bacteria etc.,
iv. Disinfection,antiseptics,sanitation,
v. Immunity,
vi. Allergy
vii. Pathogenic organisms,non-pathogenic organisms,virus and fungus.

5. PHARMACOLOGY

Objectives:

To make the student to understand drugs and their actions on human body systems, side effects, contra indications, allergic reactions which will enable him to perform qualitative analysis of medical records , accurate coding and medical billing if required

Topics covered:

i. Introduction to pharmacology,
ii. General and Local anesthetics
iii. Hypnotics and Sedatives
iv. Narcotic analgesics, narcotic antagonists,
v. Non-narcotic analgesics, antipyretics,
vi. Psycho-pharmacological agents,
vii. Drugs acting on autonomic nervous system
viii. Antihistamines,
ix. Blocking agents
x. Respiratory pharmacology, cardiovascular pharmacology

xi. Coagulants and anticoagulants,
xii. Diuretics, hormones
xiii. Chemotherapy
xiv. Drug addiction

6. FORENSIC MEDICINE

Objectives:

To make the student know about the basics of Forensic Science, Types of medico-legal cases, external causes of injuries, adverse effect of drugs and chemicals, medical laws and ethics, medico-legal autopsy, determination of causes underlying death and code them, etc.

i. Topics covered:
ii. Asphyxial deaths
iii. Hanging
iv. Rape , Sodomy
v. Gun shot injury, injury by bullets, sharp objects
vi. Traffic Accidents
vii. Drowning
viii. Medico-legal aspects of wounds
ix. Wound certificate
x. Toxicology
xi. Food poisoning
xii. Medico-legal autopsy.

The health information practitioner becomes involved in these ethical dilemmas to the extent that adequate documentation of events in the medical record is required.

BMRSc 1-2 MEDICAL TERMINOLOGY I

(including fundamentals of clinical science)

OBJECTIVES:

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.

I . Introduction to Medical Terminology

1. Definition and Origin of Medical Terms.
2. Components of Medical Terms
3. Prefixes
4. Suffixes
5. Roots and Combining forms
6. External Anatomy and Internal Anatomy
7. Additional Lists and their combining forms grouped as:

    - Verbs
    - Adjectives
    - Body Fluids
    - Body Substances
    - Chemicals
    - Colours
    - Phobias

II. Terms Relating to the Body as a Whole

1. Study of the Body
2. Basic Structures
3. Cells
4. Tissues
5. Organs
6. Systems
7. Directions
8. Anatomic Planes and Position

III. The Skeletal System

1. Pathologic conditions (Inflammations and Infections)
2. Hereditary, Congenital and Developmental Disorders
3. Fractures
4. Metabolic and Deficiency Diseases
5. Symptomatic Terms
6. Diagnostic Terms
7. Oncology Terms
8. Operative Terms
9. Laboratory Tests and Procedures
10. Standard Abbreviations

IV. The Muscular System

1. Pathologic Conditions
2. Degenerative and Innervative Disorders
3. Hereditary, Congenital and Developmental Disorders
4. Symptomatic Terms
5. Diagnostic Terms
6. Oncology Terms
7. Operative Terms
8. Laboratory Tests and Procedures.
9. Standard Abbreviations

V. Integumentary System

1. Pathologic Conditions
2. Fungal, Viral and Parasitic Infections
3. Hereditary, Congenital and Developmental Disorders
4. Symptomatic Terms
5. Diagnostic Terms
6. Oncology Terms
7. Operative Terms
8. Laboratory Tests and Procedures

BMRSc 1-3 COMMUNICATION SKILLS

OBJECTIVES:

On completion of this course, the student will be able to:

- ✓ Cut down common grammar errors
- ✓ Read, write and speak in right terminology appropriate to the context
- ✓ Develop vocabulary related to general and office communications
- ✓ Communicate effectively
- ✓ Use well mannered body language
- ✓ Maintain eye contact during conversations
- ✓ Demonstrate skill in writing and speaking
- ✓ Undertake office correspondence, that include letters, circulars, memos, reports, writing departmental policies and procedures
- ✓ Project department related presentations before invited audience

I. Basics of Communication:

- ❖ Process of and models of communications
- ❖ Types of communications:
  a). Oral communication
  b). Written Communication
  c). Non-verbal communication & Body language
- ❖ Barriers to communications

II. Reading Skills:

- ❖ Types of readings:Skimming, Scanning, intensive / loud / silent reading, map reading
- ❖ Sample passages for reading with comprehension exercises
- ❖ Tables and Graphic Organizers

