NAGALAND UNIVERSITY

Regulation and Syllabus for

Bachelor of Science in

Health Information Management (B.Sc. HIM)

(3+1 years) Degree course

2024

Regulations for the Allied Health Sciences Bachelor Programs of the Nagaland University

The Regulations & syllabus are subject to modifications by the University from time to time.

1. **Eligibility for Admission:**

   (i)   The candidate should have passed the Higher Secondary (10+2) from CBSE or State Education Board or any Govt. recognized Board with at least 50% marks for general candidates (UR) and 45% for SC/ST/OBC/NCL candidates in Physics, Chemistry, and Biology.

   (ii)   For B.Sc. (Health Information Management) course, candidates with Physics, Chemistry, and Mathematics in 10+2 may also be considered.

   (iii)   The candidate should have attained the minimum age of 17 years during the admission.

   (iv)   **Lateral Entry:**

   Candidates who have completed a two-year diploma programme in the concerned subject from Boards recognized by Central / State Government(s) / State / Central University with at least 50% marks in aggregate for (UR) candidates and 45% marks in aggregate for SC / ST / OBC / NCL candidates shall be eligible for Lateral Entry to the second year (3rd Semester) of Bachelor Programme in Allied Health Sciences.

2. **Duration of the Course**:

   (i)   Group A: 4 years, i.e., 3 years or 6 semesters of academic studies and one year of internship (B.Sc.HIM, B.Sc.DTT, B.Sc.AOTT, BSc RTT, BSc. MRIT).
   Group B: 4 and a half years, i.e., 4 years or 8 semesters of academic studies and six months of internship (BPT, BOT courses).
   Group C: 4 years, i.e., 3 and a half year or 7 Semesters of academic studies and six months of internship (BMLS) during the 8th semester.

   (ii)   The maximum duration of the Bachelor Programme for Group A, B & C above shall be N+2 where N is the normal duration of the programme. No student shall be allowed to continue beyond the maximum duration.

3. **Medium of Instruction:**

   The medium of instruction for all the Allied Health Sciences courses shall be English.

4. **Working Days Per Semester:**

   Each Semester consists of 90 working days, with eight hours of work per day and 40 hours per week, totalling 720 hours per Semester.

5. **Internship Hours:**

   One-year Internship programs will include 1440 hours of practical training and Six Months Internship will include 720 hours of practical training.

6. **Attendance**:

(i) A candidate must secure a minimum of 80% attendance in theory classes. Students who fail to meet the requirement due to illness may be eligible for a 5% condonation, provided they submit a medical certificate from a registered medical practitioner.

(ii) 100% in skills training (practical/internship) to qualify for the award of degree. In case of insufficient attendance, the candidate's internship period will be extended accordingly. There are no other exceptions to these rules under any circumstances.

7. **Submission of Log Books:**

a. At the time of practical examination, each candidate shall submit to the examiners his / her Log book duly certified by the Head of the Department as a bonafide record of the work done by the candidate.

b. The practical record shall be evaluated by the concerned Head of the Department (Internal Evaluator) and the practical record marks shall be submitted to the University 15 days prior to the commencement of the theory Examinations.

c. In respect of failed candidates, the marks awarded for record at previous examination will be carried over for the subsequent examination. The candidates shall have the option to improve his performance by submission of fresh records.

8. **Revaluation / Scrutiny of Answer Papers:**

(i) There is no provision for candidate to request for revaluation of the answer papers of failed candidates in any examination. However, the failed candidates can apply for scrutiny.

(ii) Nagaland University shall constitute a Result Moderation Committee of 3 members.

9. **Pattern of Question Paper for University Examination:**

Descriptive type Questions = 30%
Descriptive Short Notes   = 30%
Short Answer questions   = 20%
MCQ Type   = 20%

10. **Assessment**:

(i) Assessment for theory and practical examinations: - Students must attain at least 50% marks in each theory and practical component, both in internal assessments and in the final University examinations to pass the course. The final marks will be 75% from the University examination and 25% will be from the internal assessment.

(ii) The distribution of marks between theory and practical shall be provided in the **Curriculum and Syllabi** of each course.

(iii) Assessment for internship: - During the internship, students gain clinical experience and learn to document patient care effectively. Each student must maintain a logbook and a portfolio.

Activity	Marks %	Assessor
Log book	20	Supervisor
Portfolio*	20	Supervisor
Practical	40	Examiners
Viva voce	20	Examiners

*The portfolio provides one with an opportunity to demonstrate the breadth and depth of your knowledge on certain topics

The portfolio incorporates the follow documents:
- Curriculum vitae
- Progress reports
- "Summary of Competency Achievement" demonstrating the level of competency achieved in each sub-module.
- Samples of work prepared by the intern from at least 5 of the modules of internship training guide.

A presentation delivered covering key aspects of the module

The clinical supervisor will examine the portfolio at regular (at least once in three months) intervals and provide feedback to the Intern.

(iv) Mode of Evaluation: -

Evaluation for Theory papers during Odd End Semester Examination shall be internally done by the colleges and Theory papers during Even End Semester Examinations shall be externally evaluated or as notified by the University.

11. Internship Project:

As part of the internship, students are required to choose a relevant subject and prepare an in-depth project report, which should include the objective, scope of the project, and a detailed report.

12. Advancement to the Next Semester:

Advancement to the next semester is contingent upon meeting the following conditions and clearing any backlogs as described: -

A student may not fail in more than two papers in the preceding semester to be eligible to advance to the next semester.

13. Repeat examination for failed candidates:

Failed papers in odd semesters can be repeated during the exams of the subsequent odd semester. Similarly, failed papers in even semesters exams can be repeated during the subsequent even semester exams.

14. Vacation:

Maximum of 15 days including Saturdays and Sundays

15. Re-Admission after Break of Study:

Students shall be allowed to continue after break in studies provided the maximum duration as given in Clause- 2 (ii) is not exceeded.

16. Award of the Degree:

a. Candidates who have passed all written examinations and successfully completed the compulsory internship as per the university's requirements will be awarded the degree.
b. Final Consolidated Mark sheet shall be issued by the Nagaland University to the candidate after submission of his/her Internship Completion Certificate by the College.

17. Academic Calendar:

a. Odd semester shall be from July to December, and Even semester shall be from January to June.
b. The odd semester and even semester university (end) examinations shall be conducted in the months of December and June respectively.

