

B.Sc. in Health Information Management
(BHIM)

Semester Wise Distribution of Subjects

Total Credits= 120; Total Marks=4000

Semester	Code	Subject	Credits		Total	MARKS						Total Hours	
			Theory	Practical		Internal (60)		Semester (140)		Total	Theory	Practical	
						Theory	Practical	Theory	Practical				
1st Semester	BHIM-101	Basic sciences I Anatomy/physiology	4	1	5	40	20	100	40	200	72	36	
	BHIM-102	Basic sciences II	4	1	5	40	20	100	40	200	72	36	
	BHIM-103	English/ Medical terminology/Ethics /Basic computer	4	1	5	40	20	100	40	200	72	36	
	BHIM-104	Biostatistics /sociology	2	3	5	30	30	70	70	200	36	108	
			Total		20					800	252	216	
BHIM- 105 Forensic Medicine: Additional Internal Paper			2	1		90	10			100	72	36	
2nd Semester	BHIM- 201	Health Information Management Paper 1	5	5	10	40	20	100	40	200	90	180	
	BHIM-202	Medical Terminology	5	1	6	60		140		200	90	36	
	BHIM-203	General Biostatics, Vital & Hospital Statistics	3	1	4	40	20	100	40	200	54	36	
			Total		20					600	234	252	
3rd Semester	BMRT- 301	Health Information Management Paper 2	5	3	8	40	20	100	40	200	90	108	
	BMRT-302	Hospital Organization & Management	5	4	9	40	20	100	40	200	90	144	
	BMRT- 303	ICD-10 & ICD-9 CM- Paper 1	2	1	3	40	20	100	40	200	36	36	
			Total		20					600	216	288	
4th Semester	BHIM-401	ICD-10 & ICD-9 CM- Paper 2	1	5	6	20	40	100	40	200	18	180	
	BHIM-402	Medico Legal Aspects	5	1	6	60		100	40	200	90	36	
	BHIM-403	Introduction to Quality and Patient safety (including Basic emergency care and life support skills, Infection prevention and control, Biomedical waste management, Disaster management and Antibiotic resistance)	5	3	8	40	20	100	40	200	90	108	
			Total		20					600	216	324	
5th Semester	BHIM-501	Hospital Accounting & Financial Accounting	5	1	6	60	40	100		200	90		
	BHIM-502	Information Technology	4	3	7	20	40	100	40	200	72	108	
	BHIM-503	Medical Transcription & Tele Medicine	3	4	7	30	30	100	40	200	54	144	
	BHIM-504	Research Methods	3		3	30		70		100	54		

			Total		20					700	270	288
6th Semester	BHIM-601	Fundamentals of Management	4	1	5	30	30	100	40	200	72	36
	BHIM-602	ICD-10 & ICD-9 CM- Paper 3	1	6	7	20	40	100	40	200	18	216
	BHIM-603	A Project & VIVA			5				100/100	200		180
	BHIMF-604	Choice Based Credit Paper	3		3	30		70		100	54	
			Total		20					700	144	432

THE NAGALAND UNIVERSITY REGULATIONS FOR BACHELOR IN HEALTH INFORMATION MANAGEMENT COURSE (BHIM)

Regulations of the University

1. SHORT TITLE AND COMMENCEMENT:

These regulations shall be called “THE REGULATIONS FOR THE BACHELOR IN Health Information Management COURSE OF THE NAGALAND UNIVERSITY,”

They shall come into force from the academic year 2019 onwards.

The regulation and syllabi are subject to modifications by the standing Academic Board from time to time.

2. ELIGIBILITY FOR ADMISSION

(a) Candidates should have successfully completed Higher Secondary (10+2 level) with science subjects

Physics, Chemistry and Biology subjects taken together at the qualifying examination after a period of 12 years of study for BSc. MLT & BSc. Anesthesia

(OR)

Physics, Chemistry, Biology/ Mathematics subjects taken together at the qualifying examination after a period of 12 years of study for BSc. HIM

(b) Candidates should have passed the above examination with a minimum of 40% marks in each subject separately including English

(c) A candidate shall, at the time of admission, submit to the Head of the Institution, a certificate of medical fitness from an authorized Medical Officer certifying that the candidate is physically fit to undergo the academic course and does not suffer from any disability or contagious disease.