III. Listening skills

- ❖ Definition of listening
- ❖ Types of Listening
- ❖ Purposes of listening
- ❖ Obstacles for listening
- ❖ Contexts of listening
- ❖ To be a good listener
- ❖ Listening to a Lecture

IV. Speaking Skills

- ❖ Formal & Informal Conversation: Agreeing, Emphasizing, thinking ahead, correcting oneself, interrupting, politely expressing reservations, opinions, disagreeing, accepting invitations declining invitations etc.
- ❖ Telephone Conversation
- ❖ Interviews
- ❖ Visual Presentation

V. Writing Skills

- Tenses
- Writing Sentences
- Writing Paragraphs: The Development of a Paragraph
- Formal Letters – personal, applications, bio-data,
- Official correspondence: Outgoing correspondence, replying incoming correspondence, writing circulars, notices, charge memos
- Writing Reports
- Tables, Charts and Graphs
- Medical Transcription

VI. Study Skills

- Improving Study Skills
- Note Taking: Some Basic Devices,
- Writing Summaries, observation reports, and action plan

VII. Effective communication in Hospitals:

- Communicating to match the mission and vision of the institution
- The strategy of keep informed
- The nature of communications in a hospital
- Upward and Downward Communications
- Reporting of feedbacks
- Intra and interdepartmental communications
- Communications with Medical Staff, Paramedical staff and Support Services Staff
- The care provider – customer relationship
- Patient as VIP and his rights; Patient's locus standing, his agony, pains and tensions
- Directing patients to right destinations
- Giving hope to the hopeless
- Communications with the sick and injured
- Communications with teens and youngsters, middle aged and the aged
- Keeping up good impressions and manners before patients and their attendants
- Body language – How can you say it better than words?
- Communicating practically and technically feasible solutions
- How to say “no” graciously?
- Effective Intra and interdepartmental communications
- Common problems arising out of bad quality communications and trouble shooting techniques.

BHRA 1-4 MEDICAL RECORD SCIENCE

Subject description: 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 f 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:

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

1. Get acquainted with brief Historical Review of Medical Records, in USA, at the International Level and in India
2. Learn Definition of Medical Record, its Values accruing to various users
3. Be familiar with Medical Record Forms and their Content Index Cards and Registers
4. Review of health records for Deficiencies, Qualitative & quantitative analysis
5. Acquire knowledge for the organization and management of medical record department (both for Inpatients & Out-patients, including Emergency care patients)
6. To know about different numbering, filing and color coding systems
7. To know about the role of a health record professional in quality management & improvement, Utilization and risk management programmes.
8. To know about health record documentation policies, corrections and authentication procedures
9. To know the Legal Aspects & Confidentiality of Medical Records
10. To know about different nomenclatures, and classification systems of medicine and procedures
11. To know about manual and computerized medical record administration
12. To know about claims through medical insurance
13. Learn the techniques to file medical records in an accessible manner;
14. Learn the Retention Polices of medical records, and ways of disposal of Inactive Medical records
15. Get acquainted with the latest storage devices- Scanning & Disk Storage, Digital Record keeping system, etc
16. Maintain and Manage Disease Index, Physician Index, Operation Index and registers such as Admissions& Discharges, Birth, Death, Medico-legal, Notifiable Diseases, Cancer Registry etc., and indexes such as Disease, Physician, and Operations.

CONTENTS OF THE CURRICULUM THEORY

1. History of Development of Medical Records During different periods

1. Early Ancient Times to Renaissance Period (16^{th} &17^{th} Centuries)
2. 18^{th} -20^{th} Centuries and Till Date
3. In U.S.A.
4. At International Level
5. In India

II. Characteristics of quality Medical Records:

- Definition, 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
- Source-oriented, Problem-oriented, and Integrated medical records
- Medical Record Forms and their Content
- Standard Order of Arrangement of Medical Record forms
- Analysis of Medical Record-Quantitative & Qualitative
- Incomplete Record Control

III. Medical Records for different patient encounters with health care facility

i. Ambulatory Care Records {Emergency & Outpatient Records]
ii. Clinical Records in Long Term Care and Rehabilitation Facilities
iii. Mental Health Records

IV. Filing Methods, Storage, and Retention

- Numbering and Filing Systems
- Filing
- Storage- Microfilming and Disk Storage
- Retention
- Registers & Indexes
- Record movement control & Tracking system