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B.Sc. in Health Information Management (B.Sc. HIM)

Semester Wise Distribution of Subjects

Total Credits = 132; Total Marks = 3300

Semester	Code	Subject	Credits		Total	MARKS					Total Hours	
			Theory	Practical		Internal		Semester		Total	Theory	Practical
						Theory	Practical	Theory	Practical			
1ST SEMESTER	BHIM-101	Basic Sciences I Anatomy /Physiology	4	1	5	30	20	100	50	200	72	36
	BHIM-102	Basic Sciences II	4	1	5	30	20	100	50	200	72	36

	Code	Course										
	BHIM -103	English /Medical Terminology I /Ethics/Basic Computer	4	1	5	30	20	100	50	200	72	36
	BHIM-104	Biostatistics /Sociology	2	3	5	30	20	100	50	200	36	108
		Total			20					800	252	216
2ND SEMESTER	BHIM-201	Health Information Management Paper I	5	5	10	30	20	100	50	200	90	180
	BHIM-202	Medical Terminology II	5		5	25	-	75	-	100	90	
	BHIM -203	General Biostatistics / Vital & Hospital Statistics	3	2	5	30	20	100	50	200	54	36
		Total			20					500	234	216
3RD SEMESTER	BHIM-301	Health Information Management Paper II	5	3	8	30	20	100	50	200	90	180
	BHIM-302	Hospital Organization & Administration / Communication Skills	5	-	5	25	-	75	-	100	90	-
	BHIM -303	ICD-10 & ICD 9 CM Paper I	2	5	7	30	20	100	50	200	54	180
		Total			20					500	234	360
4TH SEMESTER	BHIM-401	ICD-10 & ICD 9 CM Paper II	2	5	7	30	20	100	50	200	18	180
	BHIM-402	Medico legal Aspects / Forensic Medicine	5	-	5	25	-	75	-	100	90	-
	BHIM -403	Introduction to Quality and Patient safety	5	3	8	30	20	100	50	200	90	108
		Total			20					500	198	288
5TH SEME	BHIM-501	Hospital Accounting and Financial Accounting	4		4	25	-	75	-	100	90	

	Code	Subject										
	BHIM-502	Information Technology	4	3	7	30	20	100	50	200	72	108
	BHIM -503	Medical Transcription /Telemedicine	4	2	6	30	20	100	50	200	72	72
	BHIM -504	Research Methods	3	-	3	25	-	75	-	100	54	-
		Total			**20**					**600**	**288**	**180**
6TH SEMESTER	BHIM-601	Fundamentals of Management	6		6	25	-	75	-	100	108	
	BHIM-602	Quality Management in hospital	6	2	8	30	20	100	50	200	108	36
	BHIM -603	Human Resource Management	6	-	6	25	-	75	-	100	108	
		Total			**20**					**400**	**324**	**36**
Internship		12-month compulsory rotational practical posting, Project submission, Final Practical & Viva			**12**							**100**

*INTERNSHIP – **Minimum 1440 hours (calculated based on 8 hours per day, if 180 working days in one-year span)**

CONTENTS

DETAIL SYLLABUS FOR

BACHELOR OF SCIENCE IN HEALTH INFORMATION MANAGEMENT COURSE

SEMESTER-I: 20 CREDITS

Fundamentals of Pre & Para Clinical Subjects:

Subject Description:

This course is designed to provide Allied Health Professionals a basic knowledge of Human Anatomy and Physiology, Biochemistry, Pharmacology, Clinical and General Pathology, Microbiology, biostatistics, sociology, computer science and medical ethics

BHIM 101: BASIC SCIENCES I

Anatomy and Physiology

INTRODUCTION TO THE CHEMISTRY OF LIFE:

- Atoms, molecules and compounds.
- Important biological molecules.
- Movements of substances within body fluids.
- Body fluids.

THE CELLS, TISSUES AND ORGANISATION OF THE BODY:

- The cell: structure and functions
- Tissues
- Organisation of the body
- The Skeleton

- Cavities of the body

THE BLOOD

- Blood cell formation and functions.
- Red blood cells.
- Blood grouping

THE CARDIOVASCULAR SYSTEM

- Heart – Position, Structure, Flow of blood through the heart
- Blood Pressure.
- Pulse.
- Circulation of blood
- Pulmonary Circulation
- Systemic or general circulation.

THE LYMPHATIC SYSTEM

- Lymph and Lymph vessels
- Lymphatic organs and Tissues

THE NERVOUS SYSTEM

- Central nervous system
- The meaning and cerebrospinal fluid (CSF)
- Brain
- Spinal Cord
- Peripheral nervous system.

THE SPECIAL SENSE

- Hearing and the ear
- Balance and the ear
- Sight and the eye
- Sense of smell
- Sense of taste

THE ENDOCRINE SYSTEM

- Pituitary gland and hypothalamus
- Thyroid gland
- Parathyroid glands
- Adrenal glands
- Pancreatic islets
- Pineal gland
- Thymus gland
- Local hormone

THE RESPIRATORY SYSTEM

- Nose and Nasal cavity
- Pharynx
- Larynx
- Trachea
- Lungs
- Bronchi and bronchioles
- Respiratory bronchioles and alveoli
- Respiration

INTRODUCTION TO NUTRITION

- The balanced diet
- Carbohydrates
- Proteins (nitrogenous foods)
- Fats
- Vitamins
- Minerals, trace elements and water
- Non- starch polysaccharide (NSP)

THE DIGESTIVE SYSTEM

- Organs of the digestive system
- Basic structure of the alimentary canal
- Mouth

- Salivary glands

- Pharynx

- Oesophagus

- Stomach

- Small intestine

- Large intestine, Rectum and Anal canal

- Pancreas

- Liver

THE URINARY SYSTEM

- Kidneys

- Ureters

- Urinary bladder

- Urethra

- Micturition

THE SKIN

- The Skin - Structure of the skin, Function of the skin, Wound healing.

RESISTANCE AND IMMUNITY

- Non-specific defence mechanism
- Immunity

THE MUSCULOSKELETAL SYSTEM

- Bone
- Axial skeleton
- Appendicular skeleton
- Joints
- Main synovial joints of the limbs
- Muscle tissue
- Principal skeletal muscle

INTRODUCTION TO GENETICS

- Chromosomes, genes and DNA
- Protein synthesis
- Cell division
- The genetic basis of inheritance

THE REPRODUCTIVE SYSTEMS

- Female reproductive system
- External genitalia (vulva)
- Internal genitalia
- Breasts
- The male reproductive system.