3. AGE LIMIT FOR ADMISSION:

Applicants should have completed 17 years and be less than 30 years of age as on July 31st.

Those “in Service” would be eligible for a special consideration for relaxation of the age requirement

4. ELIGIBILITY CERTIFICATE:

The candidates who have passed any qualifying examination other than the Higher Secondary course examination conducted by the Government of Nagaland shall obtain an eligibility certificate from the University by remitting the prescribed fees along with the filled in application form, Mark Sheet, Transfer Certificate and other relevant documents required by the University before seeking admission to the affiliated Institution (s).

5. REGISTRATION:

A candidate admitted to the Bachelor in Health Information Management degree course in any one of the affiliated Institution (s) of this University shall register his / her name in the prescribed application form for registration duly filled along with the prescribed fee and a declaration in the format, (as in Annexure) to the Controller of Examination of this University through the affiliated Institution within 60 days from the Cut-off date prescribed for Bachelor in Health Information Management Course for admission.

6. DURATION OF THE COURSE:
3Years (6 semesters) + 1-year Internship (optional)

7. COMMENCEMENT OF THE COURSE:

The course shall commence ordinarily from 1st July of the academic year.

8. EXAMINATION, EVALUATION AND DECLARATION OF RESULTS

a) **Conduct of Examinations:** University shall conduct **II, IV and VI** end-semester examinations and the remaining shall be conducted by the respective College (s). For all the end-semester examinations, questions papers shall be prepared by the University.

b) **Examination routine** for end-semester examinations shall be notified by the University which shall be normally of **3** hours duration.

c) **Student Assessment and Progression:** The performance of a student shall be evaluated on a **30: 70** basis *i.e.* **30** marks for internal assessment and **70** marks for end-semester examinations.

d) **Pass Marks:** A student shall have to secure a minimum of **45%** marks in the internal assessment (IA), and **45% marks** in the end-semester examinations in theory papers with a minimum of **50%** of the total aggregate (IA + end semester exam). However, in the event of a semester with practical paper, a student shall have to secure a minimum of **55%** marks to be considered passed in a given semester.

e) **Activities for Internal Assessment Tests:**

(i) The internal assessment for **30** marks shall be made in the following categories of activities which will include both theory and practical:

(a) Class Tests/Unit Tests, (b) Assignments, (c) Seminars, (d) Case Studies

(ii) A minimum of two written internal assessment examinations shall be conducted in each subject during a semester and the average marks of two examinations shall be taken into consideration for the award of internal marks.

(iii) A minimum of two practical examinations shall be conducted in each subject (wherever practical have been included in the curriculum) and the average marks of these two examinations shall be taken into consideration for award of internal marks in practical

The internal assessment should necessarily be completed before the conduct of the end-semester examinations.

f) **Eligibility criteria for End-Semester Examinations:** A student shall be deemed qualified to appear at the end-semester examinations only if he/she secures **minimum qualifying marks** in the **Internal Assessment Tests** and maintains **80% attendance separately** in every subject.

g) **Admission to the Next Semester:** Advancement to the next semester shall be permitted only with a maximum of **Two Backlog Papers** from the **preceding semester**. Further, entry to the next semester shall be regulated at the level of **4th, 5th and 6th** semesters as explained under:

(i) Admission to **4th semester** shall be allowed only after clearing **1st semester backlog paper(s)** during **3rd Semester**.

(ii) Admission to **5th Semester** shall be allowed only after clearing **2nd semester backlog paper(s)** during **4th Semester**.

(iii) Admission to **6th semester** shall be allowed only after clearing **3rd semester backlog paper(s)** during **5th semester**.

(iv) **Backlog paper(s) of 4th semester** needs to be cleared during **6th Semester**.