V. Organizational Aspects of Medical Record Department/Services

- Policies
- Functions
- Location, Space and Layout
- Equipment
- Forms Designing and Control
- Medical Records Flow and Processing

VI. Organizational Aspects of the Centralized Admitting Services

- Principles of Identification of a Patient
- Methods of Collection of Identification Data
- Types of Central Admitting Services
- Admitting Policies
- Procedure Outlines for Admissions
- Flow of Records following Admissions
- Advantages of good Admitting Policies and Procedures
- Pre-requisites for smooth & efficient functioning of the Centralized Admitting Services

VII. Medical Record Department Management

i. Planning, Organizing, Directing and Controlling
ii. Personnel
iii. Principal Responsibilities and Duties of the Medical Record Aministrator/Director
iv. Tools of Management in the Hands of the Medical Record Administrator/Director

VIII. Intradepartmental and Interdepartmental Relationships

i. Developing Intradepartmental Relationship
ii. Developing Interdepartmental Relationships with various Departments of the Hospital

IX. Quality Management

i. External and Internal Pressures for quality
ii. Quality Assessment and Quality Improvement
iii. Quality Assurance & Medical Care Evaluation
iv. Utilization management
v. Peer Review
vi. Utilization review processing & outcomes of Utilization management
vii. Risk management program [Organization & Operation
viii. International Standards Organization [ISO], Quality Council of India, & National Accreditation Board of Hospitals [NABH]

X. Heath Care Statistics, Quality control of Data Collection & Presentation

i. Incomplete Record Control
ii. Inpatient census and rates computed from it.
iii. Ambulatory care statistics
iv. Long term Care Statistics
v. Processing and reporting of Reproductive Health Statistics
vi. Reporting of Notifiable Diseases to Public Health Authorities

XI. Nomenclatures and Classification Systems:

1. Standard Nomenclatures of diseases (SNDO).
2. Current Medical Information Terminology.
3. Systematized Nomenclature of Pathology (SNOP)
4. Systematized Nomenclature of Medicine (SNOMED)
5. Common Procedures Coding System (HCPCS)
6. Current Procedural Terminology
7. International Classification of Functioning, Disability and Health (ICF)
8. Case-Mix Classifications
9. Diagnosis Related Groups
10. ICD – 9 (CM)
11. ICD – 10
12. ICD- Oncology (ICD - O)

XII. Medico-Legal Aspects of the Medical Records

1. Medical Ethics , Hippocratic Oath, and Code of Ethics for the Medical Record Professionals
2. Ownership of the Medical Record
3. Privileged Communication and confidentiality of Medical Records
4. Release of Information: To the Patient , To Authorized Persons /Agencies Legal Implications of release of Information to unauthorized , Persons/Agencies.

5. Consents: Different types and their validity, invalidity blanket, and improper consents.
6. Corrections in identification data medical documentations
7. Rights and responsibilities of patients
8. Medical Record in a Court of Law
9. Legal requirements in Retention of Medical Records

BMRSc 2-1 BIOSTATISTICS & HOSPITAL STATISTICS

OBJECTIVES:

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

- Define i) General Statistics, ii) Biostatistics iii) Hospital Statistics and, iv) Health Statistics
- Define various important Hospital Statistical Terms
- Understand the basics of theoretical aspects of General Statistics & Biostatistics;
- Learn the methods for the collection, presentation, analysis and interpretation of numerical data
- Compute data on Admissions & Discharges, monthly analysis of Hospital Performance Statistics and the Daily Inpatient Census;
- Compute percentages and rates commonly used in preparation of hospital statistical information;
- Describe the role of the Medical Record Practitioner in ensuring accuracy and reliability of statistical Data compiled and presented by the Medical Record Department

OBJECTIVES (RESEARCH METHODOLOGY)

1. Enhance conceptual knowledge in budding researchers.
2. Use conceptual knowledge of Research Methodology in designing and implementing research design.
3. Train researcher to draw better conclusions from the analysis.