Suggested reading: Text Book of Medical Physiology" by Guyton and Hall, 13th edition (Publisher, Elsevier)

BHIM 102: BASIC SCIENCES II

a. Biochemistry:

Basics of carbohydrates, Amino acids, Protein and Non-protein, Lipids, Enzymes, Minerals-Iron, Calcium & Magnesium, Normal value ranges

b. Pharmacology:

General definitions- Pharmacology, Drugs, Medical pharmacology, Toxicology, Pharmacodynamics properties, Pharmacokinetic properties

- Introduction to pharmacology, Basic pharmacology terminology and concepts
- Introduction to pharmacodynamics
- Introduction to pharmacokinetics- absorption, distribution, elimination
- Mechanism of drug action, dosage forms, routes of administration
- Common generic and trade names
- Medication errors, Legal aspects in pharmacology

c. Pathology:

Introduction of pathology, basics of inflammation, infection, degeneration and tumours (Neoplasm) clinical pathology- Study of body Fluids- CSF, Urine & stool

d. Microbiology:

Introduction and historical background of Microbiology, classification special characteristics of organisms, cultivation (Different types of Media) and identification of organisms Sterilization techniques; Basics of Immunology- Ag Ab reaction & Basics in Immune response & Hypersensitivity.

References:

1. *Textbook of Biochemistry for Medical Students 6th Edition, DM Vasudevan, Sreekumari S, Kannan Vaidyanathan.*

2. *Text book of Microbiology 9th Edition, Ananthanarayan , Paniker.*

BHIM 103: ENGLISH INCLUDING TERMINOLOGY/ ETHICS/COMPUTER

a. **English:**

Course Objective

To develop the potential for language use to perform communicative functions, meeting the demands in the student's academic and professional set-ups

The subject covers the aspects of oral communication, Grammar, Reading and Writing.

i. Writing Skills

- Objectives- Difference between spoken and written form
- How words are formed into phrases and clauses
- Tenses, Abbreviations, Punctuations
- Writing Sentences
- Writing Paragraphs: The Development of a Paragraph
- Cohesion, Coherence
- Summary, essay writing, précis writing
- Formal Letters – personal, applications, bio-data,
- Official correspondence: Outgoing correspondence, replying incoming correspondence, writing circulars, notices, charge memos
- Writing Reports
- Informal letters

ii. Basics of Communication:

- Process and models of communications
- Types of communications: Oral communication (Verbal, telephonic, face-to-face), Written Communication, Non-verbal communication & Body language
- Barriers to communications
- How to improve communication and spoken skills.

iii. Reading Skills:

- Sources of Information

- Types of readings: Skimming, Scanning, intensive / loud / silent reading, oral, extensive, map reading
- Understanding what to read- Part played by propositions
- Techniques of reading 3Q3R
- Sample passages for reading with comprehension exercises
- Tables and Graphic Organizers

Reference: *Manipal Academy of higher education; English book for Nurse by Selva Rose, 3rd Edition*

b. Medical Terminology- (Including fundamentals of clinical science)

Subject Description: Orientation to medical terminology, terms related to sympathetology, causation investigations and treatment of condition within medicine, surgery, Obstetrics and Gynaecology, all specialties including terms related to biological disorders (skin and breast, Musculo-skeletal, Neurological and Psychiatric, Cerebro & Cardiovascular disorders, and Common diseases affecting each of the above system).

Reference: *Hand book of Medical Terminology- IR Asher, Medical diagnostic & procedural Terminology- Asher, Medical Dictionary-Oxford & IBH*

c. Medical Ethics

i. Medical ethics - Definition - Goal – Scope
ii. Code of conduct – Introduction
iii. Basic principles of medical ethics – Confidentiality
iv. Malpractice and negligence - Rational and irrational drug therapy e. Autonomy and informed consent - Right of patients
v. Care of the terminally ill- Euthanasia g. Organ transplantation
vi. Medico legal aspects of medical records – Medico legal case and type- Records and document related to MLC - ownership of medical records - Confidentiality Privilege communication – Release of medical information - Unauthorized disclosure - retention of medical records - other various aspects

Reference: *Principles of Bio-Ethics: Tom Beauchamp & Childress.*

d. Basics of Computers

<u>Course Content:</u>

- Introduction to computer – I/O devices – memories – RAM and ROM – Different kinds of ROM Networking – LAN, WAN, MAN (only basic ideas)
- MS word, MS-Excel, MS-POWERPOINT,
- Explorer and Navigator – Uploading and Download of files and images – E-mail ID creation –Sending messages – Attaching files in E-mail – Introduction to "C" language –

Practical:

- Creating a worksheet using MS-Excel with data and sue of functions
- Using MS-Excel prepare a worksheet with text, date time and data
- Preparing a chart and pie diagrams using MS-Excel
- Using Internet for searching, uploading files, downloading files creating e-mail ID
- Using C language writing programs using functions
- Computer application of statistical data

<u>Reference</u>: 1. Computer Fundamentals: Pearl Software

2. *Fundamentals of Computers: E. Balagurusamy*

BHIM 104: BIOSTATISTICS/SOCIOLOGY

a. **Biostatistics**

General Statistics:

- Definition and importance of biostatistics
- Types of data, rates and ratio
- Methods of collection of data-primary and secondary data
- Sampling of data
- Measures of central tendency (Mean, median, mode)
- Measures of Dispersion (Mean deviation, standard deviation, Range)
- Presentation of data (Bar diagram, Pie diagram, Histogram, Frequency, Polygon, Frequency curve, Cumulative frequency curve, Line diagram)
- Correlation and Regression analysis
- Basic concept of probability

Reference: Introduction to Biostatistics and Research Methods (5th Edition)– P.S.S. Sundar Rao& J. Richard.

b. **Sociology and Environment Health: Practical including field work**

Sociology and health

- Difference between community health and clinical medicine
- Concepts in sociology which influence health and disease.
- Social structure, social behaviour, social institutions, socialization, culture, custom, acculturation. standard of living, social problems, social stress and social surveys
- Types of family, functions of family, family and health, broken family.
- Demography and health.
- Influence of social factors on health.

References: Text book of preventive Medicine by Park and Park Chapters 12 and 13.

Environment health: The influence of environment on health and preventive measures.

- Water, air, soil, housing, waste, radiation
- Water - Sources of water, quality of water, water pollution, purification of water, disinfection.
- Air –air pollutants, sources of air pollution, effects of air pollution.
- Housing – types and influence on health
- • Waste disposal   - excreta disposal, hospital waste disposal impact on health
- Radiation exposure and effect on health

References: Text book of preventive Medicine by Park and Park Chapters 12 and 13.