(v) **Backlog paper(s) of 5th and 6th semesters** need to be cleared during subsequent examinations for these semesters within **10 semesters** with a maximum of only one chance.

9. MEDIUM OF INSTRUCTION:

The medium of instruction and examination shall be in English

10. CURRICULUM:

The Curriculum and the Syllabi for the course shall be as prescribed by the University from time to time.

11. WORKING DAYS IN AN ACADEMIC YEAR:

There will be a total of 90 working days per semester.

12. ATTENDANCE REQUIRED FOR ADMISSION TO EXAMINATIONS:

(a) No candidate shall be permitted to appear for the University examinations, unless he/she attends the course for the prescribed period and produces the necessary certificate of attendance and satisfactory conduct from the Head of the Institution.

(b) Every candidate is required to put in a minimum of 80% of attendance both in theory and practical separately in each subject for admission to the examination.

(c) A candidate having shortage of attendance as prescribed in 12(b) in any subject in theory and /or practical shall not be permitted to appear for the semester examinations.

(d) A concession of 5% in the attendance requirements could be availed by students representing the University in various sports, cultural events. In such instances **official leave** would be granted.

(e) However in the event that a candidate failed in his exams then, the candidate would be on Academic probation and not permitted to participate in various events.

13. CONDONATION OF SHORTAGE OF ATTENDANCE;

For valid reasons, **5%** relaxation of the Attendance may be considered by the College Authority.

14. SUBMISSION OF LOG BOOKS:

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

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.

15. REVALUATION / RETOTALLING OF ANSWER PAPERS:

(a) There is no provision for revaluation of the answer papers of failed candidates in any examination. However, the failed candidates can apply for retotalling / revaluation.

(b) The Academic Committee will form a moderation committee of 3 members each year. Moderation marks cannot exceed 5 for any one candidate for all papers combined. This can be given to those papers where the candidate has borderline marks by the moderation committee.

(c) If after moderation a candidate gets less than 40 % there is no re-evaluation. Revaluation of papers between the 40%-50% would be done by two separate examiners. If the pass percentage of 50% was not achieved even after these evaluations, the candidate would be deemed to have failed the exam.

16. RE-ADMISSION AFTER BREAK OF STUDY:

- (a) In the event of a break in studies exceeding 6 months, a special condonation letter should be availed from the University.
- (b) The candidates have to complete the course within 4 years of date of admission or within double the course period.

17. VACATION: 2 weeks in each semester

18. PATTERN OF QUESTION PAPER FOR UNIVERSITY EXAMINATION:

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

**DETAIL SYLLABUS FOR
BACHELOR 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 hormones

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 defense 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 tumors (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 , KannanVaidyanathan.
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.

A. 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

B. 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

C. 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 Gynecology, 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

- a. Medical ethics - Definition - Goal - Scope
- b. Code of conduct - Introduction
- c. Basic principles of medical ethics – Confidentiality
- d. Malpractice and negligence - Rational and irrational drug therapy e.
- Autonomy and informed consent - Right of patients
- f. Care of the terminally ill- Euthanasia
- g. Organ transplantation
- h. 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

Course Content:

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

Reference: 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 behavior, 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- 105 Forensic Medicine: Additional Internal Paper 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

SEMESTER -II: 20 Credits

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:

1. Introduction to healthcare delivery system
 - a. Healthcare delivery system in India at primary, secondary and tertiary care
 - b. Community participation in healthcare delivery system
 - c. Health system in developed countries.
 - d. Private Sector
 - e. National Health Mission
 - f. National Health Policy
 - g. Issues in Health Care Delivery System in India
2. National Health Programme- Background objectives, action plan, targets, operations, achievements and constraints in various National Health Programme.
3. Introduction to AYUSH system of medicine
 - a. Introduction to Ayurveda.
 - b. Yoga and Naturopathy
 - c. Unani
 - d. Siddha
 - e. Homeopathy
 - f. Need for integration of various system of medicine
4. Health scenario of India- past, present and future
5. Epidemiology
 - a. Principles of Epidemiology
 - b. Natural History of disease
 - c. Methods of Epidemiological studies
 - d. Epidemiology of communicable & non-communicable diseases, disease transmission, host defense 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
- g. 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. Color 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.