I. GENERAL & BIO-STATISTICS

i. ***Definition*** of Statistics and Biostatistics
ii. ***Frequency Distribution:*** Measures of Central Tendency – Arithmetic Mean, Median and Mode for un-grouped and grouped data
iii. ***Presentation of data:*** Bar diagram, Pie Diagram,Histogram,Frequency polygon,Frequency curve, and Line diagram.
iv. ***Measures of Variation:*** Range, Inter Quartiles, Mean Deviation, Standard Deviation Co-efficient of Variation
v. ***Probability:*** Definitions of Classical Probability (Priori) and Frequency, Probability (Posteriori), Addition and Multiplicative Theorems of Probability
vi. ***Probability Distribution:*** Binomial distribution, Poisson distribution and Normal distribution
vii. ***Sampling***- Definition: Population and simple Sampling, Simple Random Sampling, Stratified Random Sampling, Systematic Random Sampling and Cluster Sampling
viii. ***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

II. HOSPITAL STATISTICS

- Definition of hospital statistics, and important Hospital Terms
- Sources of Hospital Statistics – Registers, Medical Records and Daily Ward Census
- Analysis of Hospital Services and Discharges
- Important Rates, Ratio and Percentages with Formula
- Uses and Limitations of Hospital Statistics.
- Hospital Statistics Reporting.

➢ VITAL STATISTICS

- Definition and Uses of Vital statistics
- Methods of Collection of Vital Statistics
- Formulae for processing Vital Statistics:

  Crude Rates
  Specific Rate
  Mortality Rates – Crude Death Rate, Specific Death Rates with respect to age , sex etc. Cause-of-death Rates; Infant Mortality Rates; Neonatal Mortality Rates
  Post-Neonatal Mortality Rate or Late Infant Mortality Rate

IV. Health Statistics

i. Introduction
ii. Uses and Sources
iii. Collection of hospital statistical data: Birth,Death,fetal death,live birth and immature infants,reporting,determination of basic data,daily analysis of hospital service,discharge analysis procedure,cumulative method,monthly and annual reports,computation of percentage (ratios) inpatient census and bed occupancy rate (computerized and manual), presentation of hospital data.
iv. Criteria of ill health
v. Classification of healthy and sick
vi. Measurement of morbidity

Research Methods:

1) Research in medicine and health care
2) Clinical research and clinical trials
3) Health record data in research
4) Research process
   a) Defining the research question (problem)
   b) Determining a research design and method
   c) Data collection procedures
   d) Data analysis
   e) Presenting results
   f) Publishing researcher
   g) quality improvement and the use of aggregate data
   h) The role of HIM professionals in quality improvement programs
   i) Collecting data through questionnaire and Record forms, Methods of collecting data, literature review and steps in research methods Presentation of Data – Bar Diagram; Pie Diagram; Histogram; Frequency, Polygon, Frequency Curve; Cumulative Frequency Curve and Line Diagram.

BMRSc 2-2 INFORMATION TECHNOLOGY

INTRODCUTION

Hospitals are highly complex institutions, with thousands of individuals sharing responsibility for the care and services provided to patients. Since medical interventions have expanded exponentially over the past several decades and average length of stay in hospitals has dropped sharply, patients now receive an enormously complex array of services in a much shorter period of time. Effective care and the survival of patients require the management of large amounts of information over a relatively short period of time. Failure to communicate or accurately record information in a timely manner can easily cost the life of a patient. In addition, growing pressures to constrain health care costs have put great pressure on hospitals to be more efficient as well as effective. The survival of a hospital requires the effective management of large amounts of information.

The hospital of the twenty-first century cannot survive without effective information technology. Relatively quickly, information systems and technology have become integral components of health care delivery systems.

Learning Objectives:

Medical informatics, may defined as the art and science of processing medical information.

Computer Applications and Technologies in Healthcare

This course provides an overview of healthcare information systems with a concentration on computerized health information management (HIM) functions. Students will be introduced to common software applications utilized to perform HIM processes. Emerging technology issues in healthcare will be explored.

Office Applications

This course focuses on the concepts and operation of the main components of word processor, electronic spreadsheet, database management, and presentation software programs. Students will gain fundamental knowledge of a major software suite and learn skills that have practical application in real world situations.

Basic ICD-10, ICD-9CM Coding

This course is designed to introduce the student to medical nomenclature and classification systems. Emphasis will be placed on ICD-9-CM structure, conventions, and guidelines for coding in hospitals and physicians offices.