BHIM 201: HEALTH INFORMATION MANAGEMENT Paper I:

1. **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:

a. Introduction to healthcare delivery system

- Healthcare delivery system in India at primary, secondary and tertiary care
- Community participation in healthcare delivery system
- Health system in developed countries
- Private Sector
- National Health Mission
- National Health Policy
- Issues in Health Care Delivery System in India

b. National Health Programme- Background objectives, action plan, targets, operations, achievements and constraints in various National Heath Programme.

c. Introduction to AYUSH system of medicine

- Introduction to Ayurveda
- Yoga and Naturopathy
- Unani
- Siddha
- Homeopathy
- Need for integration of various system of medicine

d. Health scenario of India- past, present and future

e. Epidemiology

- Principles of Epidemiology
- Natural History of disease
- Methods of Epidemiological studies

- Epidemiology of communicable & non-communicable diseases, disease transmission, host defence immunizing agents, cold chain, immunization, disease monitoring and surveillance

2. **Introduction to Health Information Management:**
   a. Health Information Management
   b. evolution of health care in the United States
   c. Health Care Today
   d. Health Care Practitioners
   e. Health-related Associations, Organizations and Agencies
   f. The Health Care Consumer
   g. The Medical Record
   h. The American Health Information Management Association
   i. Code of Ethics
   j. The Health Information Management Professional
   k. International Federation of Health Record Organizations

3. **Development and Content of the Hospital Medical Record:**
   a. Hospital Medical Record
   b. Content of the Medical Record
   c. Special Records
   d. Format types
   e. Required Characteristics of Entries in Medical Records
   f. Responsibility for Medical Record Quality

4. **Medical Records in Ambulatory Care:**
   a. Factors influencing use of Ambulatory Care
   b. Ambulatory Care
   c. Ambulatory Care Records
   d. Medical Records in Free-Standing Facilities
   e. Analysis of Ambulatory Care Records
   f. Quality Management

5. **Management of Medical Record Content:**
   a. Types of Medical Record Documentation Analyses
   b. Handling Information on Documentation Practices and Potentially Compensable Events

6. **Forms design and Control:**
   a. Form Design
   b. Forms Control

7. **Filing method, Storage and Retention:**
   a. Record Numbering and Filing Systems
   b. Physical Facilities in the File Area
   c. Protective Covers for Records
   d. Safety
   e. Organizational Patterns of Files
   f. Record Control
   g. Locating Misfiles
   h. Colour Coding of Record Folders
   i. Other Filing Rules and Procedures
   j. Transportation of Records
   k. Medical Record Retention Policies
   l. Microfilming
   m. Disk Storage

8. **Indexes and Registers:**
   a. Master Patient Index
   b. The Number Index
   c. Disease and Procedure Indexes
   d. Physician's Index
   e. Registers
   f. Cancer Registry
   g. Data Quality

BHIM 202: MEDICAL TERMINOLOGY (INCLUDING FUNDAMENTALS OF CLINICAL SCIENCE)

This includes the fundamentals of clinical science.

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.

1. **Introduction to Medical Terminology**
   a. Definition and Origin of Medical Terms.
   b. Components of Medical Terms
   c. Prefixes
   d. Suffixes
   e. Roots and Combining forms
   f. External Anatomy and Internal Anatomy

g. Additional Lists and their combining forms grouped as:

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

2. **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

3. **The Skeletal System**
   a. Pathologic conditions (Inflammations and Infections)
   b. Hereditary, Congenital and Developmental Disorders
   c. Fractures
   d. Metabolic and Deficiency Diseases
   e. Symptomatic Terms
   f. Diagnostic Terms
   g. Oncology Terms
   h. Operative Terms
   i. Laboratory Tests and Procedures
   j. Standard Abbreviations

4. **The Muscular System**
   a. Pathologic Conditions

b. Degenerative and Innervative Disorders

c. Hereditary, Congenital and Developmental Disorders

d. Symptomatic Terms

e. Diagnostic Terms

f. Oncology Terms

g. Operative Terms

h. Laboratory Tests and Procedures.

i. Standard Abbreviations

5. **Integumentary System**

   a. Pathologic Conditions

   b. Fungal, Viral and Parasitic Infections

   c. Hereditary, Congenital and Developmental Disorders

   d. Symptomatic Terms

   e. Diagnostic Terms

   f. Oncology Terms

   g. Operative Terms

   h. Laboratory Tests and Procedures

6. **The Cardiovascular System**

   a. Pathologic Conditions

   b. Haemorrhages and related Conditions

   c. Hereditary, Congenital and Developmental Disorders

   d. Symptomatic Terms

   e. Diagnostic terms

   f. Oncology Terms

   g. Operative Terms

   h. Laboratory Tests and Procedures

   i. Standard Abbreviations

7. **The Respiratory System**

   a. Pathologic Conditions

   b. Symptomatic Terms

   c. Diagnostic Terms

d. Oncology Terms

e. Operative Terms

f. Laboratory Tests and Procedures

g. Standard Abbreviations

8. **The Gastro-Intestinal System**

a. Pathologic Conditions

b. Hereditary, Congenital and Developmental Disorders

c. Symptomatic Terms

d. Diagnostic Terms

e. Oncology Terms

f. Surgical Procedures

g. Laboratory Tests and Procedures

h. Standard Abbreviations

9. **The Genito-Urinary System**

a. Urinary Tract

- Pathologic Conditions

- 2. Hereditary, Congenital and Developmental Disorders

- 3. Symptomatic Terms

- 4. Diagnostic Terms

- 5. Oncology

- 6. Surgical Procedures

- 7. Laboratory Tests and Procedures

- Standard Abbreviations

b. Male Reproductive Organs

- Hereditary, Congenital and Developmental Disorders

- Sexually Transmitted Disorders (STD)

- Symptomatic Terms

- Diagnostic Terms

- Operative Procedures

c. Female Reproductive Organs

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

10. The Endocrine System

(Pituitary-Anterior & Posterior: Hypothalamus; Thyroid; Parathyroid; Adrenal-Cortex
and Medulla; Pineal body; Pancreas; Gonads-Ovaries & Testes & Thymus)

a. Pathologic Conditions

b. Hereditary, Congenital and Developmental Disorders

c. Symptomatic Terms

d. Diagnostic Terms

e. Oncology

f. Surgical Procedures

g. Laboratory Tests and Procedures

h. Standard Abbreviations

11. The Nervous System

a. Neurological Disorders

- Pathologic conditions
- Hereditary Congenital and Developmental Disorders
- Circulatory Disturbances
- Other Organic Abnormalities
- Oncology
- Diagnostic Terms
- Surgical and other Procedures
- Laboratory Tests and Procedures

b. Psychiatric Disorders

- Psychiatric Disorders

- Other Descriptive and Diagnostic Terms
- Various Tests
- Treatment Methods for Psychiatric Conditions

12. **The Sensory Organs**
    a. Sense of Vision
        - Pathologic conditions
        - Hereditary, Congenital and Developmental Disorders
        - Diagnostic Terms
        - Operative terms
        - Oncology
        - Vision Tests and Procedures
    b. Sense of Hearing
        - Pathologic condition
        - Hereditary, Congenital and Developmental Disorders
        - Oncology
        - Surgical Procedures
        - Hearing Tests
    c. Sense of Smell
        - Pathologic and Other terms
        - Laboratory Tests
    d. Sense of Taste
- Pathologic and Other terms
    e. Touch and Other Cutaneous Senses
- Terms referring to these senses