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

VI. 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

VII. 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

VIII. 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
8. Standard Abbreviations

IX. 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

X. 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

XI. 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

XII. 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

2. Pathologic and Other terms
3. Laboratory Tests

(D) Sense of Taste

2. Pathologic and Other terms

(E) Touch and Other Cutaneous Senses

2. Terms referring to these senses

XIII. Multiple-System Diseases

1. Inflammations and Infections
2. Symptomatic Terms
3. Diagnostic Terms
4. 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

1. Health Information Management by Edna K. Huffman
2. Health Information Management by Kathleen M. LaTour
2. Introduction to Biostatistics and Research Methods by P.S.S. Sundar Rao, J. Richard (Reference)
3. Methods in Biostatistics by BK Mahajan (Reference).
4. Hand book of Medical Terminology- IR Asher
5. Medical diagnostic & procedural Terminology- Asher
6. Medical Dictionary-Oxford &IBH
7. Terms related to Biologic disorders & Supplementary terms – CMC, Vellore

SEMESTER- III: 20 CREDITS

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 MANAGEMENT- Paper I

1. Introduction to Hospital Administration
 - a) Who's Who in hospital – Key administrators and their functions, overview of medical and para-medical specialties, main service departments:
 - b) Overview of health services – government services: private & not for profit: primary, secondary & tertiary health care: types of hospital: community, super-specialty 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. Professional Practice in Health Information Management
 - i. Modern Healthcare team
 - Functions and Roles
 - Professional Image
 - Inter and Intra personal relations
 - What employers look for
 - ii. Professional Issues
 - Dichotomy
 - Professionalism at all levels
 - Productivity and compensation
 - Quality Assessment
 - Understanding Occupational health and safety
 - iii. Communication
 - Effective Communication
 - Networking
 - Team Building
 - Risk Management
 - iv. Technology
 - Tools of the trade
 - Recent advances
 - v. Time and Stress Management
 - Time Management in Health Information Profession
 - Stress Management for enhancing productivity
 - Motivational techniques
 - Morale boosting

4. 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

5. 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

6. 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

7. Product-based services

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

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

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

9. Patient Services (non-medical)

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

10. 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

11. 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

12. Hospital Information Systems

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

13. 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

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

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: INSTRUCTION MANUAL OF 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 behavioral 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

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.

Course Objectives:

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

1. Structure of Indian Judicial System, Medico-legal cases
2. Prevention against complaint of medical negligence
3. Negligence as a crime
4. Encountering consumer by medical professionals
5. Code of Medical Ethics
6. Rights of patient as a consumer

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 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.

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 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

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 maneuvers 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 color 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.

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, Expenses, Asset, Liability, Capital)
- g. Book-keeping rules
- h. Accounting books/ledgers (Nominal, Purchase, Sales, Journal etc)
- i. Dealing with cash, impress system

Preparation of various financial statements

- a. Trial balance
- b. Receipts and payment
- c. Income and expenditure account
- d. Balance sheet

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

Costing and pricing

- a. Financial accounting Vs. Cost accounting
- b. Key terms: Direct/ Indirect, Fixed/ Variable/ Semi-variable
- c. Analyzing 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 Centre, allocation and apportionment of costs
- h. Pricing methods and decisions

Inventory accounting

- a. Valuation (FIFO, LIPO, WAC etc)
- b. Optimum balance and recorder levels

Analysis of financial statements

- a. Ratio analysis- meaning and purposes
- b. Ratios applicable to Non-profit making organizations

Financial planning and control

Budgets and budgetary control

Use of computers in accounting

- a. Computerized ledger systems
- b. Spreadsheets & excel based accounting

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

BHIM-502: INFORMATION TECHNOLOGY

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

- I. 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.