On completion of this programmes, trainees will have knowledge of accessing and processing biomedical and clinical information, basic principles of patient and hospital data base management (expertise in computing, communications, and content)

1. The Internet

Define the Internet
How the Internet works
Internet capabilities and limitations
How to connect to the Internet via modem ISDN, etc.
Navigate the World Wide Web
Identify services and tools offered on the Internet
Use services and tools offered on the Internet
Explain book marks
Safety

2. Email

Define electronic mail
Compose electronic messages
Send electronic messages using appropriate format
Transmit document using electronic mail system

3. Basic knowledge of networks

Explain communications standards
Describe network structures
Explain network types and protocols
Explain network connectivity
Explain the function of servers in a graphic network
Describe various network operating systems
Explain the difference between network software and individual use software
Use a network to access, file, and store files

4. Information processing activities

Key, process, print and store text and data information using integrated software
Troubleshoot basic computer malfunctions
Load media devices
Set up print devices
Operate scanner devices
Operate Print devices
Maintain print devices
Monitor peripheral equipment operations

Operating Systems

Identify operating systems and their attributes (i.e., DOS, Unix, Macintosh, Windows)
Identify the advantages and disadvantages of the computer to individuals and business.
Identify the roles and equipment used for input, processing, and output in an information system.
Identify correct safety procedures

Demonstrate basic computer literacy

Create directories/folders and sub-directories
Format disks
Manipulate files (copy, rename, delete)
Keyboard proficiently by touch

Computer File Manipulation

Create data directory and subdirectories/folders and place files in subdirectories/folder. Copy, rename, move and delete files. Copy a disk.
Make backup disks/files of a data directory or
Subdirectory/folder and delete data from backup disks/files

a) Personal computer systems

Monitor system status and performance
Run diagnostics
Report computer system malfunction(s)
Report software malfunction(s)
Maintain security
Perform backup procedure(s)
Perform preventive maintenance
Follow log-off and power-down procedure(s)
Follow equipment maintenance procedures
Follow quality control procedures

b) Maintain computer security requirements

Follow security rules, regulations, and codes
Implement security procedures

c) Software applications

Define software types and functions
Describe need for application software
Describe different types of software applications
Explain advantages and disadvantages of integrated and dedicated software
Explain software copyright laws
Explain data compression techniques
Explain use of passwords/security
Utilize desktop productivity tools

e) Operation of peripheral devices

Identify peripherals and operating requirements of each
Explain purpose of input devices (e.g., keyboard, mouse, scanners, pens, bar code readers, credit/debit/smart cards, voice, video, gloves)

Describe operation of output devices (e.g. voice, speaker output devices, printers, plotters, printer sharing units, SCSI interface, video display)
Describe operation of multimedia (video, audio sound)

g) Information Processing Cycle

Describe difference between data files and program files

5. Database

Define database
Explain terms used in database systems
Describe common functions of database systems
Use database to create, input, edit, and display fields and records
Analyze structure of database file
Perform calculations with a data base file
Alter structure of database file
Sort records based on multiple fields
Identify advanced database technology
Use appropriate reference materials
Utilize relational database
Enter elements into database
Proofread database
Explain database
Design report formats
Transfer data to and from remote database
Print reports using data from multiple databases
Use database files with other application software
Verify accuracy of output (e.g., edit reports)

Basic Data Processing

Input, update and store data into records in an existing database
Open stored spreadsheet, input and update data into spreadsheet, store revised spreadsheet and print revised spreadsheet

Database and Spreadsheet Operations

Plan and create database, input and update data into records, store database and print quick reports from database.
Create spreadsheet, input data into spreadsheet, update data in spreadsheet and store spreadsheet.

6. Introduction to Spread sheet packages

7. Introduction to Word Processing packages

Document processing
Key, print and store merge documents (form letters, mailing labels and envelopes)

Scan documents onto a formatted storage medium and import into a word processing program
Locate and retrieve information from a variety of electronic sources
Prepare, place and send information on the internet
Key, Print and store transparency masters for presentation from legible longhand or edited rough draft using presentation software.

9. Basic Computer Concepts and Applications

Explain how data is stored in main computer memory
Explain how computer system executes program instruction
Explain computer storage capacity
Explain how data is represented
Describe data storage devices
Identify types of memory
Describe back-up and archival disciplines
Merge a database application and a spreadsheet application with a word processing document.
Use available software to input personal, business, and organizational names in proper indexing order, and produce an alphabetical list.
Integrate database, spreadsheet and graphic files
Convert documents from one system to another
Demonstrate use of computer thesaurus
Use multimedia techniques/resources
Perform merge functions

10. Hospital Information System (HIS) with Electronic Medical Records (EMR)

BMRSc 2-3 MEDICAL TERMINOLOGY II

OBJECTIVES:

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.**

I. The Cardiovascular System

1. Pathologic Conditions
2. Hemorrhages and related Conditions
3. Hereditary, Congenital and Developmental Disorders
4. Symptomatic Terms
5. Diagnostic terms
6. Oncology Terms
7. Operative Terms
8. Laboratory Tests and Procedures
9. Standard Abbreviations