13. **Multiple-System Diseases**
    a. Inflammations and Infections
    b. Symptomatic Terms
    c. Diagnostic Terms
    d. Laboratory Tests and Procedures

BHIM-203: GENERAL BIO-STATISTICS, VITAL & HOSPITAL STATISTICS

General Bio-statistics

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

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
- Practical: Hands-on training in hospital statistics – collection and analysis

Vital Statistics:

- Definition and Uses of Vital Statistics

- Methods of collection of Vital Statistics

- Formulae for processing Vital Statistics
    - Crude Rates
    - Specific Rates
    - Prevalence, Incidence, Morbidity, Fertility Rates
    - 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

References:

i.   *Health Information Management by Edna K. Huffman*

ii. *Health Information Management by Kathleen M. LA Tour*

iii. *Introduction to Biostatistics and Research Methods by P.S.S. Sundar Rao, J. Richard (Reference)*

iv. *Methods in Biostatistics by BK Mahajan (Reference).*

v.   *Hand book of Medical Terminology- IR Asher*

vi. *Medical diagnostic & procedural Terminology- Asher*

vii. *Medical Dictionary-Oxford &IBH*

viii. *Terms related to Biologic disorders & Supplementary terms – CMC, Vellore*

BHIM 301: HEALTH INFORMATION MANAGEMENT Paper II

1. **Clinical Records in long term care and rehabilitation facilities**
   a. Long term Care Facilities
   b. Nursing Facilities
   c. Home Care
   d. The Hospice
   e. Respite care
   f. Rehabilitation Facilities
   g. General Medical Record Management Principles
   h. Retention of Records
   i. Release of Information
   j. Consulting

2. **Mental Health Records**
   a. History of Mental Health Care in the United states
   b. Content of Mental Health Records
   c. Patient Management
   d. Special Therapies
   e. Record Documentation
   f. Review process
   g. Utilization Review
   h. Release of Information

3. **Ethical issues in Health Information Management**
4. **Paper based Health Record**
5. **Computer based patient records**
6. **Health care Information standards**

7. **Health Insurance and Third Party Payers**

   Health Insurance

   a. Definition and history of health insurance

   b. Concepts in health insurance

   c. Issues in health insurance

   d. Effective health insurance

   e. Good & Bad in health insurance

   f. Reasons for lack of coverage

   g. Denial of claims

   h. Contracts or M.O. Us

   i. Health Insurance in India

   j. Health insurance & TPAs

   k. Insurance regulatory development authority & its role

   l. Billing &health insurance billing

8. **Reimbursement Methodologies**

   a. History of healthcare reimbursement

   b. Development of prepaid health plans

   c. Healthcare reimbursement systems

   d. Healthcare reimbursement methodologies

   e. Reimbursement support process

   f. Internal audits

BHIM-302: HOSPITAL ORGANIZATION AND ADMINISTRATION / COMMUNICATION SKILLS- Paper I

a. Hospital Organization and Administration

i. Introduction to Hospital Administration
- Who's Who in hospital – Key administrators and their functions, overview of medical and para-medical specialties, main service departments:
- Overview of health services – government services: private & not for profit: primary, secondary & tertiary health care: types of hospital: community, super-specialty etc.

ii. Principles of Organizational Management
- Culture, Values and Mission
- Organizational Structure
- Planning and Controlling
- Hospital Organizational Structures – Government, Private and Not for Profit

iii. Professional Practice in Health Information Management
- Modern Healthcare team
  - Functions and Roles
  - Professional Image
  - Inter and Intra personal relations
  - What employers look for
- Professional Issues
  - Dichotomy
  - Professionalism at all levels
  - Productivity and compensation
  - Quality Assessment
  - Understanding Occupational health and safety

- Communication
- Effective Communication
- Networking
- Team Building
- Risk Management
- Technology
- Tools of the trade
- Recent advances
- Time and Stress Management
- Time Management in Health Information Profession
- Stress Management for enhancing productivity
- Motivational techniques
- Morale boosting

iv. Clinical Services
- Overview of clinical departments and services – OPD, In-patients, ICU, Surgical, Emergency, Community/family Health, Paramedical & Rehabilitation
- Types of doctors, their training, roles and responsibilities
- The role & responsibilities of the HOD
- Medical Audit
- Medical Negligence & Litigation

v. Nursing Services and Wards
- Objectives of the nursing service
- Nursing service organization, types of nurses, their training, qualifications and functions, other ward staff, personnel issues.
- Ward management

vi. Product-based services

- Pharmacy purchasing and stores
- Pharmacy dispensing
- Prosthetics & Orthotics

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

- Overview – main services and their functions
- In-house services

9. Patient Services (non-medical)

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

10. Managing Support Services

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

11. Hospital Infrastructure (Buildings and Plant)

- Civil Engineering – Planning and maintaining buildings, water & sewage
- Electrical Engineering
- Mechanical Engineering, Equipment Maintenance, Medical Gases, etc.
- Biomedical Engineering

12. Hospital Information Systems

- Analysing information requirements
- Reporting systems
- Early warning systems
- Computerized Systems, intranet

13. Managing the Organization (putting it all together)

- Planning: strategy and corporate planning

- Dealing with risk and uncertainty
- Organizational Development and Change management
- Corporate Governance & legal matters
- Relationships with other institutions and organizations

b. Communication skills

i. Basics of Communication:
- Process and models of communications
- Types of communications: Oral communication (Verbal, telephonic, face-to-face), Written Communication, Non-verbal communication & Body language
- Barriers to communications
- How to improve communication and spoken skills

ii. Reading Skills:
- Sources of Information
- Types of readings: Skimming, Scanning, intensive / loud / silent reading, oral, extensive, map reading
- Understanding what to read- Part played by propositions
- Techniques of reading 3Q3R
- 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 •
- Factors helping listening: Semantic markers, focused listening
- Facilitating understanding
- Static & process description- gambits

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

Objectives- Difference between spoken and written form

- How words are formed into phrases and clauses
- Tenses, Abbreviations, Punctuations
- Writing Sentences
- Writing Paragraphs: The Development of a Paragraph
- Cohesion, Coherence
- Summary, essay writing, précis writing
- Formal Letters – personal, applications, bio-data, Informal letters
- Official correspondence: Outgoing correspondence, replying incoming correspondence, writing circulars, notices, charge memos
- Writing Reports
- Tables, Charts and Graphs

vi. Study Skills

- Improving Study Skills
- Note Taking: Some Basic Devices, Visual aids
- 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