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

I. 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 explored.

II. 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.

III. 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.

IV. 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 physician's 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)

V. 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

VI. Email:

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

VII. 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

VIII. 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

IX. 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

X. Computer File Manipulation:

b) General

- 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

d) Maintain computer security requirements

- Follow security rules, regulations, and codes
- Implement security procedures

e) 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

f) 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

XI. Database:

- Define database
- Explain terms used in database systems
- Describe common functions of database systems

XII. Introduction to Spread sheet packages:

XIII. 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.

XIV. 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

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

BHIM- 503: MEDICAL TRANSCRIPTION & TELE MEDICINE

1. Basic of Medical Transcription
2. Objectives of Medical Transcription
3. Rules of Medical Transcription
4. Advantages of Medical Transcription
5. Division of medical words into their component parts
6. Forms, Suffixes, Prefixes and Terminology
7. 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

- Research in medicine and healthcare
- Clinical research and clinical trials
- Research models

- Research process
- Selecting an instrument
- Gathering data
- Analyzing the data
- Presenting results
- Publishing research
- Search techniques
- 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

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?

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
- Behavioral approach
- Quantitative approach
- System approach
- Contingency approach

Coordination

- Distinction between coordination and cooperation
- Need for coordination
- Requisites for excellent coordination
- Types & Techniques of coordination
- Difficulty of coordination

Planning

- Nature of Planning
- Importance of Planning
- Forms of Planning
- Types of Plans
- Steps in Planning
- Limitations of Planning
- Making planning effective

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

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

Staffing

- Importance and need for proper staffing
- Manpower planning
- Recruitment
- Selection
- Placement and orientation

Training and Development

- Meaning
- Advantages
- Types of training programmes
- Training methods

Performance Appraisal

- Purposes
- Essentials of a good performance appraisal system
- Criteria for performance appraisal
- Performance Appraisal methods

Promotions

- Meaning
- Requirements of a sound promotion policy
- Merit vs Seniority
- Designing a seniority system

Directing

- Definition
- Requirements of effective direction
- Giving orders

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

Counseling

- Definition
- Characteristics
- Need & Causes
- Functions, Types & Steps in counseling process

- Drawbacks of counseling

Mentoring

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

Leadership

- Meaning
- Role of a leader
- Leadership theories

BHIM-602: INTERNATIONAL CLASSIFICATION OF DISEASES (ICD-10) AND SURGICAL PROCEDURES (ICD-9CM) - PART III

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 behavioral 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)

Reference for VI Semester:

- International Statistical Classification of Diseases and Related Health Problems- Tenth Revision by World Health Organization
- Health Information Management by American Health Information Management Association
- Health Information Management- Concepts, Principles and Practice by Kathleen M. LaTour
- Hospital Administration by C.M. Francis

BHIM 603: PROJECT PREPARATION AND VIVA

BHIM 604: CHOICE BASED CREDIT PAPER

Option 1. Principles of basic nursing & Hospital infection control

Option 2. Disaster management& human resource management

Option 3. Social psychology& counseling

Syllabus for Option 1. (Principles of basic nursing & hospital infection control)

Admission to the hospital.

- Unit and its preparation admission bed.
- Admission procedure.
- Medico-legal issues.
- Roles and Responsibilities of the nurse.

Discharge from the hospital

- Types: Planned discharge, LAMA and abscond,
- Referrals and transfers.
- Medico-legal issue.
- Roles and Responsibilities of the nurse.
- Care of the Unit after discharge.

Communication:

- Levels, Elements, Types, Modes, Process, Factors influencing Communication.
- Methods of Effective Communication.

- Helping Relationships (NPR): Dimensions of Helping Relationships, Phases of a helping relationship
- Communication effectively with patient, families and team members and maintain effective human relations with special reference to communicating with vulnerable group.
- Patient Teaching: Importance, Purpose, Process, role of nurse and Integrating teaching in Nursing Process.

Vital Signs

- Guidelines for taking vital signs
- Body temperature
- Pulse:
- Respiration
- Blood Pressure:
- Recording of vital signs.