II. The Respiratory System

1. Pathologic Conditions
2. Symptomatic Terms
3. Diagnostic Terms
4. Oncology Terms
5. Operative Terms
6. Laboratory Tests and Procedures
7. Standard Abbreviations

III. The Gastro-Intestinal System

1. Pathologic Conditions
2. Hereditary, Congenital and Developmental Disorders
3. Symptomatic Terms
4. Diagnostic Terms
5. Oncology Terms
6. Surgical Procedures
7. Laboratory Tests and Procedures

9. Standard Abbreviations

IV. The Genito-Urinary System

(A). Urinary Tract

1. Pathologic Conditions
2. Hereditary, Congenital and Developmental Disorders
3. Symptomatic Terms
4. Diagnostic Terms
5. Oncology
6. Surgical Procedures
7. Laboratory Tests and Procedures
8. Standard Abbreviations

(B) Male Reproductive Organs

1. Hereditary, Congenital and Developmental Disorders
2. Sexually Transmitted Disorders (STD)
3. Symptomatic Terms
4. Diagnostic Terms
5. Operative Procedures

(C) Female Reproductive Organs

1. Hereditary, Congenital and Developmental Disorders
2. Sexually Transmitted Disorders (STD)
3. Symptomatic Terms
4. Diagnostic Terms
5. Operative Procedures
6. Laboratory tests and Procedures

V. The Endocrine System (Pituitary-Anterior & Posterior: Hypothalamus; Thyroid; Parathyroid;

Adrenal-Cortex and Medulla; Pineal body; Pancreas; Gonads-Ovaries & Testes & Thymus)

1. Pathologic Conditions
2. Hereditary, Congenital and Developmental Disorders

3. Symptomatic Terms
4. Diagnostic Terms
5. Oncology
6. Surgical Procedures
7. Laboratory Tests and Procedures
8. Standard Abbreviations

VI. The Nervous System

(A). Neurological Disorders

1. Pathologic conditions
2. Hereditary Congenital and Developmental Disorders
3. Circulatory Disturbances
4. Other Organic Abnormalities
5. Oncology
6. Diagnostic Terms
7. Surgical and other Procedures
8. Laboratory Tests and Procedures

(B). Psychiatric Disorders

1. Psychiatric Disorders
2. Other Descriptive and Diagnostic Terms
3. Various Tests
4. Treatment Methods for Psychiatric Conditions

VII. The Sensory Organs

(A). Sense of Vision

1. Pathologic conditions
2. Hereditary, Congenital and Developmental Disorders
3. Diagnostic Terms
4. Operative terms
5. Oncology
6. Vision Tests and Procedures

(B). Sense of Hearing

1. Pathologic condition
2. Hereditary, Congenital and Developmental Disorders
3. Oncology
4. Surgical Procedures
5. Hearing Tests.

(C). Sense of Smell

1. Pathologic and Other terms
2. Laboratory Tests

(D). Sense of Taste

1. Pathologic and Other terms

(E). Touch and Other Cutaneous Senses

1. Terms referring to these senses

BLOCK-XII Multiple-System Diseases

1. Inflammations and Infections
2. Symptomatic Terms
3. Diagnostic Terms
4. Laboratory Tests and Procedures

BMRSc 2-4 HEALTH INFORMATION MANAGEMENT 1 & NOMENCLATURE

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.

1. Informatics and Health Information Management

Introduction, Health care delivery systems, Informatics in Health Care, Health Information Management profession, Data and formation management, Information systems Development

2. Aggregate Health care data

Secondary records and Health care database, Clinical classification and Terminologies, Reimbursement methodologies.

Nomenclature

1. Introduction to Nomenclature

2. Early Nomenclature

3. Specialty Nomenclature

4. Statistical Classifications

5. Other Classifications

6. Choosing a Classification System

7. Encoding Systems

8. Summary

BMRSc 3-1 International Classification of Diseases(ICD-10) and SurgicalProcedures(ICD-9CM), CPT, HCPCS

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.Introduction and usage of International Classification of Disease in practicals.