BHIM-303: INSTRUCTION MANUAL OF ICD-10 CODING (VOLUME 2) & ICD-9 CM PROCEDURES- Paper 1

- Volume 1- Tabular List
- Volume 2- Instruction Manual
- Volume 3- Alphabetic Index

Introduction and usage of International Classification of Diseases- (ICD-10) and Surgical Procedures ICD-9 CM

Chapter 1:	Certain Infectious and Parasitic Disease	(A00-B99)
Chapter 2:	Neoplasm	(C00-D48)
Chapter 3:	Diseases of the blood and blood forming Organs and certain disorders involving the Immune mechanism	(D50-D89)
Chapter 4:	Endocrine, nutritional and metabolic diseases	(E00-E90)
Chapter 5:	Mental and behavioural Disorders	(F00-F99)
Chapter 6:	Diseases of the nervous system	(G00-G99)
Chapter 7:	Diseases of the Eye and Adnexa	(H00-H59)
Chapter 8:	Diseases of the ear and Mastoid Process	(H60-H95)
Chapter 9:	Diseases of the Circulatory System	(I00-I99)
Chapter 10:	Diseases of the Respiratory System	(J00-J99)
Chapter 11:	Diseases of the Digestive System	(K00-K93)
Chapter 12:	Diseases of the Skin and Subcutaneous tissue	(L00-L99)

References:

1.. International Statistical Classification of Diseases and Related Health Problems-Tenth Revision by World Health Organization

2. Health Information Management by American Health Information Management Association

3. Health Information Management- Concepts, Principles and Practice by Kathleen M. LaTour

SEMESTER- IV: 20 CREDITS

BHIM 401: ICD-10 CODING (VOLUME 2) & ICD-9 CM PROCEDURES- Paper 2

Chapter 1:   Certain Infectious and Parasitic Disease   (A00-B99)

Chapter 2:   Neoplasm   (C00-D48)

Chapter 3:   Diseases of the blood and blood forming

Organs and certain disorders involving the Immune mechanism

(D50-D89)

Chapter 4:   Endocrine, nutritional and metabolic diseases   (E00-E90)

Chapter 5:   Mental and behavioural Disorders   (F00-F99)

Chapter 6:   Diseases of the nervous system   (G00-G99)

Chapter 7:   Diseases of the Eye and Adnexa   (H00-H59)

Chapter 8:   Diseases of the ear and Mastoid Process   (H60-H95)

Chapter 9:   Diseases of the Circulatory System   (I00-I99)

Chapter 10:   Diseases of the Respiratory System   (J00-J99)

Chapter 11:   Diseases of the Digestive System   (K00-K93)

Chapter 12:   Diseases of the Skin and Subcutaneous tissue   (L00-L99)

Chapter 13:   Diseases of the musculoskeletal system and

connective tissue   (M00-M99)

Chapter 14:   Diseases of the Genitourinary system   (N00-N99)

Chapter 15:   Pregnancy, Childbirth and the Puerperium   (O00-O99)

Chapter 16:   Certain conditions originating in the perinatal period   (P00-P96)

Chapter 17:   Congenital malformations, deformations and chromosomal

abnormalities   (Q00-Q99)

Chapter 18:   Symptoms, signs and abnormal clinical and laboratory findings, (NEC)

(R00-R99)

Chapter 19:   Injury, poisoning and certain other consequences of external causes

(S00-T98)

Chapter 20:   External causes of morbidity and mortality   (V01-Y98)

Chapter 21:   Factors influencing health status and contact

with health services   (Z00-Z99)

BHIM- 402: MEDICO LEGAL ASPECTS / FORENSIC MEDICINE

a. Medico Legal Aspects

<u>Course Objectives:</u>

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 students 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.

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

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 method 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.

b. **Forensic medicine**
   i. Asphyxial deaths
   ii. Hanging
   iii. Rape, Sodomy
   iv. Gunshot injury, injury by bullets, sharp objects
   v. Traffic Accidents
   vi. Drowning
   vii. Medico-legal aspects of wounds
   viii. Wound certificate
   ix. Toxicology
   x. Food poisoning
   xi. Medico-legal autopsy

BHIM- 403:   INTRODUCTION TO QUALITY AND PATIENT SAFETY

1. **Quality assurance and management** - The objective of the course is to help students understand the basic concepts of quality in health Care and develop skills to implement sustainable quality assurance program in the health system.

   a. Concepts of Quality of Care

   b. Quality Improvement Approaches

   c. Standards and Norms

   d. Quality Improvement Tools

   e. Introduction to NABH guidelines

2. **Basics of emergency care and life support skills** - Basic life support (BLS) is the foundation for saving lives following cardiac arrest. Fundamental aspects of BLS include immediate recognition of sudden cardiac arrest (SCA) and activation of the emergency response system, early cardiopulmonary resuscitation (CPR), and rapid defibrillation with an automated external defibrillator (AED). Initial recognition and response to heart attack and stroke are also considered part of BLS. The student is also expected to learn about basic emergency care including first aid and triage. Topics to be covered under the subject are as follows:

   a. Vital signs and primary assessment

   b. Basic emergency care – first aid and triage

   c. Ventilations including use of bag-valve-masks (BVMs)

   d. Choking, rescue breathing methods

   e. One- and Two-rescuer CPR

   f. Using an AED (Automated external defibrillator).

   g. Managing an emergency including moving a patient

At the end of this topic, focus should be to teach the students to perform the manoeuvres in simulation lab and to test their skills with focus on airways management and chest compressions. At the end of the foundation course, each student should be able to perform and execute/operate on the above mentioned modalities.

3. **Bio medical waste management and environment safety**- The aim of this section will be to help prevent harm to workers, property, the environment and the general public. Topics to be covered under the subject are as follows:

   a. Definition of Biomedical Waste

   b. Waste minimization

   c. BMW – Segregation, collection, transportation, treatment and disposal (including colour coding)

   d. Liquid BMW, Radioactive waste, Metals / Chemicals / Drug waste

   e. BMW Management & methods of disinfection

   f. Modern technology for handling BMW

   g. Use of Personal protective equipment (PPE)

   h. Monitoring & controlling of cross infection (Protective devices)

4. **Infection prevention and control** - The objective of this section will be to provide a broad understanding of the core subject areas of infection prevention and control and to equip AHPs with the fundamental skills required to reduce the incidence of hospital acquired infections and improve health outcomes. Concepts taught should include –

   a. Evidence-based infection control principles and practices [such as sterilization, disinfection, effective hand hygiene and use of Personal protective equipment (PPE)],

   b. Prevention & control of common healthcare associated infections,

   c. Components of an effective infection control program, and

   d. Guidelines (NABH and JCI) for Hospital Infection Control

5. **Antibiotic Resistance-**

   a. History of Antibiotics

   b. How Resistance Happens and Spreads

   c. Types of resistance- Intrinsic, Acquired, Passive

   d. Trends in Drug Resistance

   e. Actions to Fight Resistance

   f. Bacterial persistence

   g. Antibiotic sensitivity

h. Consequences of antibiotic resistance

i. Antimicrobial Stewardship- Barriers and opportunities, Tools and models in hospitals

6. **Disaster preparedness and management**- The objective of this section will be to provide knowledge on the principles of on-site disaster management. Concepts to be taught should include-

   a. Fundamentals of emergency management,

   b. Psychological impact management,

   c. Resource management,

   d. Preparedness and risk reduction,

   e. Key response functions (including public health, logistics and governance, recovery, rehabilitation and reconstruction), information management, incident command and institutional mechanisms.