Health Assessment

- Purposes.
- Process of Health assessment.

Documentation

- Purposes of Recording and reporting.
- Guidelines for Reporting: Factual Basis, Accuracy, Completeness, Current issue, Organization and Confidentiality.
- Methods of Recording.

Meeting patient needs

Hygienic needs, Nutritional needs, Elimination needs, Comfort needs, Psychological needs,

Infection control

- Organization of the Infection Control Programme at the CMCH.
- Surveillance & Reporting of Infection.
- Employee Health Programme.
- Preventing Transmission of Blood Borne Pathogens.
- Regulation of Staff with Specific Diseases.
- Techniques.
- Care of Access Systems, Indwelling Devices and Wound.
- Isolation Policies and Procedures.
- Disinfection and Sterilization.
- Hospital Waste Management.
- Housekeeping.
- Common Areas of Patient Care.
- Specific Areas of Patient Care.
- Outbreak Management.

References- Hospital Infection Control Manual, 6th edition 2015, CMC, Vellore.

Syllabus for Option 2. (Disaster management & human resource management) Disaster management

Introduction to disaster

- What is Disaster Management?
- Aim of Disaster Management
- Types of Disasters
- Identifying potential Disasters
- Risk and threats

Disaster Management Process

- Prevention / Mitigation
- Preparedness
- Response
- Recovery
- Rehabilitation

Hospital Disaster Preparedness and Emergency Response Plan

- Introduction to Hospital Emergency Incidence Command System (HEICS)
- Basic Units of HEICS.
- Job action sheets/ cards.
- Disaster Triage.
- Types of Triage.
- Triage exercise (Practical exercise)

Mock drills in a healthcare facility

- Disaster codes
- Fire drill

References:

- CMAI Disaster management workshop.
- EHA – Emergency Response framework.
- WHO – Disaster management.

Human resource management

Recruitment and selection

- Definition
- Recruitment and Planning
- Process of Recruitment
- Flow chart of recruitment
- Joining Formalities

Performance appraisal

- Definition
- Types of Performance appraisal
- Procedure of appraisal
- Importance of appraisal

Compensation and Benefits

- Definition
- Different types of Compensation and Benefits

Business communication

- Definition
- Business writing

Disciplinary procedures and employee misconduct

- Definition
- Important of Disciplinary procedure

Grievance and its procedures

- Definition of Employee Grievance
- Procedure of Employee Grievances
- Importance of Grievance procedure

Exit Interview

- Definition
- Procedure of Exit Interview
- Importance of Exit Interview

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

SYLLABUS FOR OPTION 3. (SOCIAL PSYCHOLOGY & COUNSELLING)

Basic skills of counseling, Basics of Theory and Practice of Counseling and Psychotherapy, Basics of group counseling and its dynamics

Social Self

Self and identity, Culture and development of self
Social cognition; impression management

Attribution, bias and errors in attribution
Prejudice, stereotypes and discrimination;
Attitude organization; methods of attitudes change

Social Relationships

Nature, dimensions and dynamics of interpersonal relationships; Interpersonal attraction; Sexuality and intimacy;
Alternate gender/ sexual minorities
Altruism: Influences of helping; Long-term helpfulness
Aggression: Nature and characteristics; Violence- sexual harassment, domestic violence, terrorism.

Culture and Behaviour

Cross-cultural psychology
Diversity in socialization; Individualism in a collectivistic culture; Poverty and deprivation
Culture and psychopathology; Traditional healing methods for mental illness

Social and Cultural Issues

Gender and mental health
Complex environment and behaviour
Social psychology in educational context
Social psychology at work- application in job satisfaction and performance

References: Berry, J.W., Mishra, R.C. &Tripathi, R.C. (Eds). (2003). *Psychology in human and social development: lessons from diverse cultures*. New Delhi: Sage
Dasen, P.R. Berry, J.W. & Sartorius, N. (1988) (Eds.). *Health and cross- cultural psychology: toward applications*. New Delhi: Sage.