International Classification of Diseases

ICD-10, ICD-9 CM (Surgical Procedures)

CPT – Current Procedural Terminology (Introduction)

HCPCS – Healthcare Common Procedure Coding System (Introduction)

ICD-10 - Alpha-numeric coding
Volume 1 – Tabular list
Volume 2 – Instruction manual
Volume 3 – Alphabetical Index

Classification of Diseases according to Clinical Pertinence

ICD-9CM (Procedure) coding – International Classification of Diseases – Clinical modification

CPT – Introduction of CPT and HCPCS – 3 levels of codes

BMRSc 3-2 HOSPITAL ORGANIZATIONAND ADMINISTRATION, MEDICAL ETHICS & CONSUMER PROTECTION ACT

I. HOSPITAL ORGANIZATION AND ADMINISTRATION

1.Introduction to Hospital Administration

a) Who's Who in hospital – Key administrators and their functions, overview of medical and para-medical specialities, main service departments:
b) Overview of health services – government services: private & not for profit: primary, secondary & tertiary health care: types of hospital: community, super – speciality etc.

2.Principles of Organizational Management

a) Culture, Values and Mission
b) Organizational Structure
c) Planning and Controlling
d) Hospital Organizational Structures – Government, Private and Not for Profit.

3.Managing People (Human Resources)

a) Overview – scope and functions of HR dept, HR planning
b) Recruitment and Appointment
c) Training and Development
d) Goal setting, rewards systems and motivation
e) Performance Appraisal
f) Promotion, internal transfers
g) Problems and Legal issues
h) Leadership
i) Working in teams

4.Clinical Services

a) Overview of clinical departments and services – OPD, In-patients, ICU, Surgical, Emergency, Community/family Health, Paramedical & Rehabilitation
b) Types of doctors, their training, roles and responsibilities
c) The role & responsibilities of the HOD
d) Medical Audit
e) Medical Negligence & Litigation

5.Nursing Services and Wards

a) Objectives of the nursing service
b) Nursing service organization, types of nurses, their training, qualifications and functions, other ward staff, personnel issues.

c) Ward management

6.Product-based services

a) Pharmacy purchasing and stores
b) Pharmacy dispensing
c) Prosthetics & Orthotics

7.Diagnostic Services (Radiology, Laboratories, Blood Bank etc)

a) Overview – main services and their functions
b) In-house services

8.Patient Services (non medical)

a) Reception, Welcome/Help Desk
b) Patient facilities, wheelchairs, Ambulances
c) Public Relations – objectives, functions, policies, different media, methodologies, networking

9.Managing Support Services

a) Overview of functions of all support services including Laundry, Catering, Cleaning, CSSD, Transport, Security, Materials (Purchase and Stores) etc
b) Functions of GS Office

10.Hospital Infrastructure (Buildings and Plant)

a) Civil Engineering – Planning and maintaining buildings, water & sewage
b) Electrical Engineering
c) Mechanical Engineering, Equipment Maintenance, Medical Gases, etc
d) Biomedical Engineering

11.Hospital Information Systems

a) Analysing information requirements
b) Reporting systems
c) Early warning systems
d) Computerized Systems, intranet

12.Managing the Organization (putting it all together)

a) Planning: strategy and corporate planning
b) Dealing with risk and uncertainty
c) Organizational Development and Change management
d) Corporate Governance & legal matters
e) Relationships with other institutions and organizations

MEDICAL ETHICS & CONSUMER PROTECTION ACT

This course is designed to provide Medical Record professionals, an advanced knowledge of structure of Indian Judicial system, Basics of Medical laws, Matters relating to Medical Negligence, Medical Ethics and Consumer Protection Act.

This course will equip student with general skills needed in guiding medical professionals to follow required standards of medical documentations to protect the welfare of the health care institution and the patients.

COURSE OBJECTIVES:

At the end of the course student will be able to understand:

- Structure of Indian Judicial System, Medico-legal cases.
- Prevention against complaint of medical negligence
- Negligence as a crime
- Encountering consumer by Medical Professionals
- Code of Medical Ethics
- Rights of patient as a consumer

Laws relating to Hospital Administration:

1.Structure of Indian Judicial System:

Subordinate courts - Various Tribunals - High court and Supreme court - their working relationships and effect of orders.

2.Medico – legal cases:

IPC – Medical Termination of Pregnancy Act 1971, Transplantation of Human Organs Act.

3.Law of Contract:

Patient as a consumer - Law of Tort - Composition of D.C.D.R.F, S.C.D.R.C and N.C.D.R.C - powers, terms and jurisdiction, enforcement of orders.

4.Medical Negligence:

Negligence - Medical Negligence - Contributory Negligence - Gross Negligence - Criminal Negligence - Onus of Proof - Prevention of such Negligence.

5.Liability and Compensation:

Vicarious Liability - Liability of Medical Professionals and Para-medical staff - Quantum of Compensation - Applicability of provisions of Consumer Protection Act for various institutions.