SEMESTER- V: 20 CREDITS

BHIM 501: HOSPITAL ACCOUNTING AND FINANCIAL ACCOUNTING

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

1. **Nature and purpose of accounting, accounting Concepts &accounting records**

   - What is accounting information? Who needs it? What they need or expect?
   - What do accountants do?
   - Single Entry Book- keeping
   - Double Entry Book-keeping
   - What is an account? Making entries
   - Five types of Accou4nts (Income, Expenses, Asset, Liability, Capital)
   - Book-keeping rules
   - Accounting books/ledgers (Nominal, Purchase, Sales, Journal etc.)
   - Dealing with cash, impress system

2. **Preparation of various financial statements**
   - Trial balance
   - Receipts and payment
   - Income and expenditure account d.   Balance sheet

3. **Fixed assets and depreciation**
   - What are fixed assets and why are they different?
   - What is depreciation and why do we need it?
   - How do we calculate depreciation? (Pros and cons of different methods)
   - Accounting entries for depreciation

4. **Costing and pricing**
   - Financial accounting Vs. Cost accounting
   - Key terms: Direct/ Indirect, Fixed/ Variable/ Semi-variable c.   Analysing results: Standard/ budgeted/actual
   - Costing hospital services
   - Taken action: controllable/ uncontrollable
   - Making decisions: Marginal/book/out of pocket costs
   - Reporting costs: Cost Centre, allocation and apportionment of costs h. Pricing methods and decisions

5. **Inventory accounting**
   - Valuation (FIFO, LIPO, WAC etc)
   - Optimum balance and recorder levels

6. **Analysis of financial statements**
   - Ratio analysis- meaning and purposes
   - Ratios applicable to Non-profit making organizations

7. **Financial planning and control**
   - Budgets and budgetary control

8. **Use of computers in accounting**
   - Computerized ledger systems
   - Spreadsheets &excel based accounting

9. **Accounting and audit procedures in health care sector**
   - Accounting system in hospital
   - Purpose of an audit and auditing principles
   - What the auditor does?
   - The audit report- "True and Fair View"
   - Legal requirements: layout, audit and filing of accounts

BHIM-502: INFORMATION TECHNOLOGY

<u>Learning Objectives</u>: Medical informatics may be defined as the art and science of processing medical information.

1. **Computer Applications and Technologies in Healthcare:** This section 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 exposed.

2. **Basic ICD-10, ICD-9CM Coding**

   This section 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 programme, 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).

3. **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)

4. **Database and Spreadsheet Operations**

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

5. **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.

6. **Hospital Information System (HIS) with Electronic Medical Records (EMR) or Electronic Health Information Management System (HMIS)**

- Overview and Purpose: Definition of HIS, EMR, and HMIS. Advantages and uses of EMR and HIMS

- Components of HIS: Patient scheduling systems, laboratory information systems, radiology information systems, and pharmacy management systems.

- Features of EMR and HMIS: Features of Electronic Medical Records and Health Information Management Systems, such as patient data storage, access to historical health records, real-time updates, and data security measures.

- Data Management: Methods of data input, storage, retrieval, and sharing. Include information on data integrity, and privacy
- Benefits of EMR and HIMS: Improved diagnostic accuracy, reduced errors, enhanced communication between providers, and more personalized patient care.
- Integration with Other Systems: integration of HIS, EMR, and HMIS with other healthcare technologies and systems, including interoperability issues and solutions.
- Security and Privacy Concerns: Security and privacy concerns associated with digital medical records, including potential risks and the strategies employed to mitigate them.
- Implementation Challenges: Challenges in implementing and maintaining these systems, such as cost concerns, resistance to change among staff, technical challenges, and training needs.
- Case Studies and Real-World Applications of HIS, EMR, and HMIS in healthcare settings.

7. **Healthcare Data Management**
- Types of health data (clinical, administrative, financial)
- Data standards and interoperability
- Data quality and governance

8. **IT Infrastructure in Healthcare**
- Networking and data communication in hospitals
- Cloud computing in healthcare
- Security and disaster recovery planning

9. **Project Management in Healthcare IT**
- IT project lifecycle in the healthcare setting
- Best practices in healthcare IT project management
- Case studies of successful IT implementations in healthcare

10. Emerging Technologies in Healthcare

- Artificial intelligence and machine learning applications in healthcare
- Block chain technology in healthcare
- Internet of Things (IoT) and wearable technologies

11. **Office Applications**

This section 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.

12. Database Management System (Practical)

This subject discusses the design, development, deployment, and evaluation of database systems. In addition, students learn conceptual and relational data modeling, and implementation languages. Additional topics include data integrity, relational normalization theory, security, privacy, and concurrence control

13. Practical Work and Case Studies

- Analysis of existing health information systems
- Hands-on projects with EHR software
- Field trips or virtual visits to healthcare IT departments

BHIM- 503: MEDICAL TRANSCRIPTION / TELE MEDICINE

This subject provides a dual-focused exploration of Medical Transcription and Telemedicine. In the Medical Transcription section, students gain proficiency in essential aspects such as terminology breakdown, forms, prefixes, and clinical abbreviations. Whereas, Telemedicine covers classifications, technology, objectives, and legal considerations under the Telemedicine Act. Students also examine the merits of telemedicine, its future trajectory, and the role of research in shaping this dynamic field.

Medical Transcription

a. Basic of Medical Transcription
b. Objectives of Medical Transcription
c. Rules of Medical Transcription
d. Advantages of Medical Transcription
e. Division of medical words into their component parts
f. Forms, Suffixes, Prefixes and Terminology
g. Laboratory tests, Clinical Procedures and Abbreviations

Telemedicine

a. Basic health care
b. Classification of telemedicine
c. Technology of telemedicine
d. Objectives of telemedicine
e. Rules of telemedicine
f. Telemedicine act
g. Merits of telemedicine
h. Future of telemedicine plans
i. Research

BHIM 504: RESEARCH METHODOLOGY

This subject provides a comprehensive exploration of Research Methodology in the context of medicine and healthcare. Beginning with an overview of research in these fields, it delves into the intricacies of clinical research and trials, emphasizing various research models. Students gain practical insights into the research process, from instrument selection to data gathering, analysis, and result presentation and also guides students on publishing their research findings and introduces effective search techniques.

The list of the topics covered are:

a. Research in medicine and healthcare
b. Clinical research and clinical trials
c. Research models
d. Research process
e. Selecting an instrument
f. Gathering data
g. Analysing the data
h. Presenting results
i. Publishing research
j. Search techniques
k. Research's relationship with the professional body of knowledge

References:

1. *Health Information Management by American Health Information Management Association*
2. *Health Information Management- Concepts, Principles and Practice by Kathleen M. LaTour*
3. *Medical Transcription by NSMT (Reference)*
4. *Medical Transcription for Dummies by Anne Martinez (Reference)*

5. *Financial and Cost Accounting by Dr. S. Ganesan (Reference)*

6. *Hospital Administration by C.M. Francis*

7. *Computer Fundamentals: Pearl Software*

8. *Fundamentals of Computers: E. Balagurusamy*

9. *Introduction to Biostatistics and Research Methods by P.S.S. Sundar Rao, J. Richard (Reference), Chapter 21*

SEMESTER- VI: 20 CREDITS

BHIM- 601: FUNDAMENTALS OF MANAGEMENT

This subject introduces strategic planning and organizational development. The interplay of strategic leadership, management, and planning will be applied to health information management. Other topics include organizational assessment and benchmarking, change management, and leading enterprise-level projects.

The list of topics to be covered are:

- Knowledge of leadership, management, organizational structures theory
- Knowledge of accreditation requirements, licensing regulations, and certification requirements relevant to department/organization
- Knowledge of financial management and budgeting
- Strategy development
- Policy development
- Ability to create agendas, lead meetings, maintain documentation, and follow up
- Effective communication and negotiation skills
- Conduct a stakeholder analysis

1. **Introduction to Management**
   - Importance of Management
   - Definition of Management
   - Characteristic features of Management
   - Roles of Management
   - Role of a Manager
   - Levels of Management and their functions
   - Process of Management
   - Managerial skills

- Management and Administration Management – Science or an Art?

  Management – a profession?

2. **Principles of Management**
   - Meaning of principle
   - Nature of Management principles
   - Need for Management principles
   - Early Management approaches
   - Scientific Management
   - Administrative Management
   - Human Relation Movement
   - Modern Management approaches
   - Behavioural approach
   - Quantitative approach
   - System approach
   - Contingency approach

3. **Coordination**
   - Distinction between coordination and cooperation
   - Need for coordination
   - Requisites for excellent coordination
   - Types & Techniques of coordination
   - Difficulty of coordination

4. **Planning**
   - Nature of Planning
   - Importance of Planning
   - Forms of Planning
   - Types of Plans
   - Steps in Planning

- Limitations of Planning
- Making planning effective

5. Decision Making

- Meaning
- Types of decisions
- Steps in Rational decision-making
- Difficulties in decision-making
- Organization
- Meaning
- Why study organizations?
- Process of organizing
- Span of Management
- Principles of organizing
- Departmentalization

6. Communication

- Importance of communication
- Purposes of communication
- Formal communication
- Forms of communication
- Informal communication
- The communication process
- Barriers to communication
- Principles of effective communication
- Communication networks in a working group
- Checks on in-plant communication
- Communication in Indian industries

7. Staffing

- Importance and need for proper staffing

- Manpower planning

- Recruitment

- Selection

- Placement and orientation

8. Training and Development

- Meaning

- Advantages

- Types of training programmes

- Training methods

9. Performance Appraisal

- Purposes

- Essentials of a good performance appraisal system

- Criteria for performance appraisal

- Performance Appraisal methods

10. Promotions

- Meaning

- Requirements of a sound promotion policy

- Merit vs Seniority

- Designing a seniority system

11. Directing

- Definition

- Requirements of effective direction

- Giving orders

12. Motivation

- Meaning, definition
- Nature and characteristics of motivation
- Importance and benefits
- Types of motivation
- Various theories
- McGregor's
- Maslow's
- Herzberg's
- Wage Incentive Plan

13. Counselling

- Definition
- Characteristics
- Need & Causes
- Functions, Types & Steps in counselling process
- Drawbacks of counselling

14. Mentoring

- Meaning, Role of a mentor
- Importance, Steps
- Conditions necessary for effective mentoring system
- Types
- Hurdles

15. Leadership

- Meaning
- Role of a leader
- Leadership theories

BHIM-602: QUALITY MANAGEMENT IN HOSPITAL

This subject provides a comprehensive understanding of quality management in hospitals, covering historical perspectives, accreditation processes, TQM, Lean Six Sigma, and various quality assurance techniques. Students will gain insights into practical tools and methodologies essential for maintaining and enhancing healthcare quality.

1. **Introduction to Quality systems**
   - History of Quality
   - Overview of Quality
   - Quality in Healthcare
   - Objectives of Quality in Healthcare
   - Healthcare Quality initiatives in India
   - Hospital Quality Accreditation
     - Understanding Accreditation Systems
     - Joint Commission International (JCI)
     - National Accreditation Board for Hospitals (NABH)

2. **TQM & SIX – SIGMA**
   - Introduction to Total Quality Management (TQM)
   - TQM in Hospital
   - Introduction to Lean Six Sigma
   - Lean Six Sigma in Hospital
   - 7 Quality tools
   - PDCA cycle- Plan –Do-check cycle

3. **Quality Assurance Techniques**
   - Principles and Definition
   - SOPs and Department Manual Development
   - Overview of Quality Audit

BHIM 603: HUMAN RESOURCE MANAGEMENT

This subject introduces the principles of managing people and other organizational resources. Students will learn how to plan, organize, lead, and evaluate human resources. Topics include: management and leadership, motivations, team building, communication, productivity, performance appraisal, recruitment, job development, training, performance improvement, and revenue cycles.

Topics to be covered include:

Understand staffing levels and productivity standards

- Performa productivity calculations
- Knowledge of labour/employment laws
- Awareness of human resources structure and operations
- Principles of human resources management
- Able to apply techniques/practices related to recruitment, supervision, retention, counselling, disciplinary action
- Knowledge of employment laws, labour laws (local and national)
- Plan workforce education and training programs
- Monitor relevant labour trends and market analysis
- Monitor and benchmark performance standards
- Plan professional development for self and others

Reference:

1. *Human Resource Management - by Biswajeet P*

2. *Human Resource Development - by P Murali Krishna*

3. *Human Resource Management in Hospitals - D Samuel Abraham*