6.Consumer Protection Act 1986:

Various provisions - structure, powers and jurisdiction of various forums constituted in C.P Act - orders - how enforced.

7.Consent:

Consent - Medical Consent - various types of Consent - Consent forms - "informed Consent" in clinical trials - Consent as a process - full proof methods for proper Consent - various defects in obtaining Consent.

8.Important case studies:

District Forums, State Consumer Disputes Redressal Commission - National Consumer Disputes Redressal Commission Case study as how cases were decided.

BMRSc 3-3 HEALTH INFORMATION MANAGEMENT II, TRANSCRIPTION & TELEMEDICINE

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.

1. Development of Health Care Information

Health Care Information standards, Paper based Health Records, Computer based patient records, Ethical issues in Health Information Management

2. Comparitive data

Research methods, Clinical quality management

3. Management of Health Information Services

Principles of Management and Leadership, Work Design and Performance improved, Human Resources Management, Training and Development, Project Management, Strategic Management.

Medical Transcription:

- Basics of Medical Transcription
- Objectives of Medical Transcription
- Rules of Medical Transcription
- Advantages of Medical Transcription
- Division of medical words into their component parts
- Forms, Suffixes, Prefixes and Terminology
- Laboratory tests, Clinical procedures and Abbreviations

Telemedicine:

- Basic health care
- Classification of Telemedicine
- Technology of Telemedicine
- Objectives of Telemedicine
- Rules of Telemedicine
- Telemedicine Act
- Merits of Telemedicine
- Future Telemedicine plans
- Research

BMRSc 3-4 HOSPITAL ACCOUNTING AND FINANCIAL ACCOUNTING AND HEALTH INSURANCE AND BILLING DESIGN

The course aims to give a fair view of exposure to the students on the basic concepts of accounts, Finance and Financial Management in Hospital and practical application in Hospital Financial Management Accounting and Health Insurance.

1. **The Nature and purpose of Accounting, Accounting Concepts & Accounting records:**
    a. What is accounting information? Who needs it? What they need or expect?
    b. What do accountants do?
    c. Single Entry Book – keeping
    d. Double Entry Book - keeping
    e. What is an Account? Making entries.
    f. Five types of Accounts (Income, Expense, Asset, Liability, Capital)
    g. Book – keeping rules
    h. Accounting books/ledgers (Nominal, Purchase, Sales, Journal etc)
    i. Dealing with cash, imprest system

2. **Preparation of various Financial Statements:**
    i. Trial Balance
    ii. Receipts and Payments
    iii. Income and Expenditure Account
    iv. Balance Sheet

3. **Fixed assets and Depreciation:**
    a. What are fixed assets and why are they different?
    b. What is depreciation and why do we need it?
    c. How do we calculate depreciation? (pros and cons of different methods)
    d. Accounting entries for depreciation

4. **Costing and Pricing:**
    a. Financial accounting Vs. Cost accounting
    b. Key terms: Direct/indirect, fixed/variable/semi-variable
    c. Analysing results: Standard/budgeted/actual
    d. Costing hospital services
    e. Taken action: controllable /uncontrollable
    f. Making decisions: Marginal/book/out –of pocket costs
    g. Reporting costs: Cost Centres, allocation and apportionment of costs
    h. Pricing methods and decisions.

5. **Inventory Accounting:**
    a. Inventory / stocks
        i. Valuation (FIFO, LIFO, WAC etc)
        ii. Optimum balance and reorder levels.

6. **Analysis of Financial Statements:**
    a. Ratio analysis – meaning and purposes
    b. Ratios applicable to Non-profit making organizations

7. Financial Planning and Control:

Budgets and budgetary control

8. Use of Computers in Accounting:

a. Computerised ledger systems
b. Spreadsheets & Excel based accounting

9. Accounting and Audit Procedures in Health Care Sector:

a. Accounting System in hospital
b. Purpose of an audit and auditing principles
c. What the auditor does?
d. The audit report – "True and Fair View"
e. Legal requirements: layout, audit and filing of accounts

10. Health Insurance and Third Party Payers.

<u>Health Insurance:</u>

- Definition and history of Health Insurance
- Concepts in Health Insurance
- Issues in Health Insurance
- Effective Health Insurance
- Good & Bad in Health Insurance
- Reasons for lack of coverage
- Denial of claims
- Contracts or Memorandums of Understanding
- Health Insurance in India
- Health Insurance & Third Party Administrators
- Insurance Regulatory Development Authority & its role
- Billing & Health Insurance Billing

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